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ADA Accessibility Guidelines (ADAAG)



ADA STANDARDS

As amended through September 2002

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cited in *Kirola v. City & County of San Francisco*
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1. PURPOSE.

This document contains scoping and technical requirements for accessibility to buildings and facilities by individuals with disabilities under the Americans with Disabilities Act (ADA) of 1990. These scoping and technical requirements are to be applied during the design, construction, and alteration of buildings and facilities covered by titles II and III of the ADA to the extent required by regulations issued by Federal agencies, including the Department of Justice and the Department of Transportation, under the ADA.

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Paragraphs marked with an asterisk have related, nonmandatory material in the [Appendix](#). In the Appendix, the corresponding paragraph numbers are preceded by an A.

2. GENERAL.

2.1 Provisions for Adults and Children. The specifications in these guidelines are based upon adult dimensions and anthropometrics. These guidelines also contain alternate specifications based on children's dimensions and anthropometrics for drinking fountains, water closets, toilet stalls, lavatories, sinks, and fixed or built-in seating and tables.

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

[Appendix Note](#)

2.3 Incorporation by Reference.

2.3.1 General. The publications listed in 2.3.2 are incorporated by reference in this document. The Director of the Federal Register has approved these materials for incorporation by reference in accordance with 5U.S.C. 552(a) and 1 C.F.R. part 51. Copies of the referenced publications may be inspected at the Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW., Suite 1000, Washington, DC; at the Department of Justice, Civil Rights Division, Disability Rights Section, 1425 New York Avenue, NW., Washington, DC; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

2.3.2 Referenced Publications. The specific edition of the publications listed below are referenced in this document. Where differences occur between this document and the referenced publications, this document applies.

2.3.2.1 American Society for Testing and Materials (ASTM) Standards. Copies of the referenced publications may be obtained from the American Society for Testing and Materials, 100 Bar Harbor Drive, West Conshohocken, Pennsylvania 19428 (<http://www.astm.org>).

ASTM F 1292-99 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment (see 15.6.7.2 Ground Surfaces, Use Zones).

ASTM F 1487-98 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use (see 3.5 Definitions, Use Zone).

ASTM F 1951-99 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment (see 15.6.7.1 Ground Surfaces, Accessibility).

2.3.2.2 International Code Council (ICC) Codes. Copies of the referenced publications may be obtained from the International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, VA 2204-3401 (<http://www.intlcode.org>).

International Building Code 2000 (see 15.3.3.2 Height).

*cited in Kirola v. City & County of San Francisco
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3. MISCELLANEOUS INSTRUCTIONS AND DEFINITIONS.

- [3.1 Graphic Conventions](#)
- [3.2 Dimensional Tolerances](#)
- [3.3 Notes](#)
- [3.4 General Terminology](#)
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3.1 Graphic Conventions. Graphic conventions are shown in Table 1. Dimensions that are not marked minimum or maximum are absolute, unless otherwise indicated in the text or captions.

3.2 Dimensional Tolerances. All dimensions are subject to conventional building industry tolerances for field conditions.

3.3 Notes. The text of these guidelines does not contain notes or footnotes. Additional information, explanations, and advisory materials are located in the [Appendix](#).

3.4 General Terminology.

comply with. Meet one or more specifications of these guidelines.

if, if ... then. Denotes a specification that applies only when the conditions described are present.

may. Denotes an option or alternative.

shall. Denotes a mandatory specification or requirement.

should. Denotes an advisory specification or recommendation.

3.5 Definitions.

Access Aisle.

An accessible pedestrian space between elements, such as parking spaces, seating, and desks, that provides clearances appropriate for use of the elements.

Accessible.

Describes a site, building, facility, or portion thereof that complies with these guidelines.

Accessible Element.

An element specified by these guidelines (for example, telephone controls, and the like).

Accessible Route.

A continuous unobstructed path connecting all accessible elements and spaces of a building or facility. Interior accessible routes may include corridors, floors, ramps, elevators, lifts, and clear floor space at fixtures. Exterior accessible routes may include parking access aisles, curb ramps, crosswalks at vehicular ways, walks, ramps, and lifts.

Accessible Space.

Space that complies with these guidelines.

Adaptability.

The ability of certain building spaces and elements, such as kitchen counters, sinks, and grab bars, to be added or altered so as to accommodate the needs of individuals with or without disabilities or to accommodate the needs of persons with different types or degrees of disability.

Addition.

An expansion, extension, or increase in the gross floor area of a building or facility.

Administrative Authority.

A governmental agency that adopts or enforces regulations and guidelines for the design, construction, or alteration of buildings and facilities.

Alteration.

An alteration is a change to a building or facility that affects or could affect the usability of the building or facility or part thereof. Alterations include, but are not limited to, remodeling, renovation, rehabilitation, reconstruction, historic restoration, resurfacing of circulation paths or vehicular ways, changes or rearrangement of the structural parts or elements, and changes or rearrangement in the plan configuration of walls and full-height partitions. Normal maintenance, reroofing, painting or wallpapering, or changes to mechanical and electrical systems are not alterations unless they affect the usability of the building or facility.

Amusement Attraction.

Any facility, or portion of a facility, located within an amusement park or theme park which provides amusement without the use of an amusement device. Examples include, but are not limited to, fun houses, barrels, and other attractions without seats.

Amusement Ride.

cited in *Kirola v. City & County of San Francisco*
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A system that moves persons through a fixed course within a defined area for the purpose of amusement.

Amusement Ride Seat.

A seat that is built-in or mechanically fastened to an amusement ride intended to be occupied by one or more passengers.

Area of Rescue Assistance.

An area, which has direct access to an exit, where people who are unable to use stairs may remain temporarily in safety to await further instructions or assistance during emergency evacuation.

Area of Sport Activity.

That portion of a room or space where the play or practice of a sport occurs.

Assembly Area.

A room or space accommodating a group of individuals for recreational, educational, political, social, civic, or amusement purposes, or for the consumption of food and drink.

Automatic Door.

A door equipped with a power-operated mechanism and controls that open and close the door automatically upon receipt of a momentary actuating signal. The switch that begins the automatic cycle may be a photoelectric device, floor mat, or manual switch (see [power-assisted door](#)).

Boarding Pier.

A portion of a pier where a boat is temporarily secured for the purpose of embarking or disembarking.

Boat Launch Ramp.

A sloped surface designed for launching and retrieving trailered boats and other water craft to and from a body of water.

Boat Slip.

That portion of a pier, main pier, finger pier, or float where a boat is moored for the purpose of berthing, embarking, or disembarking.

Building.

Any structure used and intended for supporting or sheltering any use or occupancy.

Catch Pool.

A pool or designated section of a pool used as a terminus for water slide flumes.

Circulation Path.

An exterior or interior way of passage from one place to another for pedestrians, including, but not limited to, walks, hallways, courtyards, stairways, and stair landings.

Clear.

Unobstructed.

Clear Floor Space.

The minimum unobstructed floor or ground space required to accommodate a single, stationary wheelchair and occupant.

Closed Circuit Telephone.

A telephone with dedicated line(s) such as a house phone, courtesy phone or phone that must be used to gain entrance to a facility.

Common Use.

Refers to those interior and exterior rooms, spaces, or elements that are made available for the use of a restricted group of people (for example, occupants of a homeless shelter, the occupants of an office building, or the guests of such occupants).

Cross Slope.

The slope that is perpendicular to the direction of travel (see [running slope](#)).

Curb Ramp.

A short ramp cutting through a curb or built up to it.

Detectable Warning.

A standardized surface feature built in or applied to walking surfaces or other elements to warn visually impaired people of hazards on a circulation path.

Dwelling Unit.

A single unit which provides a kitchen or food preparation area, in addition to rooms and spaces for living, bathing, sleeping, and the like. Dwelling units include a single family home or a townhouse used as a transient group home; an apartment building used as a shelter; guestrooms in a hotel that provide sleeping accommodations and food preparation areas; and other similar facilities used on a transient basis. For purposes of these guidelines, use of the term "Dwelling Unit" does not imply the unit is used as a residence.

Egress, Means of.

A continuous and unobstructed way of exit travel from any point in a building or facility to a public way. A means of egress comprises vertical and horizontal travel and may include intervening room spaces, doorways, hallways, corridors, passageways, balconies, ramps, stairs, enclosures, lobbies, horizontal exits, courts and yards. An accessible means of egress is one that complies with these guidelines and does not include stairs, steps, or escalators. Areas of rescue assistance or evacuation elevators may be included as part of accessible means of egress.

Element.

cited in *Kirola v. City & County of San Francisco*
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An architectural or mechanical component of a building, facility, space, or site, e.g., telephone, curb ramp, door, drinking fountain, seating, or water closet.

Elevated Play Component.

A play component that is approached above or below grade and that is part of a composite play structure consisting of two or more play components attached or functionally linked to create an integrated unit providing more than one play activity.

Entrance.

Any access point to a building or portion of a building or facility used for the purpose of entering. An entrance includes the approach walk, the vertical access leading to the entrance platform, the entrance platform itself, vestibules if provided, the entry door(s) or gate(s), and the hardware of the entry door(s) or gate(s).

Facility.

All or any portion of buildings, structures, site improvements, complexes, equipment, roads, walks, passageways, parking lots, or other real or personal property located on a site.

Gangway.

A variable-sloped pedestrian walkway that links a fixed structure or land with a floating structure. Gangways which connect to vessels are not included.

Golf Car Passage.

A continuous passage on which a motorized golf car can operate.

Ground Floor.

Any occupiable floor less than one story above or below grade with direct access to grade. A building or facility always has at least one ground floor and may have more than one ground floor as where a split level entrance has been provided or where a building is built into a hillside.

Ground Level Play Component.

A play component that is approached and exited at the ground level.

Mezzanine or Mezzanine Floor.

That portion of a story which is an intermediate floor level placed within the story and having occupiable space above and below its floor.

Marked Crossing.

A crosswalk or other identified path intended for pedestrian use in crossing a vehicular way.

Multifamily Dwelling.

Any building containing more than two dwelling units.

Occupiable.

A room or enclosed space designed for human occupancy in which individuals congregate for amusement, educational or similar purposes, or in which occupants are engaged at labor, and which is equipped with means of egress, light, and ventilation.

Operable Part.

A part of a piece of equipment or appliance used to insert or withdraw objects, or to activate, deactivate, or adjust the equipment or appliance (for example, coin slot, pushbutton, handle).

Path of Travel.

(Reserved).

Play Area.

A portion of a site containing play components designed and constructed for children.

Play Component.

An element intended to generate specific opportunities for play, socialization, or learning. Play components may be manufactured or natural, and may be stand alone or part of a composite play structure.

Power-assisted Door.

A door used for human passage with a mechanism that helps to open the door, or relieves the opening resistance of a door, upon the activation of a switch or a continued force applied to the door itself.

Private Facility.

A place of public accommodation or a commercial facility subject to title III of the ADA and 28 C.F.R. part 36 or a transportation facility subject to title III of the ADA and 49 C.F.R. 37.45.

Public Facility.

A facility or portion of a facility constructed by, on behalf of, or for the use of a public entity subject to title II of the ADA and 28 C.F.R. part 35 or to title II of the ADA and 49 C.F.R. 37.41 or 37.43.

Public Use.

Describes interior or exterior rooms or spaces that are made available to the general public. Public use may be provided at a building or facility that is privately or publicly owned.

Ramp.

A walking surface which has a running slope greater than 1:20.

Running Slope.

The slope that is parallel to the direction of travel (see [cross slope](#)).

Service Entrance.

*cited in Kirola v. City & County of San Francisco
No. 14-17521 archived on June 19, 2017*

An entrance intended primarily for delivery of goods or services.

Signage.

Displayed verbal, symbolic, tactile, and pictorial information.

Site.

A parcel of land bounded by a property line or a designated portion of a public right-of-way.

Site Improvement.

Landscaping, paving for pedestrian and vehicular ways, outdoor lighting, recreational facilities, and the like, added to a site.

Sleeping Accommodations.

Rooms in which people sleep; for example, dormitory and hotel or motel guest rooms or suites.

Soft Contained Play Structure.

A play structure made up of one or more components where the user enters a fully enclosed play environment that utilizes pliable materials (e.g., plastic, netting, fabric).

Space.

A definable area, e.g., room, toilet room, hall, assembly area, entrance, storage room, alcove, courtyard, or lobby.

Story.

That portion of a building included between the upper surface of a floor and upper surface of the floor or roof next above. If such portion of a building does not include occupiable space, it is not considered a story for purposes of these guidelines. There may be more than one floor level within a story as in the case of a mezzanine or mezzanines.

Structural Frame.

The structural frame shall be considered to be the columns and the girders, beams, trusses and spandrels having direct connections to the columns and all other members which are essential to the stability of the building as a whole.

TDD (Telecommunication Devices for the Deaf).

See [text telephone](#).

TTY (Tele-Typewriter).

See [text telephone](#).

Tactile.

Describes an object that can be perceived using the sense of touch.

Technically Infeasible.

See [4.1.6\(1\)\(j\)](#) EXCEPTION.

Teeing Ground.

In golf, the starting place for the hole to be played.

Text Telephone (TTY).

Machinery or equipment that employs interactive text based communications through the transmission of coded signals across the standard telephone network. Text telephones can include, for example, devices known as TDDs (telecommunication display devices or telecommunication devices for deaf persons) or computers with special modems. Text telephones are also called TTYs, an abbreviation for tele-typewriter.

Transfer Device.

Equipment designed to facilitate the transfer of a person from a wheelchair or other mobility device to and from an amusement ride seat.

*Transient Lodging.**

A building, facility, or portion thereof, excluding inpatient medical care facilities and residential facilities, that contains sleeping accommodations. Transient lodging may include, but is not limited to, resorts, group homes, hotels, motels, and dormitories. [Appendix Note](#)

Transition Plate.

A sloping pedestrian walking surface located at the end(s) of a gangway.

Use Zone.

The ground level area beneath and immediately adjacent to a play structure or equipment that is designated by ASTM F 1487 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use (incorporated by reference, see [2.3.2](#)) for unrestricted circulation around the equipment and on whose surface it is predicted that a user would land when falling from or exiting the equipment.

Vehicular Way.

A route intended for vehicular traffic, such as a street, driveway, or parking lot.

Walk.

An exterior pathway with a prepared surface intended for pedestrian use, including general pedestrian areas such as plazas and courts.

cited in *Kirola v. City & County of San Francisco*
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4.1 Minimum Requirements

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- [4.1.5 Accessible Buildings: Additions](#)
- [4.1.6 Accessible Buildings: Alterations](#)
- [4.1.7 Accessible Buildings: Historic Preservation](#)

4.1.1* Application.

(1) General. All areas of newly designed or newly constructed buildings and facilities and altered portions of existing buildings and facilities shall comply with section 4, unless otherwise provided in this section or as modified in a special application section.

(2) Application Based on Building Use. Special application sections provide additional requirements based on building use. When a building or facility contains more than one use covered by a special application section, each portion shall comply with the requirements for that use.

(3)* Areas Used Only by Employees as Work Areas. Areas that are used only as work areas shall be designed and constructed so that individuals with disabilities can approach, enter, and exit the areas. These guidelines do not require that any areas used only as work areas be constructed to permit maneuvering within the work area or be constructed or equipped (i.e., with racks or shelves) to be accessible. [Appendix Note](#)

(4) Temporary Structures. These guidelines cover temporary buildings or facilities as well as permanent facilities. Temporary buildings and facilities are not of permanent construction but are extensively used or are essential for public use for a period of time. Examples of temporary buildings or facilities covered by these guidelines include, but are not limited to: reviewing stands, temporary classrooms, bleacher areas, exhibit areas, temporary banking facilities, temporary health screening services, or temporary safe pedestrian passageways around a construction site. Structures, sites and equipment directly associated with the actual processes of construction, such as scaffolding, bridging, materials hoists, or construction trailers are not included.

(5) General Exceptions.

(a) In new construction, a person or entity is not required to meet fully the requirements of these guidelines where that person or entity can demonstrate that it is structurally impracticable to do so. Full compliance will be considered structurally impracticable only in those rare circumstances when the unique characteristics of terrain prevent the incorporation of accessibility features. If full compliance with the requirements of these guidelines is structurally impracticable, a person or entity shall comply with the requirements to the extent it is not structurally impracticable. Any portion of the building or facility which can be made accessible shall comply to the extent that it is not structurally impracticable.

(b) Accessibility is not required to or in:

(i) raised areas used primarily for purposes of security or life or fire safety, including, but not limited to, observation or lookout galleries, prison guard towers, fire towers, or fixed life guard stands;

(ii) non-occupiable spaces accessed only by ladders, catwalks, crawl spaces, very narrow passageways, tunnels, or freight (non-passenger) elevators, and frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment; such spaces may include, but are not limited to, elevator pits, elevator penthouses, piping or equipment catwalks, water or sewage treatment pump rooms and stations, electric substations and transformer vaults, and highway and tunnel utility facilities;

(iii) single occupant structures accessed only by a passageway that is below grade or that is elevated above standard curb height, including, but not limited to, toll booths accessed from underground tunnels;

(iv) raised structures used solely for refereeing, judging, or scoring a sport;

(v) water slides;

(vi) animal containment areas that are not for public use; or

(vii) raised boxing or wrestling rings.

4.1.2 Accessible Sites and Exterior Facilities: New Construction. An accessible site shall meet the following minimum requirements:

*cited in Kirola v. City & County of San Francisco
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(1) At least one accessible route complying with [4.3](#) shall be provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones if provided, and public streets or sidewalks, to an accessible building entrance.

(2) (a) At least one accessible route complying with [4.3](#) shall connect accessible buildings, accessible facilities, accessible elements, and accessible spaces that are on the same site.

(b)* Court Sports: An accessible route complying with [4.3](#) shall directly connect both sides of the court in court sports. [Advisory Note](#)

(3) All objects that protrude from surfaces or posts into circulation paths shall comply with [4.4](#).

EXCEPTION: The requirements of [4.4](#) shall not apply within an area of sport activity.

(4) Ground surfaces along accessible routes and in accessible spaces shall comply with [4.5](#).

EXCEPTION 1*: The requirements of [4.5](#) shall not apply within an area of sport activity. [Appendix Note](#)

EXCEPTION2*: Animal containment areas designed and constructed for public use shall not be required to provide stable, firm, and slip resistant ground and floor surfaces and shall not be required to comply with [4.5.2](#). [Appendix Note](#)

(5) (a) If parking spaces are provided for self-parking by employees or visitors, or both, then accessible spaces complying with [4.6](#) shall be provided in each such parking area in conformance with the table below. Spaces required by the table need not be provided in the particular lot. They may be provided in a different location if equivalent or greater accessibility, in terms of distance from an accessible entrance, cost and convenience is ensured.

Total Parking in Lot	Required Minimum Number of Accessible Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20 plus 1 for each 100 over 1000

*cited in Kirola v. City & County of San Francisco
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Except as provided in (b), access aisles adjacent to accessible spaces shall be 60 in (1525 mm) wide minimum.

(b) One in every eight accessible spaces, but not less than one, shall be served by an access aisle 96 in (2440 mm) wide minimum and shall be designated "van accessible" as required by [4.6.4](#). The vertical clearance at such spaces shall comply with [4.6.5](#). All such spaces may be grouped on one level of a parking structure.

EXCEPTION: Provision of all required parking spaces in conformance with "Universal Parking Design" (see appendix [A4.6.3](#)) is permitted.

(c) If passenger loading zones are provided, then at least one passenger loading zone shall comply with [4.6.6](#).

(d) At facilities providing medical care and other services for persons with mobility impairments, parking spaces complying with 4.6 shall be provided in accordance with [4.1.2\(5\)\(a\)](#) except as follows:

(i) Outpatient units and facilities: 10 percent of the total number of parking spaces provided serving each such outpatient unit or facility;

(ii) Units and facilities that specialize in treatment or services for persons with mobility impairments: 20 percent of the total number of parking spaces provided serving each such unit or facility.

(e)* Valet parking: Valet parking facilities shall provide a passenger loading zone complying with [4.6.6](#) located on an accessible route to the entrance of the facility. Paragraphs 5(a), 5(b), and 5(d) of this section do not apply to valet parking facilities. [Appendix Note](#)

(6) If toilet facilities are provided on a site, then each such public or common use toilet facility shall comply

with [4.22](#). If bathing facilities are provided on a site, then each such public or common use bathing facility shall comply with [4.23](#). For single user portable toilet or bathing units clustered at a single location, at least five percent but no less than one toilet unit or bathing unit complying with [4.22](#) or [4.23](#) shall be installed at each cluster whenever typical inaccessible units are provided. Accessible units shall be identified by the International Symbol of Accessibility.

EXCEPTION: Portable toilet units at construction sites used exclusively by construction personnel are not required to comply with [4.1.2\(6\)](#).

(7) Building Signage. Signs which designate permanent rooms and spaces shall comply with [4.30.1](#), [4.30.4](#), [4.30.5](#) and [4.30.6](#). Other signs which provide direction to, or information about, functional spaces of the building shall comply with [4.30.1](#), [4.30.2](#), [4.30.3](#), and [4.30.5](#). Elements and spaces of accessible facilities which shall be identified by the International Symbol of Accessibility and which shall comply with [4.30.7](#) are:

- (a) Parking spaces designated as reserved for individuals with disabilities;
- (b) Accessible passenger loading zones;
- (c) Accessible entrances when not all are accessible (inaccessible entrances shall have directional signage to indicate the route to the nearest accessible entrance);
- (d) Accessible toilet and bathing facilities when not all are accessible.

4.1.3 Accessible Buildings: New Construction. Accessible buildings and facilities shall meet the following minimum requirements:

(1)(a) At least one accessible route complying with [4.3](#) shall connect accessible building or facility entrances with all accessible spaces and elements within the building or facility.

(b)* Court Sports. An accessible route complying with [4.3](#) shall directly connect both sides of the court in court sports. [Appendix Note](#)

(2) All objects that overhang or protrude into circulation paths shall comply with [4.4](#).

EXCEPTION: The requirements of [4.4](#) shall not apply within an area of sport activity.

(3) Ground and floor surfaces along accessible routes and in accessible rooms and spaces shall comply with [4.5](#).

EXCEPTION 1 *: The requirements of [4.5](#) shall not apply within an area of sport activity. [Appendix Note](#)

EXCEPTION 2 *: Animal containment areas designed and constructed for public use shall not be required to provide stable, firm, and slip resistant ground and floor surfaces and shall not be required to comply with [4.5.2](#). [Appendix Note](#)

(4) Interior and exterior stairs connecting levels that are not connected by an elevator, ramp, or other accessible means of vertical access shall comply with [4.9](#).

(5)* One passenger elevator complying with [4.10](#) shall serve each level, including mezzanines, in all multi-story buildings and facilities unless exempted below. If more than one elevator is provided, each passenger elevator shall comply with [4.10](#). [Appendix Note](#)

EXCEPTION 1: Elevators are not required in:

- (a) private facilities that are less than three stories or that have less than 3000 square feet per story unless the building is a shopping center, a shopping mall, or the professional office of a health care provider, or another type of facility as determined by the Attorney General; or
- (b) public facilities that are less than three stories and that are not open to the general public if the story above or below the accessible ground floor houses no more than five persons and is less than 500 square feet. Examples may include, but are not limited to, drawbridge towers and boat traffic towers, lock and dam control stations, and train dispatching towers.

The elevator exemptions set forth in paragraphs (a) and (b) do not obviate or limit in any way the obligation to comply with the other accessibility requirements established in section [4.1.3](#). For example, floors above or below the accessible ground floor must meet the requirements of this section except for elevator service. If toilet or bathing facilities are provided on a level not served by an elevator, then toilet or bathing facilities must be provided on the accessible ground floor. In new construction, if a building or facility is eligible for exemption but a passenger elevator is nonetheless planned, that elevator shall meet the requirements of [4.10](#) and shall serve each level in the building. A passenger elevator that provides

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service from a garage to only one level of a building or facility is not required to serve other levels.

EXCEPTION 2: Elevator pits, elevator penthouses, mechanical rooms, piping or equipment catwalks are exempted from this requirement.

EXCEPTION 3: Accessible ramps complying with [4.8](#) may be used in lieu of an elevator.

EXCEPTION 4: Platform lifts (wheelchair lifts) complying with [4.11](#) of this guideline and applicable State or local codes may be used in lieu of an elevator only under the following conditions:

- (a) To provide an accessible route to a performing area in an assembly occupancy.
- (b) To comply with the wheelchair viewing position line-of-sight and dispersion requirements of [4.33.3](#).
- (c) To provide access to incidental occupiable spaces and rooms which are not open to the general public and which house no more than five persons, including but not limited to equipment control rooms and projection booths.
- (d) To provide access where existing site constraints or other constraints make use of a ramp or an elevator infeasible.
- (e) To provide access to raised judges' benches, clerks' stations, speakers' platforms, jury boxes and witness stands or to depressed areas such as the well of a court.
- (f) * To provide access to player seating areas serving an area of sport activity. [Appendix Note](#)

EXCEPTION 5: Elevators located in air traffic control towers are not required to serve the cab and the floor immediately below the cab.

(6) Windows: (Reserved).

(7) Doors:

- (a) At each accessible entrance to a building or facility, at least one door shall comply with [4.13](#).
 - (b) Within a building or facility, at least one door at each accessible space shall comply with [4.08](#).
 - (c) Each door that is an element of an accessible route shall comply with [4.13](#).
 - (d) Each door required by [4.3.10](#), Egress, shall comply with [4.13](#).
- (8)** The requirements in (a) and (b) below shall be satisfied independently:

(a)(i) At least 50 percent of all public entrances (excluding those in (b) below) shall comply with [4.14](#). At least one must be a ground floor entrance. Public entrances are any entrances that are not loading or service entrances.

(ii) Accessible public entrances must be provided in a number at least equivalent to the number of exits required by the applicable building or fire codes. (This paragraph does not require an increase in the total number of public entrances planned for a facility.)

(iii) An accessible public entrance must be provided to each tenancy in a facility (for example, individual stores in a strip shopping center).

(iv) In detention and correctional facilities subject to section 12, public entrances that are secured shall be accessible as required by [12.2.1](#).

One entrance may be considered as meeting more than one of the requirements in (a). Where feasible, accessible public entrances shall be the entrances used by the majority of people visiting or working in the building.

(b)(i) In addition, if direct access is provided for pedestrians from an enclosed parking garage to the building, at least one direct entrance from the garage to the building must be accessible.

(ii) If access is provided for pedestrians from a pedestrian tunnel or elevated walkway, one entrance to the building from each tunnel or walkway must be accessible.

(iii) In judicial, legislative, and regulatory facilities subject to section 11, restricted and secured entrances shall be accessible in the number required by [11.1.1](#).

One entrance may be considered as meeting more than one of the requirements in (b).

Because entrances also serve as emergency exits whose proximity to all parts of buildings and facilities is

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essential, it is preferable that all entrances be accessible.

(c) If the only entrance to a building, or tenancy in a facility, is a service entrance, that entrance shall be accessible.

(d) Entrances which are not accessible shall have directional signage complying with [4.30.1](#), [4.30.2](#), [4.30.3](#), and [4.30.5](#), which indicates the location of the nearest accessible entrance.

(9)* In buildings or facilities, or portions of buildings or facilities, required to be accessible, accessible means of egress shall be provided in the same number as required for exits by local building/life safety regulations. Where a required exit from an occupiable level above or below a level of accessible exit discharge is not accessible, an area of rescue assistance shall be provided on each such level (in a number equal to that of inaccessible required exits). Areas of rescue assistance shall comply with [4.3.11](#). A horizontal exit, meeting the requirements of local building/life safety regulations, shall satisfy the requirement for an area of rescue assistance. [Appendix Note](#)

EXCEPTION: Areas of rescue assistance are not required in buildings or facilities having a supervised automatic sprinkler system.

(10)* Drinking Fountains:

(a) Where only one drinking fountain is provided on a floor there shall be a drinking fountain which is accessible to individuals who use wheelchairs in accordance with [4.15](#) and one accessible to those who have difficulty bending or stooping. (This can be accommodated by the use of a "hi-lo" fountain; by providing one fountain accessible to those who use wheelchairs and one fountain at a standard height convenient for those who have difficulty bending; by providing a fountain accessible under 4.15 and a water cooler; or by such other means as would achieve the required accessibility for each group on each floor.)

(b) Where more than one drinking fountain or water cooler is provided on a floor, 50% of those provided shall comply with [4.15](#) and shall be on an accessible route. [Appendix Note](#)

(11) Toilet Facilities: If toilet rooms are provided, then each public and common use toilet room shall comply with [4.22](#). Other toilet rooms provided for the use of occupants of specific spaces (e.g., a private toilet room for the occupant of a private office) shall be adaptable. If bathing rooms are provided, then each public and common use bathroom shall comply with [4.23](#). Accessible toilet rooms and bathing facilities shall be on an accessible route.

(12) Storage, Shelving and Display Units

(a) If fixed or built-in storage facilities such as cabinets, shelves, closets, and drawers are provided in accessible spaces, at least one of each type provided shall contain storage space complying with [4.25](#). Additional storage may be provided outside of the dimensions required by 4.25.

(b) Shelves or display units allowing self-service by customers in mercantile occupancies shall be located on an accessible route complying with [4.3](#). Requirements for accessible reach range do not apply.

(c)* Where lockers are provided in accessible spaces, at least 5 percent, but not less than one, of each type of locker shall comply with [4.25](#). [Appendix Note](#)

(13) Controls and operating mechanisms in accessible spaces, along accessible routes, or as parts of accessible elements (for example, light switches and dispenser controls) shall comply with [4.27](#).

EXCEPTION: The requirements of [4.27](#) shall not apply to exercise machines.

(14) If emergency warning systems are provided, then they shall include both audible alarms and visual alarms complying with [4.28](#). Sleeping accommodations required to comply with [9.3](#) shall have an alarm system complying with [4.28](#). Emergency warning systems in medical care facilities may be modified to suit standard health care alarm design practice.

(15) Detectable warnings shall be provided at locations as specified in [4.29](#).

(16) Building Signage:

(a) Signs which designate permanent rooms and spaces shall comply with [4.30.1](#), [4.30.4](#), [4.30.5](#) and [4.30.6](#).

(b) Other signs which provide direction to or information about functional spaces of the building shall comply with [4.30.1](#), [4.30.2](#), [4.30.3](#), and [4.30.5](#).

EXCEPTION: Building directories, menus, and all other signs which are temporary are not required to comply.

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(17) Public telephones:

(a) If public pay telephones, public closed circuit telephones, or other public telephones are provided, then they shall comply with [4.31.2](#) through [4.31.8](#) to the extent required by the following table:

(text version)

Number of each type of telephone provided on each floor	Number of telephones required to comply with 4.31.2 through 4.31.8 ¹
1 or more single unit	1 per floor
1 bank ²	1 per floor
2 or more banks ²	1 per bank. Accessible unit may be installed as a single unit in proximity (either visible or with signage) to the bank. At least one public telephone per floor shall meet the requirements for a forward reach telephone ³

¹ Additional public telephones may be installed at any height. Unless otherwise specified, accessible telephones may be either forward or side reach telephones.

² A bank consists of two or more adjacent public telephones, often installed as a unit.

³ EXCEPTION: For exterior installations only, if dial tone first service is available, then a side reach telephone may be installed instead of the required forward reach telephone.

(b)* All telephones required to be accessible and complying with [4.31.2](#) through [4.31.8](#) shall be equipped with a volume control. In addition, 25 percent, but never less than one, of all other public telephones provided shall be equipped with a volume control and shall be dispersed among all types of public telephones, including closed circuit telephones, throughout the building or facility. Signage complying with applicable provisions of [4.30.7](#) shall be provided. [Appendix Note](#)

(c) The following shall be provided in accordance with [4.31.9](#):

(i) If four or more public pay telephones (including both interior and exterior telephones) are provided at a site of a private facility, and at least one is in an interior location, then at least one interior public text telephone (TTY) shall be provided. If an interior public pay telephone is provided in a public use area in a building of a public facility, at least one interior public text telephone (TTY) shall be provided in the building in a public use area.

(ii) If an interior public pay telephone is provided in a private facility that is a stadium or arena, a convention center, a hotel with a convention center, or a covered mall, at least one interior public text telephone (TTY) shall be provided in the facility. In stadiums, arenas and convention centers which are public facilities, at least one public text telephone (TTY) shall be provided on each floor level having at least one interior public pay telephone.

(iii) If a public pay telephone is located in or adjacent to a hospital emergency room, hospital recovery room, or hospital waiting room, one public text telephone (TTY) shall be provided at each such location.

(iv) If an interior public pay telephone is provided in the secured area of a detention or correctional facility subject to section 12, then at least one public text telephone (TTY) shall also be provided in at least one secured area. Secured areas are those areas used only by detainees or inmates and security personnel.

(d) Where a bank of telephones in the interior of a building consists of three or more public pay telephones, at least one public pay telephone in each such bank shall be equipped with a shelf and outlet in compliance with [4.31.9\(2\)](#).

EXCEPTION: This requirement does not apply to the secured areas of detention or correctional facilities where shelves and outlets are prohibited for purposes of security or safety.

(18) If fixed or built-in seating or tables (including, but not limited to, study carrels and student laboratory stations), are provided in accessible public or common use areas, at least five percent (5%), but not less than one, of the fixed or built-in seating areas or tables shall comply with [4.32](#). An accessible route shall lead to and through such fixed or built-in seating areas, or tables.

(19)* Assembly Areas:

(a) In places of assembly with fixed seating accessible wheelchair locations shall comply with [4.33.2](#), [4.33.3](#), and [4.33.4](#) and shall be provided consistent with the following table:

Capacity of Seating in Assembly Area	Number of Required Wheelchair Locations
--------------------------------------	---

4 to 25	1
26 to 50	2
51 to 300	4
301 to 500	6
over 500	6 plus 1 additional space for each total seating capacity increase of 100

In addition, one percent, but not less than one, of all fixed seats shall be aisle seats with no armrests on the aisle side, or removable or folding armrests on the aisle side. Each such seat shall be identified by a sign or marker. Signage notifying patrons of the availability of such seats shall be posted at the ticket office. Aisle seats are not required to comply with [4.33.4. Appendix Note](#)

(b) This paragraph applies to assembly areas where audible communications are integral to the use of the space (e.g., concert and lecture halls, playhouses and movie theaters, meeting rooms, etc.). Such assembly areas, if (1) they accommodate at least 50 persons, or if they have audio-amplification systems, and (2) they have fixed seating, shall have a permanently installed assistive listening system complying with [4.33](#). For other assembly areas, a permanently installed assistive listening system, or an adequate number of electrical outlets or other supplementary wiring necessary to support a portable assistive listening system shall be provided. The minimum number of receivers to be provided shall be equal to 4 percent of the total number of seats, but in no case less than two. Signage complying with applicable provisions of [4.30](#) shall be installed to notify patrons of the availability of a listening system.

(c) Where a team or player seating area contains fixed seats and serves an area of sport activity, the seating area shall contain the number of wheelchair spaces required by 4.1.3(19)(a), but not less than one wheelchair space. Wheelchair spaces shall comply with [4.33.2](#), [4.33.3](#), [4.33.4](#), and [4.33.5](#).

EXCEPTION 1: Wheelchair spaces in team or player seating areas shall not be required to provide a choice of admission price or lines of sight comparable to those for members of the general public.

EXCEPTION 2: This provision shall not apply to team or player seating areas serving bowling lanes not required to be accessible by [15.7.3](#).

(20) Where automated teller machines (ATMs) are provided, each ATM shall comply with the requirements of [4.34](#) except where two or more are provided at a location, then only one must comply.

EXCEPTION: Drive-up-only automated teller machines are not required to comply with [4.27.2](#), [4.27.3](#) and [4.34.3](#).

(21) Where dressing, fitting, or locker rooms are provided, the rooms shall comply with [4.35](#).

EXCEPTION: Where dressing, fitting, or locker rooms are provided in a cluster, at least 5 percent, but not less than one, of the rooms for each type of use in each cluster shall comply with [4.35](#).

(22) Where saunas or steam rooms are provided, the rooms shall comply with [4.36](#).

EXCEPTION: Where saunas or steam rooms are provided in a cluster, at least 5 percent, but not less than one, of the rooms for each type of use in each cluster shall comply with [4.36](#).

4.1.4 (Reserved).

4.1.5 Accessible Buildings: Additions. Each addition to an existing building or facility shall be regarded as an alteration. Each space or element added to the existing building or facility shall comply with the applicable provisions of [4.1.1](#) to [4.1.3](#), Minimum Requirements (for New Construction) and the applicable technical specifications of section 4 and the special application sections. Each addition that affects or could affect the usability of an area containing a primary function shall comply with [4.1.6\(2\)](#).

4.1.6 Accessible Buildings: Alterations.

(1) General. Alterations to existing buildings and facilities shall comply with the following:

(a) No alteration shall be undertaken which decreases or has the effect of decreasing accessibility or usability of a building or facility below the requirements for new construction at the time of alteration.

(b) If existing elements, spaces, or common areas are altered, then each such altered element, space, feature, or area shall comply with the applicable provisions of [4.1.1](#) to [4.1.3](#) Minimum Requirements (for New Construction). If the applicable provision for new construction requires that an element, space, or common area be on an accessible route, the altered element, space, or common area is not required to be on an accessible route except as provided in [4.1.6\(2\)](#) (Alterations to an Area Containing a Primary Function.)

(c) If alterations of single elements, when considered together, amount to an alteration of a room or space in a building or facility, the entire space shall be made accessible.

(d) No alteration of an existing element, space, or area of a building or facility shall impose a requirement for greater accessibility than that which would be required for new construction. For example, if the elevators and stairs in a building are being altered and the elevators are, in turn, being made accessible, then no accessibility modifications are required to the stairs connecting levels connected by the elevator. If stair modifications to correct unsafe conditions are required by other codes, the modifications shall be done in compliance with these guidelines unless technically infeasible.

(e) At least one interior public text telephone (TTY) complying with [4.31.9](#) shall be provided if:

(i) alterations to existing buildings or facilities with less than four exterior or interior public pay telephones would increase the total number to four or more telephones with at least one in an interior location; or

(ii) alterations to one or more exterior or interior public pay telephones occur in an existing building or facility with four or more public telephones with at least one in an interior location.

(f) If an escalator or stair is planned or installed where none existed previously and major structural modifications are necessary for such installation, then a means of accessible vertical access shall be provided that complies with the applicable provisions of [4.7](#), [4.8](#), [4.10](#), or [4.11](#).

(g) In alterations, the requirements of [4.1.3\(9\)](#), [4.3.10](#) and [4.3.11](#) do not apply.

(h) * Entrances: If a planned alteration entails alterations to an entrance, and the building has an accessible entrance, the entrance being altered is not required to comply with [4.1.3\(8\)](#), except to the extent required by [4.1.6\(2\)](#). If a particular entrance is not made accessible, appropriate accessible signage indicating the location of the nearest accessible entrance(s) shall be installed at or near the inaccessible entrance, such that a person with disabilities will not be required to retrace the approach route from the inaccessible entrance. [Appendix Note](#)

(i) If the alteration work is limited solely to the electrical, mechanical, or plumbing system, or to hazardous material abatement, or automatic sprinkler retrofitting, and does not involve the alteration of any elements or spaces required to be accessible under these guidelines, then [4.1.6\(2\)](#) does not apply.

(j) EXCEPTION: In alteration work, if compliance with [4.1.6](#) is technically infeasible, the alteration shall provide accessibility to the maximum extent feasible. Any elements or features of the building or facility that are being altered and can be made accessible shall be made accessible within the scope of the alteration.

Technically Infeasible. Means, with respect to an alteration of a building or a facility, that it has little likelihood of being accomplished because existing structural conditions would require removing or altering a load-bearing member which is an essential part of the structural frame; or because other existing physical or site constraints prohibit modification or addition of elements, spaces, or features which are in full and strict compliance with the minimum requirements for new construction and which are necessary to provide accessibility.

(k) EXCEPTION:

(i) These guidelines do not require the installation of an elevator in an altered facility that is exempt from the requirement for an elevator under [4.1.3\(5\)](#).

(ii) The exemption provided in paragraph (i) does not obviate or limit in any way the obligation to comply with the other accessibility requirements established in these guidelines. For example, alterations to floors above or below the ground floor must be accessible regardless of whether the altered facility has an elevator. If a facility subject to the elevator exemption set forth in paragraph (i) nonetheless has a passenger elevator, that elevator shall meet, to the maximum extent feasible, the accessibility requirements of these guidelines.

(2) Alterations to an Area Containing a Primary Function: In addition to the requirements of [4.1.6\(1\)](#), an alteration that affects or could affect the usability of or access to an area containing a primary function shall be made so as to ensure that, to the maximum extent feasible, the path of travel to the altered area and the restrooms, telephones, and drinking fountains serving the altered area, are readily accessible to and usable by individuals with disabilities, unless such alterations are disproportionate to the overall alterations in terms of cost and scope (as determined under criteria established by the Attorney General).

(3) Special Technical Provisions for Alterations to Existing Buildings and Facilities:

(a) Ramps: Curb ramps and interior or exterior ramps to be constructed on sites or in existing buildings or

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facilities where space limitations prohibit the use of a 1:12 slope or less may have slopes and rises as follows:

- (i) A slope between 1:10 and 1:12 is allowed for a maximum rise of 6 inches (150 mm).
 - (ii) A slope between 1:8 and 1:10 is allowed for a maximum rise of 3 inches (75 mm). A slope steeper than 1:8 is not allowed.
- (b) Stairs:** Full extension of handrails at stairs shall not be required in alterations where such extensions would be hazardous or impossible due to plan configuration.
- (c) Elevators:**
- (i) If safety door edges are provided in existing automatic elevators, automatic door reopening devices may be omitted (see [4.10.6](#)).
 - (ii) Where existing shaft configuration or technical infeasibility prohibits strict compliance with [4.10.9](#), the minimum car plan dimensions may be reduced by the minimum amount necessary, but in no case shall the inside car area be smaller than 48 in (1220 mm) by 48 in (1220 mm).
 - (iii) Equivalent facilitation may be provided with an elevator car of different dimensions when usability can be demonstrated and when all other elements required to be accessible comply with the applicable provisions of [4.10](#). For example, an elevator of 47 in by 69 in (1195 mm by 1755 mm) with a door opening on the narrow dimension, could accommodate the standard wheelchair clearances shown in [Figure 4](#).
- (d) Doors:**
- (i) Where it is technically infeasible to comply with clear opening width requirements of [4.13.5](#), a projection of 5/8 in (16 mm) maximum will be permitted for the latch side stop.
 - (ii) If existing thresholds are 3/4 in (19 mm) high or less, and have (or are modified to have) a beveled edge on each side, they may remain.
- (e) Toilet Rooms:**
- (i) Where it is technically infeasible to comply with [4.22](#) or [4.23](#), the installation of at least one unisex toilet/bathroom per floor, located in the same area as existing toilet facilities, will be permitted in lieu of modifying existing toilet facilities to be accessible. Each unisex toilet room shall contain one water closet complying with [4.16](#) and one lavatory complying with [4.19](#), and the door shall have a privacy latch.
 - (ii) Where it is technically infeasible to install a required standard stall ([Fig. 30\(a\)](#)), or where other codes prohibit reduction of the fixture count (i.e., removal of a water closet in order to create a double-wide stall), either alternate stall ([Fig. 30\(b\)](#)) may be provided in lieu of the standard stall.
 - (iii) When existing toilet or bathing facilities are being altered and are not made accessible, signage complying with [4.30.1](#), [4.30.2](#), [4.30.3](#), [4.30.5](#), and [4.30.7](#) shall be provided indicating the location of the nearest accessible toilet or bathing facility within the facility.
- (f) Assembly Areas:**
- (i) Where it is technically infeasible to disperse accessible seating throughout an altered assembly area, accessible seating areas may be clustered. Each accessible seating area shall have provisions for companion seating and shall be located on an accessible route that also serves as a means of emergency egress.
 - (ii) Where it is technically infeasible to alter all performing areas to be on an accessible route, at least one of each type of performing area shall be made accessible.
- (g) Platform Lifts (Wheelchair Lifts):** In alterations, platform lifts (wheelchair lifts) complying with [4.11](#) and applicable state or local codes may be used as part of an accessible route. The use of lifts is not limited to the conditions in [exception 4 of 4.1.3\(5\)](#).
- (h) Dressing Rooms:** In alterations where technical infeasibility can be demonstrated, one dressing room for each sex on each level shall be made accessible. Where only unisex dressing rooms are provided, accessible unisex dressing rooms may be used to fulfill this requirement.

4.1.7 Accessible Buildings: Historic Preservation.

(1)* Applicability:

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(a) General Rule. Alterations to a qualified historic building or facility shall comply with [4.1.6](#) (Accessible Buildings: Alterations), the applicable technical specifications of section 4 and the applicable special application sections unless it is determined in accordance with the procedures in [4.1.7\(2\)](#) that compliance with the requirements for accessible routes (exterior and interior), ramps, entrances, or toilets would threaten or destroy the historic significance of the building or facility in which case the alternative requirements in [4.1.7\(3\)](#) may be used for the feature. [Appendix Note](#)
EXCEPTION: (Reserved).

(b) Definition. A qualified historic building or facility is a building or facility that is:

(i) Listed in or eligible for listing in the National Register of Historic Places; or

(ii) Designated as historic under an appropriate State or local law.

(2) Procedures:

(a) Alterations to Qualified Historic Buildings and Facilities Subject to Section 106 of the National Historic Preservation Act:

(i) Section 106 Process. Section 106 of the National Historic Preservation Act (16 U.S.C. 470 f) requires that a Federal agency with jurisdiction over a Federal, federally assisted, or federally licensed undertaking consider the effects of the agency's undertaking on buildings and facilities listed in or eligible for listing in the National Register of Historic Places and give the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking prior to approval of the undertaking.

(ii) ADA Application. Where alterations are undertaken to a qualified historic building or facility that is subject to section 106 of the National Historic Preservation Act, the Federal agency with jurisdiction over the undertaking shall follow the section 106 process. If the State Historic Preservation Officer or Advisory Council on Historic Preservation agrees that compliance with the requirements for accessible routes (exterior and interior), ramps, entrances, or toilets would threaten or destroy the historic significance of the building or facility, the alternative requirements in [4.1.7\(3\)](#) may be used for the feature.

(b) Alterations to Qualified Historic Buildings and Facilities Not Subject to Section 106 of the National Historic Preservation Act. Where alterations are undertaken to a qualified historic building or facility that is not subject to section 106 of the National Historic Preservation Act, if the entity undertaking the alterations believes that compliance with the requirements for accessible routes (exterior and interior), ramps, entrances, or toilets would threaten or destroy the historic significance of the building or facility and that the alternative requirements in [4.1.7\(3\)](#) should be used for the feature, the entity should consult with the State Historic Preservation Officer. If the State Historic Preservation Officer agrees that compliance with the accessibility requirements for accessible routes (exterior and interior), ramps, entrances or toilets would threaten or destroy the historical significance of the building or facility, the alternative requirements in [4.1.7\(3\)](#) may be used.

(c) Consultation With Interested Persons. Interested persons should be invited to participate in the consultation process, including State or local accessibility officials, individuals with disabilities, and organizations representing individuals with disabilities.

(d) Certified Local Government Historic Preservation Programs. Where the State Historic Preservation Officer has delegated the consultation responsibility for purposes of this section to a local government historic preservation program that has been certified in accordance with section 101(c) of the National Historic Preservation Act of 1966 (16 U.S.C. 470a (c)) and implementing regulations (36 C.F.R. 61.5), the responsibility may be carried out by the appropriate local government body or official.

(3) Historic Preservation: Minimum Requirements:

(a) At least one accessible route complying with [4.3](#) from a site access point to an accessible entrance shall be provided.

EXCEPTION: A ramp with a slope no greater than 1:6 for a run not to exceed 2 ft (610 mm) may be used as part of an accessible route to an entrance.

(b) At least one accessible entrance complying with [4.14](#) which is used by the public shall be provided.

EXCEPTION: If it is determined that no entrance used by the public can comply with [4.14](#), then access at any entrance not used by the general public but open (unlocked) with directional signage at the primary entrance may be used. The accessible entrance shall also have a notification system. Where security is a problem, remote monitoring may be used.

(c) If toilets are provided, then at least one toilet facility complying with [4.22](#) and [4.1.6](#) shall be provided along an accessible route that complies with [4.3](#). Such toilet facility may be unisex in design.

(d) Accessible routes from an accessible entrance to all publicly used spaces on at least the level of the

accessible entrance shall be provided. Access shall be provided to all levels of a building or facility in compliance with [4.1](#) whenever practical.

(e) Displays and written information, documents, etc., should be located where they can be seen by a seated person. Exhibits and signage displayed horizontally (e.g., open books), should be no higher than 44 in (1120 mm) above the floor surface.

4.2 Space Allowance and Reach Ranges.

4.2.1* Wheelchair Passage Width. The minimum clear width for single wheelchair passage shall be 32 in (815 mm) at a point and 36 in (915 mm) continuously (see Fig. 1 and 24(e)). [Appendix Note](#)

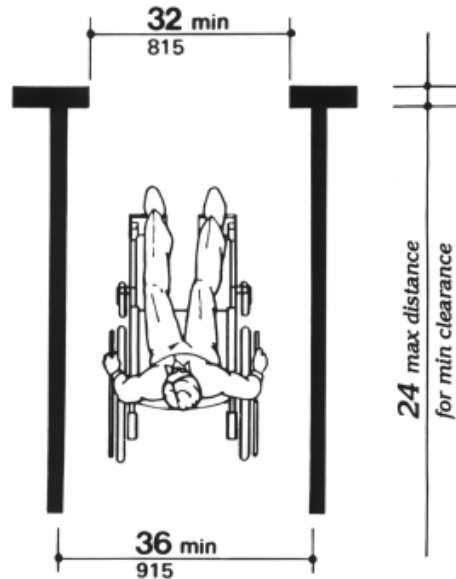


Figure 1
Minimum Clear Width for Single Wheelchair

4.2.2 Width for Wheelchair Passing. The minimum width for two wheelchairs to pass is 60 in (1525 mm) (see [Fig. 2](#)).

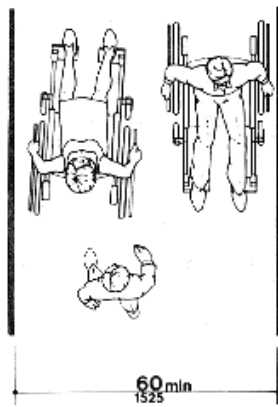


Figure 2
Minimum Clear Width for Two Wheelchairs

4.2.3* Wheelchair Turning Space. The space required for a wheelchair to make a 180-degree turn is a clear space of 60 in (1525 mm) diameter (see Fig. 3(a)) or a T-shaped space (see Fig. 3(b)). [Appendix Note](#)

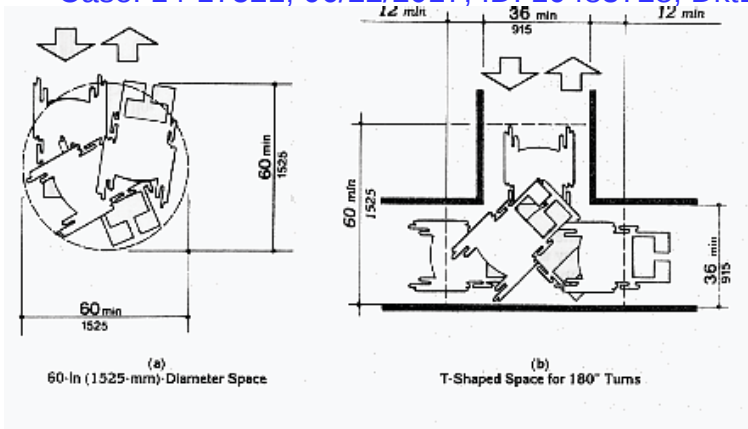


Figure 3
Wheelchair Turning Space

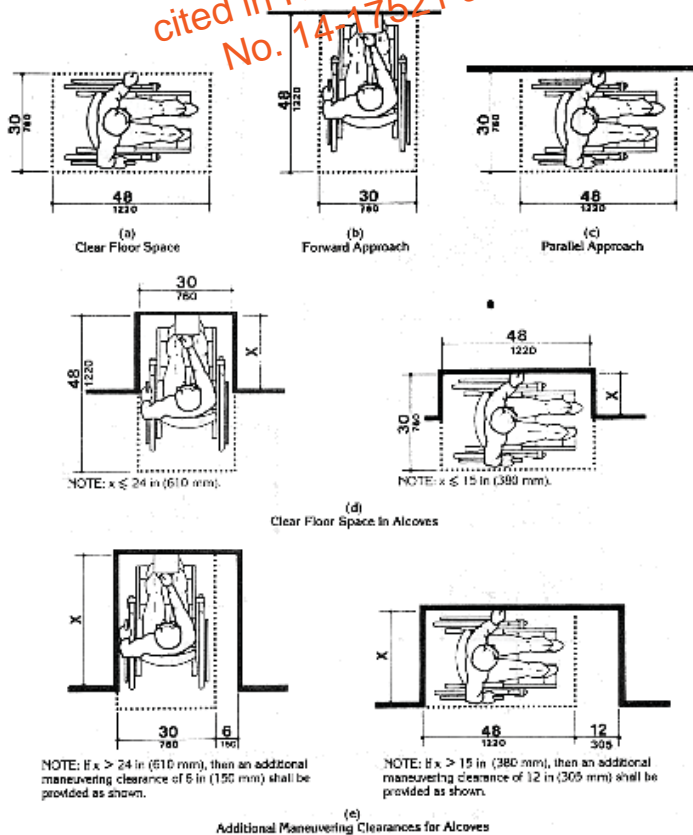
4.2.4* Clear Floor or Ground Space for Wheelchairs.

4.2.4.1 Size and Approach. The minimum clear floor or ground space required to accommodate a single, stationary wheelchair and occupant is 30 in by 48 in (760 mm by 1220 mm) (see Fig. 4(a)). The minimum clear floor or ground space for wheelchairs may be positioned for forward or parallel approach to an object (see Fig. 4(b) and (c)). Clear floor or ground space for wheelchairs may be part of the knee space required under some objects.

4.2.4.2 Relationship of Maneuvering Clearance to Wheelchair Spaces. One full unobstructed side of the clear floor or ground space for a wheelchair shall adjoin or overlap an accessible route or adjoin another wheelchair clear floor space. If a clear floor space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances shall be provided as shown in Fig. 4(d) and (e).

4.2.4.3 Surfaces for Wheelchair Spaces. Clear floor or ground spaces for wheelchairs shall comply with

4.5. Appendix Note



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Figure 4

Minimum Clear Floor Space for Wheelchairs

4.2.5* Forward Reach. If the clear floor space only allows forward approach to an object, the maximum high forward reach allowed shall be 48 in (1220 mm) (see Fig. 5(a)). The minimum low forward reach is 15 in (380 mm). If the high forward reach is over an obstruction, reach and clearances shall be as shown in Fig. 5(b). [Appendix Note](#)

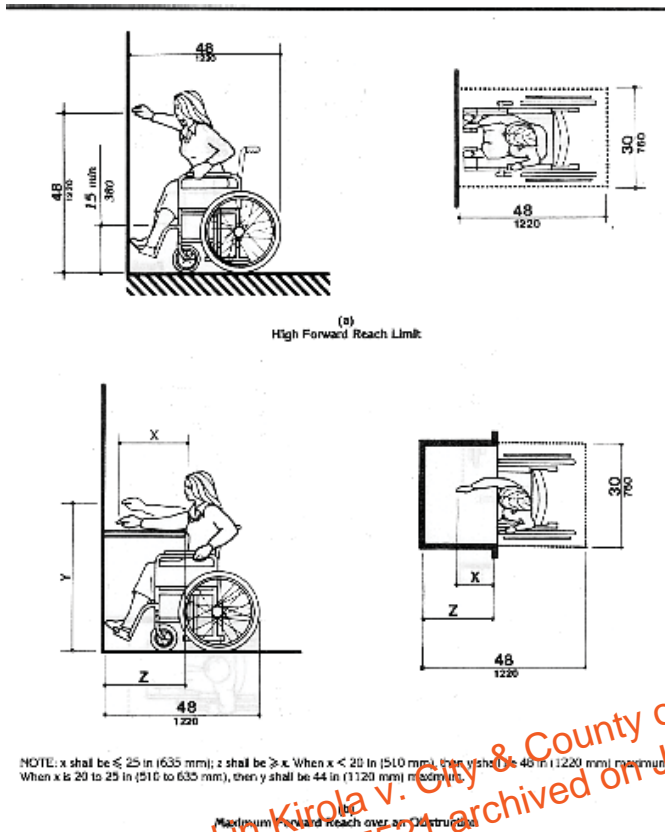


Figure 5

Forward Reach

4.2.6* Side Reach. If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 in (1370 mm) and the low side reach shall be no less than 9 in (230 mm) above the floor (Fig. 6(a) and (b)). If the side reach is over an obstruction, the reach and clearances shall be as shown in [Fig 6\(c\)](#). [Appendix Note](#)

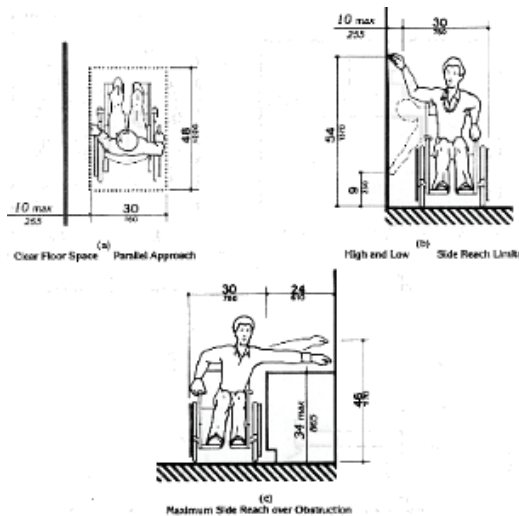


Figure 6

Side Reach

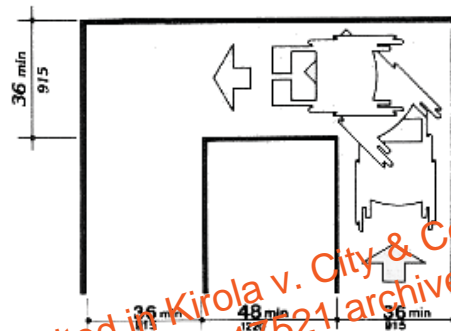
4.3 Accessible Route.

4.3.1* General. All walks, halls, corridors, aisles, skywalks, tunnels, and other spaces that are part of an accessible route shall comply with **4.3. Appendix Note**

4.3.2 Location.

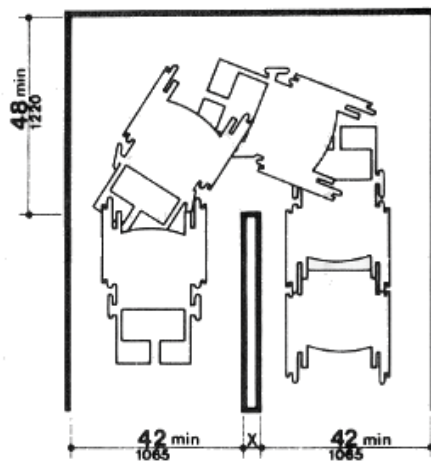
- (1) At least one accessible route within the boundary of the site shall be provided from public transportation stops, accessible parking, and accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance they serve. The accessible route shall, to the maximum extent feasible, coincide with the route for the general public.
- (2) At least one accessible route shall connect accessible buildings, facilities, elements, and spaces that are on the same site.
- (3) At least one accessible route shall connect accessible building or facility entrances with all accessible spaces and elements and with all accessible dwelling units within the building or facility.
- (4) An accessible route shall connect at least one accessible entrance of each accessible dwelling unit with those exterior and interior spaces and facilities that serve the accessible dwelling unit.

4.3.3 Width. The minimum clear width of an accessible route shall be 36 in (915 mm) except at doors (see **4.13.5** and **4.13.6**). If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in Fig. 7(a) and (b).



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**Figure 7(a)
Accessible Route
90 Degree Turn**



NOTE: Dimensions shown apply when x < 48 in (1220 mm).

**Figure 7(b)
Accessible Route
Turns around an Obstruction**

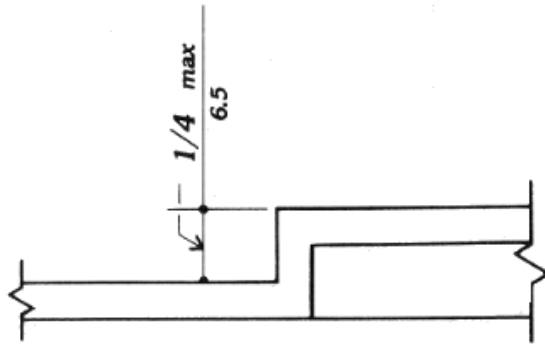


Figure 7(c)
Accessible Route
Changes in level

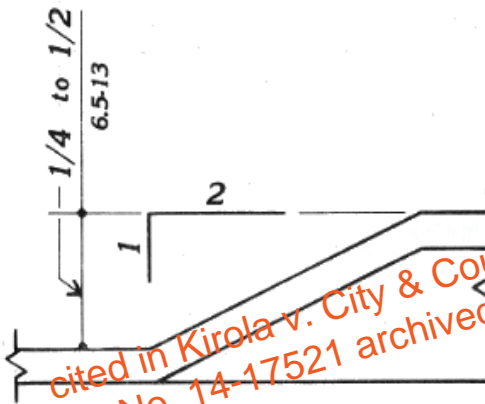


Figure 7(d)
Accessible Route
Changes in level

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4.3.4 Passing Space. If an accessible route has less than 60 in (1525 mm) clear width, then passing spaces at least 60 in by 60 in (1525 mm by 1525 mm) shall be located at reasonable intervals not to exceed 200 ft (61 m). A T-intersection of two corridors or walks is an acceptable passing place.

4.3.5 Head Room. Accessible routes shall comply with [4.4.2](#).

4.3.6 Surface Textures. The surface of an accessible route shall comply with [4.5](#).

4.3.7 Slope. An accessible route with a running slope greater than 1:20 is a ramp and shall comply with [4.8](#). Nowhere shall the cross slope of an accessible route exceed 1:50.

4.3.8 Changes in Levels. Changes in levels along an accessible route shall comply with [4.5.2](#). If an accessible route has changes in level greater than 1/2 in (13 mm), then a curb ramp, ramp, elevator, or platform lift (as permitted in [4.1.3](#) and [4.1.6](#)) shall be provided that complies with [4.7](#), [4.8](#), [4.10](#), or [4.11](#), respectively. An accessible route does not include stairs, steps, or escalators. See definition of "egress, means of" in [3.5](#).

4.3.9 Doors. Doors along an accessible route shall comply with [4.13](#).

4.3.10* Egress. Accessible routes serving any accessible space or element shall also serve as a means of egress for emergencies or connect to an accessible area of rescue assistance. [Appendix Note](#)

4.3.11 Areas of Rescue Assistance.

4.3.11.1 Location and Construction. An area of rescue assistance shall be one of the following:

- (1) A portion of a stairway landing within a smokeproof enclosure (complying with local requirements).
- (2) A portion of an exterior exit balcony located immediately adjacent to an exit stairway when the balcony complies with local requirements for exterior exit balconies. Openings to the interior of the building located within 20 feet (6 m) of the area of rescue assistance shall be protected with fire assemblies having a three- fourths hour fire protection rating.
- (3) A portion of a one-hour fire-resistive corridor (complying with local requirements for fire-resistive construction and for openings) located immediately adjacent to an exit enclosure.
- (4) A vestibule located immediately adjacent to an exit enclosure and constructed to the same fire-resistive standards as required for corridors and openings.
- (5) A portion of a stairway landing within an exit enclosure which is vented to the exterior and is separated from the interior of the building with not less than one-hour fire-resistive doors.
- (6) When approved by the appropriate local authority, an area or a room which is separated from other portions of the building by a smoke barrier. Smoke barriers shall have a fire-resistive rating of not less than one hour and shall completely enclose the area or room. Doors in the smoke barrier shall be tight-fitting smoke- and draft-control assemblies having a fire-protection rating of not less than 20 minutes and shall be self-closing or automatic closing. The area or room shall be provided with an exit directly to an exit enclosure. Where the room or area exits into an exit enclosure which is required to be of more than one-hour fire- resistive construction, the room or area shall have the same fire- resistive construction, including the same opening protection, as required for the adjacent exit enclosure.
- (7) An elevator lobby when elevator shafts and adjacent lobbies are pressurized as required for smokeproof enclosures by local regulations and when complying with requirements herein for size, communication, and signage. Such pressurization system shall be activated by smoke detectors on each floor located in a manner approved by the appropriate local authority. Pressurization equipment and its duct work within the building shall be separated from other portions of the building by a minimum two-hour fire- resistive construction.

4.3.11.2 Size. Each area of rescue assistance shall provide at least two accessible areas each being not less than 30 inches by 48 inches (760 mm by 1220 mm). The area of rescue assistance shall not encroach on any required exit width. The total number of such 30-inch by 48-inch (760 mm by 1220 mm) areas per story shall be not less than one for every 200 persons of calculated occupant load served by the area of rescue assistance.

EXCEPTION: The appropriate local authority may reduce the minimum number of 30-inch by 48-inch (760 mm by 1220 mm) areas to one for each area of rescue assistance on floors where the occupant load is less than 200.

4.3.11.3* Stairway Width. Each stairway adjacent to an area of rescue assistance shall have a minimum clear width of 48 inches between handrails. [Appendix Note](#)

4.3.11.4* Two-way Communication. A method of two-way communication, with both visible and audible signals, shall be provided between each area of rescue assistance and the primary entry. The fire department or appropriate local authority may approve a location other than the primary entry. [Appendix Note](#)

4.3.11.5 Identification. Each area of rescue assistance shall be identified by a sign which states "AREA OF RESCUE ASSISTANCE" and displays the international symbol of accessibility. The sign shall be illuminated when exit sign illumination is required. Signage shall also be installed at all inaccessible exits and where otherwise necessary to clearly indicate the direction to areas of rescue assistance. In each area of rescue assistance, instructions on the use of the area under emergency conditions shall be posted adjoining the two-way communication system.

4.4 Protruding Objects.

4.4.1* General. Objects projecting from walls (for example, telephones) with their leading edges between 27 in and 80 in (685 mm and 2030 mm) above the finished floor shall protrude no more than 4 in (100 mm) into walks, halls, corridors, passageways, or aisles (see Fig. 8(a)). Objects mounted with their leading edges at or below 27 in (685 mm) above the finished floor may protrude any amount (see Fig. 8(a) and (b)). Free-standing objects mounted on posts or pylons may overhang 12 in (305 mm) maximum from 27 in to 80 in (685 mm to 2030 mm) above the ground or finished floor (see Fig. 8(c) and (d)). Protruding objects shall not reduce the clear width of an accessible route or maneuvering space (see Fig. 8(e)). [Appendix Note](#)

4.4.2 Head Room. Walks, halls, corridors, passageways, aisles, or other circulation spaces shall have 80 in (2030 mm) minimum clear head room (see Fig. 8(a)). If vertical clearance of an area adjoining an accessible route is reduced to less than 80 in (nominal dimension), a barrier to warn blind or visually-impaired persons shall be provided (see Fig. 8(c-1)).

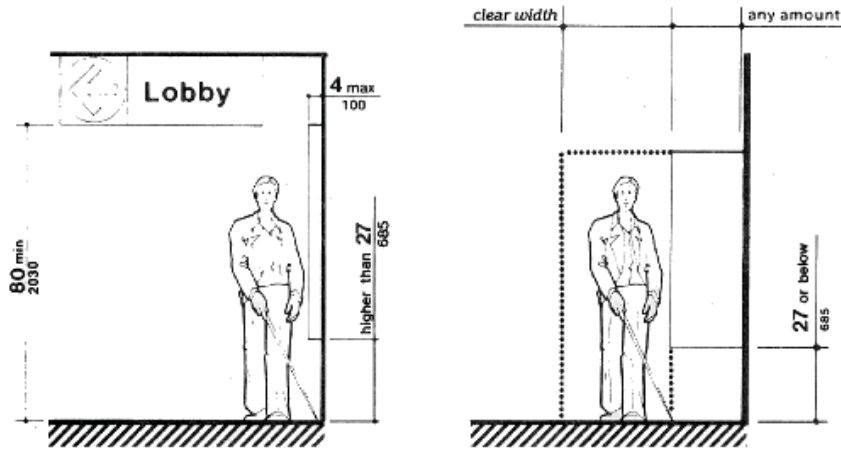


Figure 8a
Protruding Objects
Walking Parallel to a Wall

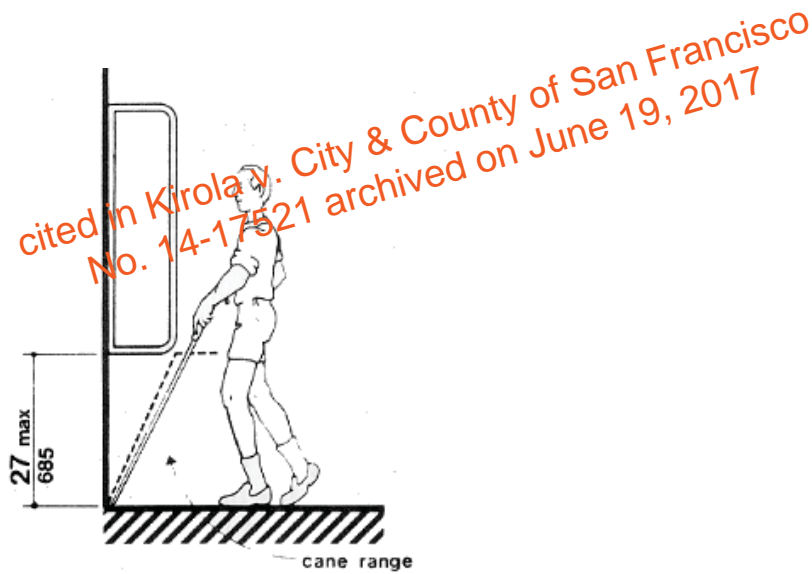


Figure 8b
Protruding Objects
Walking Perpendicular to a Wall

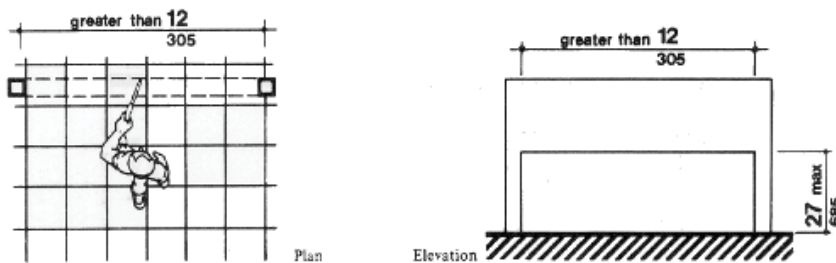


Figure 8c

Protruding Objects
Free-Standing Overhanging Objects

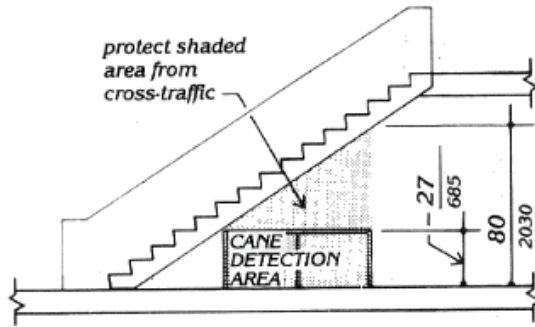
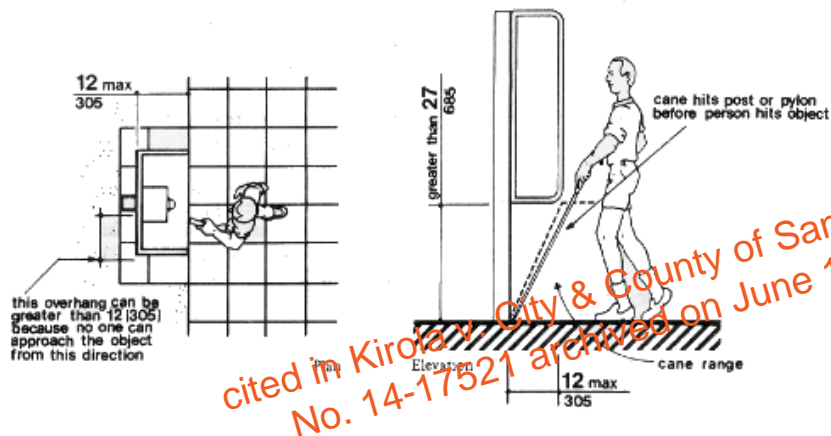


Figure 8c-1
Protruding Objects
Overhead Hazards



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Figure 8d
Protruding Objects
Objects Mounted on Posts or Pylons

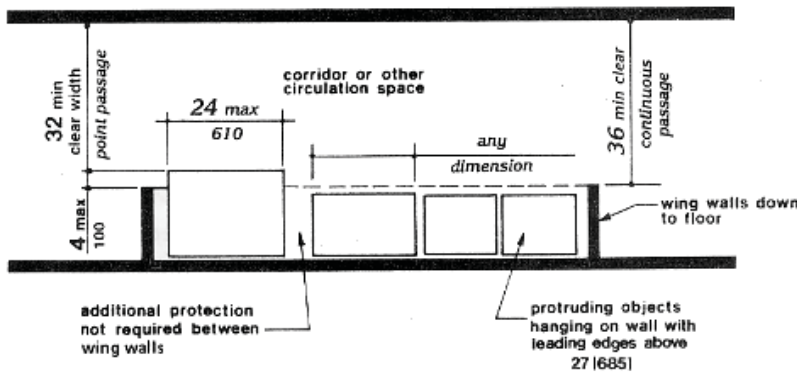


Figure 8e
Protruding Objects

Example of Protection around Wall-Mounted Objects and Measurements of Clear Widths

4.5.1* General. Ground and floor surfaces along accessible routes and in accessible rooms and spaces including floors, walks, ramps, stairs, and curb ramps, shall be stable, firm, slip-resistant, and shall comply with 4.5. **Appendix Note**

4.5.2 Changes in Level. Changes in level up to 1/4 in (6 mm) may be vertical and without edge treatment (see Fig. 7(c)). Changes in level between 1/4 in and 1/2 in (6 mm and 13 mm) shall be beveled with a slope no greater than 1:2 (see Fig. 7(d)). Changes in level greater than 1/2 in (13 mm) shall be accomplished by means of a ramp that complies with 4.7 or 4.8.

4.5.3* Carpet. If carpet or carpet tile is used on a ground or floor surface, then it shall be securely attached; have a firm cushion, pad, or backing, or no cushion or pad; and have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. The maximum pile thickness shall be 1/2 in (13 mm) (see Fig. 8(f)). Exposed edges of carpet shall be fastened to floor surfaces and have trim along the entire length of the exposed edge. Carpet edge trim shall comply with 4.5.2. **Appendix Note**

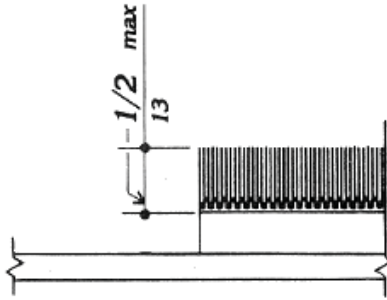


Figure 8F
Carpet Pile Thickness

4.5.4 Gratings. If gratings are located in walking surfaces, then they shall have spaces no greater than 1/2 in (13 mm) wide in one direction (see Fig. 8(g)). If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel (see Fig. 8(h)).

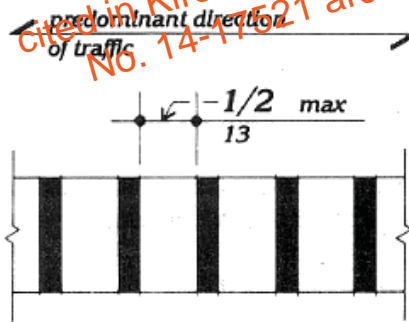
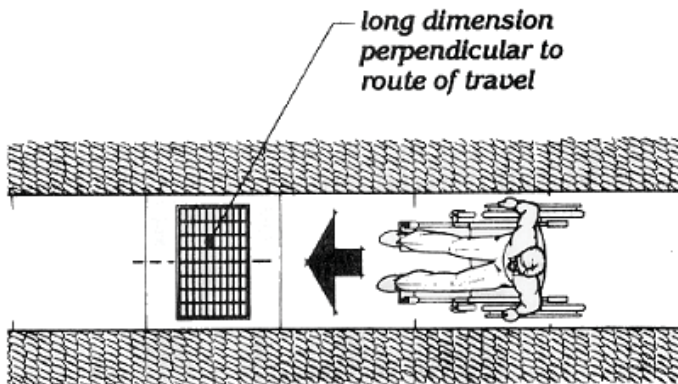


Figure 8G
Gratings



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Figure 8h
Gratings Orientation

4.6 Parking and Passenger Loading Zones.

4.6.1 Minimum Number. Parking spaces required to be accessible by [4.1](#) shall comply with 4.6.2 through 4.6.5. Passenger loading zones required to be accessible by [4.1](#) shall comply with [4.6.5](#) and [4.6.6](#).

4.6.2 Location. Accessible parking spaces serving a particular building shall be located on the shortest accessible route of travel from adjacent parking to an accessible entrance. In parking facilities that do not serve a particular building, accessible parking shall be located on the shortest accessible route of travel to an accessible pedestrian entrance of the parking facility. In buildings with multiple accessible entrances with adjacent parking, accessible parking spaces shall be dispersed and located closest to the accessible entrances.

4.6.3* Parking Spaces. Accessible parking spaces shall be at least 96 in (2440 mm) wide. Parking access aisles shall be part of an accessible route to the building or facility entrance and shall comply with [4.3](#). Two accessible parking spaces may share a common access aisle (see Fig. 9). Parked vehicle overhangs shall not reduce the clear width of an accessible route. Parking spaces and access aisles shall be level with surface slopes not exceeding 1:50 (2%) in all directions. [Appendix Note](#)

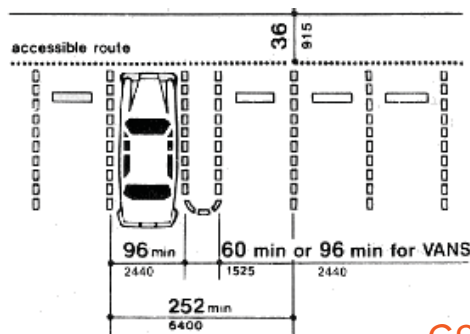


Figure 9
Dimensions of Parking Spaces

4.6.4* Signage. Accessible parking spaces shall be designated as reserved by a sign showing the symbol of accessibility (see 4.30.7). Spaces complying with [4.1.2\(5\)\(b\)](#) shall have an additional sign "Van-Accessible" mounted below the symbol of accessibility. Such signs shall be located so they cannot be obscured by a vehicle parked in the space. [Appendix Note](#)

4.6.5* Vertical Clearance. Provide minimum vertical clearance of 114 in (2895 mm) at accessible passenger loading zones and along at least one vehicle access route to such areas from site entrance(s) and exit(s). At parking spaces complying with [4.1.2\(5\)\(b\)](#), provide minimum vertical clearance of 98 in (2490 mm) at the parking space and along at least one vehicle access route to such spaces from site entrance(s) and exit(s). [Appendix Note](#)

4.6.6 Passenger Loading Zones. Passenger loading zones shall provide an access aisle at least 60 in (1525 mm) wide and 20 ft (240 in)(6100 mm) long adjacent and parallel to the vehicle pull-up space (see Fig. 10). If there are curbs between the access aisle and the vehicle pull-up space, then a curb ramp complying with [4.7](#) shall be provided. Vehicle standing spaces and access aisles shall be level with surface slopes not exceeding 1:50 (2%) in all directions.

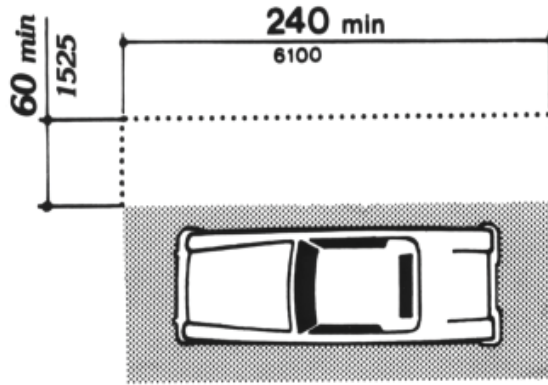


Figure 10
Access Aisle at Passenger Loading Zones

4.7 Curb Ramps.

4.7.1 Location. Curb ramps complying with 4.7 shall be provided wherever an accessible route crosses a curb.

4.7.2 Slope. Slopes of curb ramps shall comply with 4.8.2. The slope shall be measured as shown in Fig. 11. Transitions from ramps to walks, gutters, or streets shall be flush and free of abrupt changes. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed 1:20.

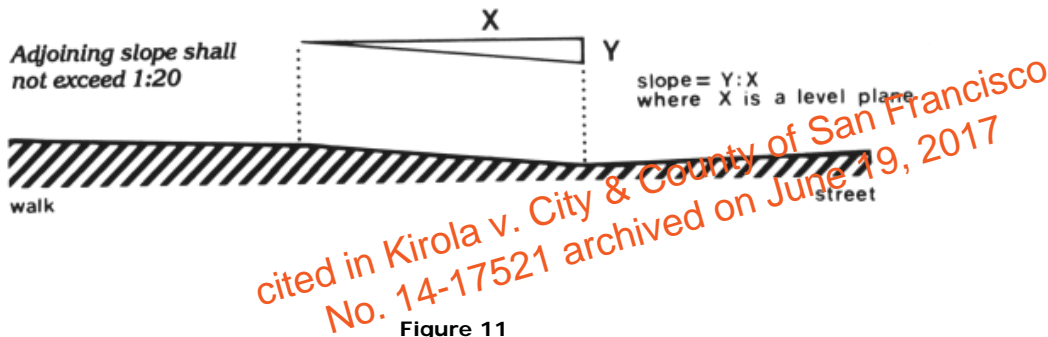


Figure 11
Measurement of Curb Ramp Slopes

4.7.3 Width. The minimum width of a curb ramp shall be 36 in (915 mm), exclusive of flared sides.

4.7.4 Surface. Surfaces of curb ramps shall comply with 4.5.

4.7.5 Sides of Curb Ramps. If a curb ramp is located where pedestrians must walk across the ramp, or where it is not protected by handrails or guardrails, it shall have flared sides; the maximum slope of the flare shall be 1:10 (see Fig. 12(a)). Curb ramps with returned curbs may be used where pedestrians would not normally walk across the ramp (see Fig. 12(b)).

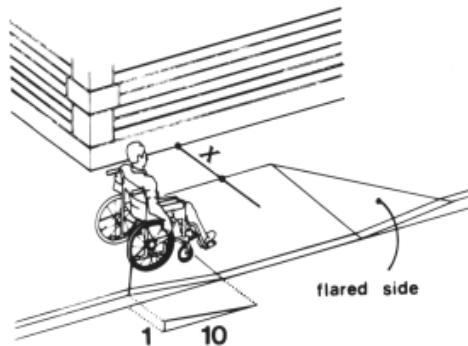


Figure 12(a)
Sides of Curb Ramps
Flared Sides

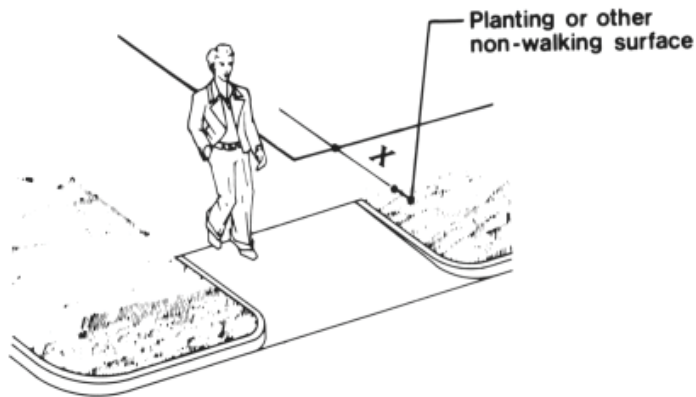
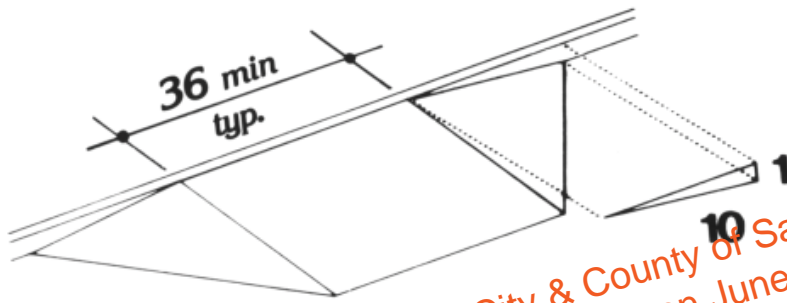


Figure 12(b)
Sides of Curb Ramps
Returned Curb

4.7.6 Built-up Curb Ramps. Built-up curb ramps shall be located so that they do not project into vehicular traffic lanes (see Fig. 13).



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Figure 13
Built-Up Curb Ramp

4.7.7 Detectable Warnings. A curb ramp shall have a detectable warning complying with [4.29.2](#). The detectable warning shall extend the full width and depth of the curb ramp.

4.7.8 Obstructions. Curb ramps shall be located or protected to prevent their obstruction by parked vehicles.

4.7.9 Location at Marked Crossings. Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides (see Fig. 15).

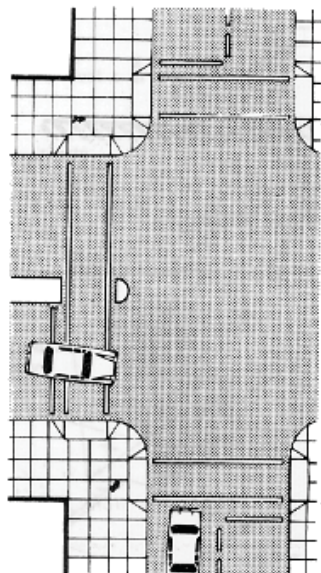


Figure 15a
Curb Ramp at Marked Crossings

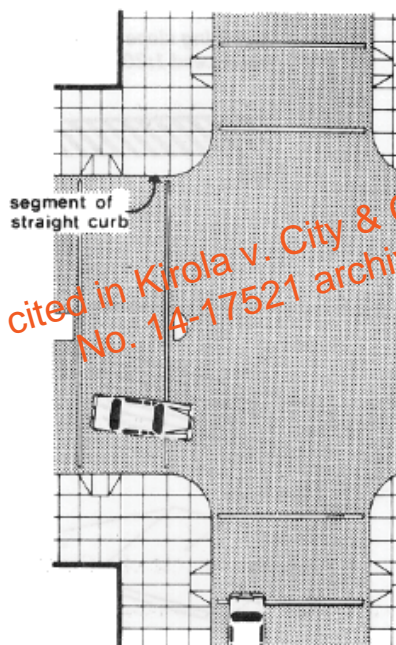


Figure 15b
Curb Ramp at Marked Crossings

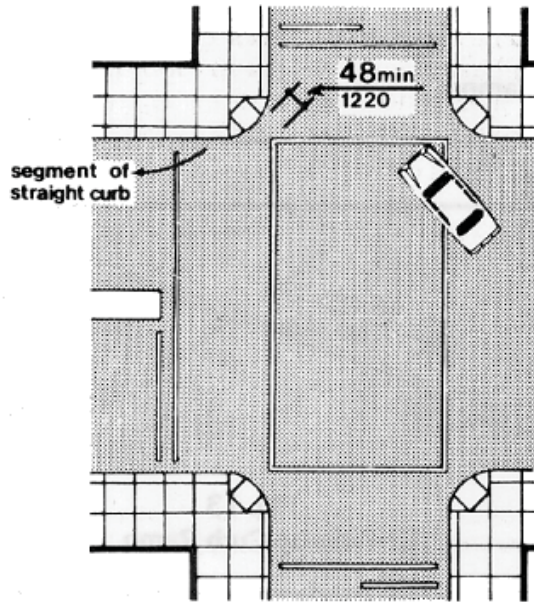


Figure 15c
Curb Ramp at Marked Crossings

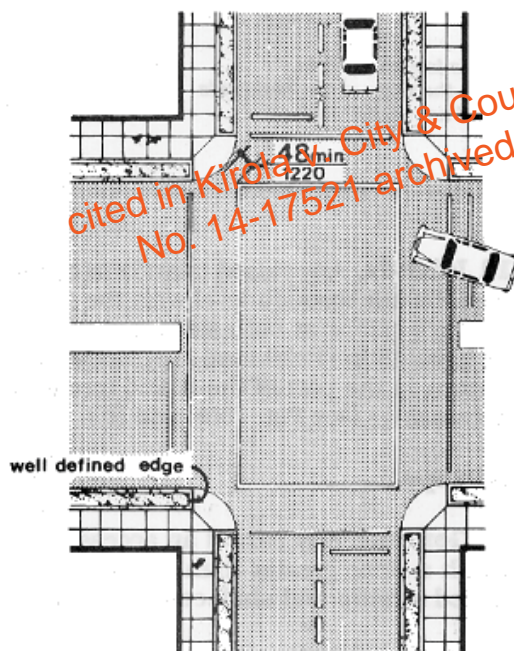


Figure 15d
Curb Ramp at Marked Crossings

4.7.10 Diagonal Curb Ramps. If diagonal (or corner type) curb ramps have returned curbs or other well-defined edges, such edges shall be parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have 48 in (1220 mm) minimum clear space as shown in Fig. 15(c) and (d). If diagonal curb ramps are provided at marked crossings, the 48 in (1220 mm) clear space shall be within the markings (see Fig. 15(c) and (d)). If diagonal curb ramps have flared sides, they shall also have at least a 24 in (610 mm) long segment of straight curb located on each side of the curb ramp and within the marked crossing (see Fig. 15(c)).

4.7.11 Islands. Any raised islands in crossings shall be cut through level with the street or have curb ramps at both sides and a level area at least 48 in (1220 mm) long between the curb ramps in the part of the island intersected by the crossings (see Fig. 15(a) and (b)).

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4.8 Ramps.

4.8.1* General. Any part of an accessible route with a slope greater than 1:20 shall be considered a ramp and shall comply with 4.8. [Appendix Note](#)

4.8.2* Slope and Rise. The least possible slope shall be used for any ramp. The maximum slope of a ramp in new construction shall be 1:12. The maximum rise for any run shall be 30 in (760 mm) (see Fig. 16). Curb ramps and ramps to be constructed on existing sites or in existing buildings or facilities may have slopes and rises as allowed in [4.1.6\(3\)\(a\)](#) if space limitations prohibit the use of a 1:12 slope or less. [Appendix Note](#)

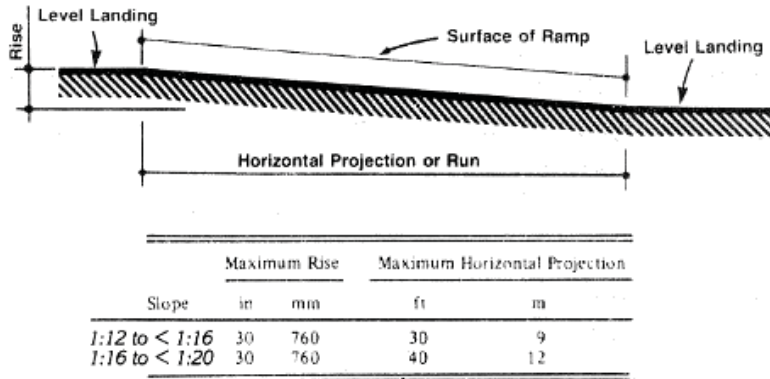


Figure 16
Components of a Single Ramp Run and Sample Ramp Dimensions

4.8.3 Clear Width. The minimum clear width of a ramp shall be 36 in (915 mm).

4.8.4* Landings. Ramps shall have level landings at bottom and top of each ramp and each ramp run. Landings shall have the following features:

- (1) The landing shall be at least as wide as the ramp run leading to it.
- (2) The landing length shall be a minimum of 60 in (1525 mm) clear.
- (3) If ramps change direction at landings, the minimum landing size shall be 60 in by 60 in (1525 mm by 1525 mm).
- (4) If a doorway is located at a landing, then the area in front of the doorway shall comply with [4.13.6](#).

[Appendix Note](#)

4.8.5* Handrails. If a ramp run has a rise greater than 6 in (150 mm) or a horizontal projection greater than 72 in (1830 mm), then it shall have handrails on both sides. Handrails are not required on curb ramps or adjacent to seating in assembly areas. Handrails shall comply with [4.26](#) and shall have the following features:

- (1) Handrails shall be provided along both sides of ramp segments. The inside handrail on switchback or dogleg ramps shall always be continuous.
- (2) If handrails are not continuous, they shall extend at least 12 in (305 mm) beyond the top and bottom of the ramp segment and shall be parallel with the floor or ground surface (see Fig. 17).

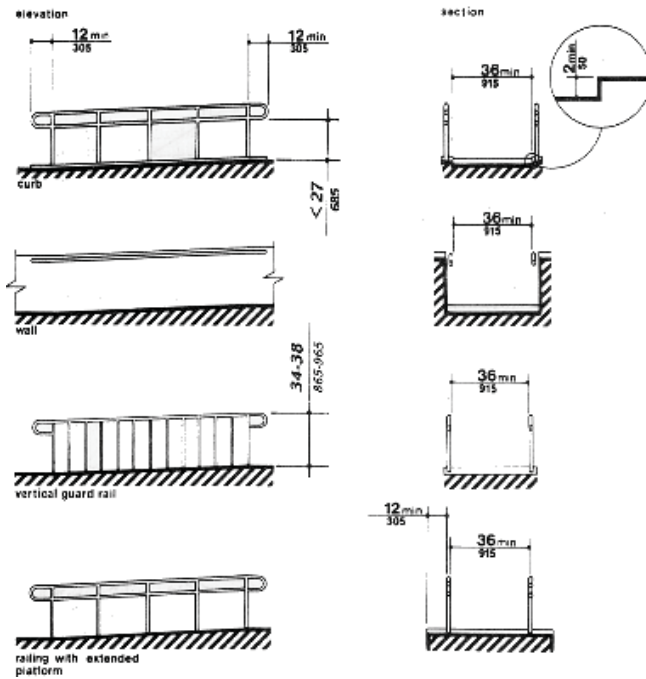


Figure 17
Examples of Edge Protection and Handrail Extensions

- (3) The clear space between the handrail and the wall shall be 1 - 1/2 in (38 mm).
- (4) Gripping surfaces shall be continuous.
- (5) Top of handrail gripping surfaces shall be mounted between 34 in and 38 in (865 mm and 965 mm) above ramp surfaces.
- (6) Ends of handrails shall be either rounded or returned smoothly to the floor, wall, or post.
- (7) Handrails shall not rotate within their fittings. [Appendix Note](#)

4.8.6 Cross Slope and Surfaces. The cross slope of ramp surfaces shall be no greater than 1:50. Ramp surfaces shall comply with [4.5](#).

4.8.7 Edge Protection. Ramps and landings with drop-offs shall have curbs, walls, railings, or projecting surfaces that prevent people from slipping off the ramp. Curbs shall be a minimum of 2 in (50 mm) high (see Fig. 17).

4.8.8 Outdoor Conditions. Outdoor ramps and their approaches shall be designed so that water will not accumulate on walking surfaces.

4.9 Stairs.

4.9.1* Minimum Number. Stairs required to be accessible by [4.1](#) shall comply with 4.9. [Appendix Note](#)

4.9.2 Treads and Risers. On any given flight of stairs, all steps shall have uniform riser heights and uniform tread widths. Stair treads shall be no less than 11 in (280 mm) wide, measured from riser to riser (see Fig. 18(a)). Open risers are not permitted.

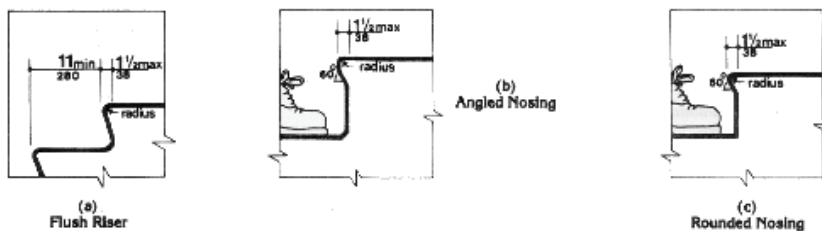


Figure 18

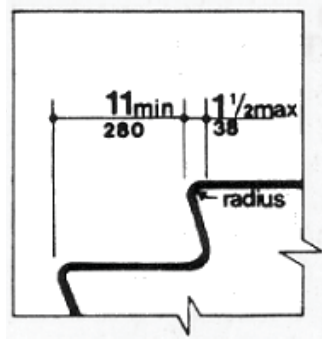


Figure 18a

Usable Tread Width and Examples of Acceptable Nosings - Flush Riser

4.9.3 Nosings. The undersides of nosings shall not be abrupt. The radius of curvature at the leading edge of the tread shall be no greater than 1/2 in (13 mm). Risers shall be sloped or the underside of the nosing shall have an angle not less than 60 degrees from the horizontal. Nosings shall project no more than 1-1/2 in (38 mm) (see Fig. 18).

4.9.4* Handrails. Stairways shall have handrails at both sides of all stairs. Handrails shall comply with **4.26** and shall have the following features:

(1) Handrails shall be continuous along both sides of stairs. The inside handrail on switchback or dogleg stairs shall always be continuous (see Fig. 19(a) and (b)).

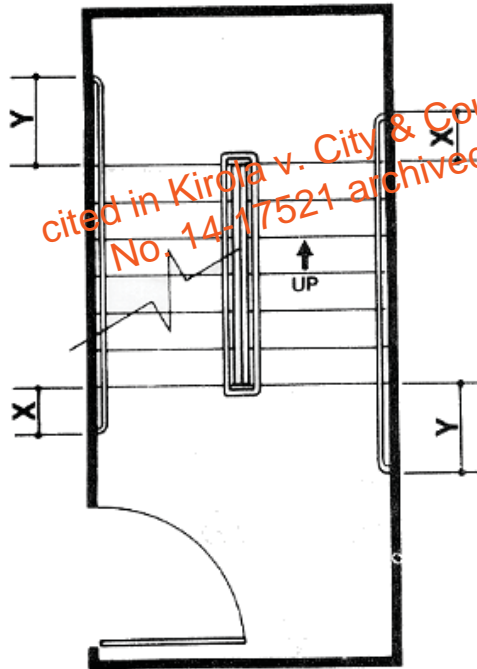


Figure 19a
Stair Handrails - Plan

NOTE:

X is the 12 in minimum handrail extension required at each top riser.

Y is the minimum handrail extension of 12 in plus the width of one tread that is required at each bottom riser.

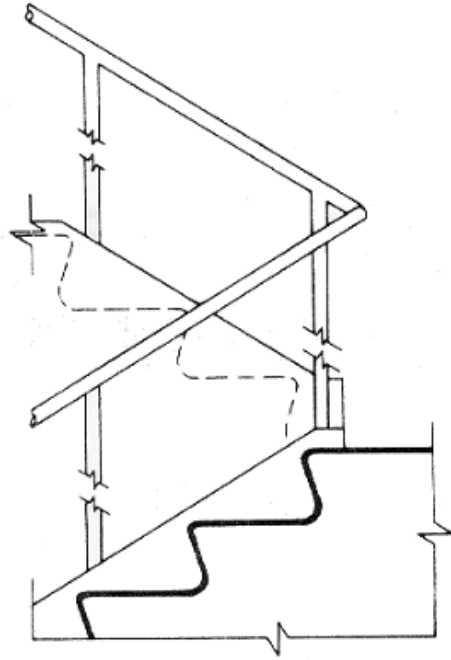


Figure 19b
Stair Handrails - Elevation of Center Handrail

NOTE:

X is the 12 in minimum handrail extension required at each top riser.

Y is the minimum handrail extension of 12 in plus the width of one tread that is required at each bottom riser.

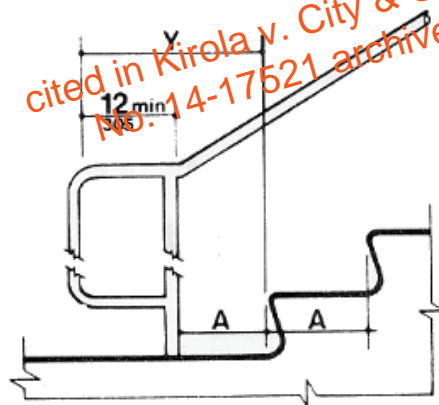


Figure 19c
Stair Handrails - Extension at Bottom of Run

NOTE:

X is the 12 in minimum handrail extension required at each top riser.

Y is the minimum handrail extension of 12 in plus the width of one tread that is required at each bottom riser.

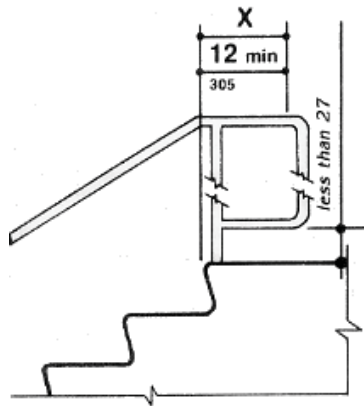


Figure 19d
Stair Handrails - Extension at Top of Run

NOTE:

X is the 12 in minimum handrail extension required at each top riser.

Y is the minimum handrail extension of 12 in plus the width of one tread that is required at each bottom riser.

(2) If handrails are not continuous, they shall extend at least 12 in (305 mm) beyond the top riser and at least 12 in (305 mm) plus the width of one tread beyond the bottom riser. At the top, the extension shall be parallel with the floor or ground surface. At the bottom, the handrail shall continue to slope for a distance of the width of one tread from the bottom riser; the remainder of the extension shall be horizontal (see Fig. 19(c) and (d)). Handrail extensions shall comply with [4.4](#).

(3) The clear space between handrails and wall shall be 1-1/2 in (38 mm).

(4) Gripping surfaces shall be uninterrupted by newel posts, other construction elements, or obstructions.

(5) Top of handrail gripping surface shall be mounted between 34 in and 38 in (865 mm and 965 mm) above stair nosings.

(6) Ends of handrails shall be either rounded or returned smoothly to floor, wall or post.

(7) Handrails shall not rotate within their fittings. [Appendix Note](#)

4.9.5 Detectable Warnings at Stairs. (Reserved).

4.9.6 Outdoor Conditions. Outdoor stairs and their approaches shall be designed so that water will not accumulate on walking surfaces.

4.10 Elevators.

4.10.1 General. Accessible elevators shall be on an accessible route and shall comply with 4.10 and with the ASME A17.1-1990, Safety Code for Elevators and Escalators. Freight elevators shall not be considered as meeting the requirements of this section unless the only elevators provided are used as combination passenger and freight elevators for the public and employees.

4.10.2 Automatic Operation. Elevator operation shall be automatic. Each car shall be equipped with a self-leveling feature that will automatically bring the car to floor landings within a tolerance of 1/2 in (13 mm) under rated loading to zero loading conditions. This self-leveling feature shall be automatic and independent of the operating device and shall correct the overtravel or undertravel.

4.10.3 Hall Call Buttons. Call buttons in elevator lobbies and halls shall be centered at 42 in (1065 mm) above the floor. Such call buttons shall have visual signals to indicate when each call is registered and when each call is answered. Call buttons shall be a minimum of 3/4 in (19 mm) in the smallest dimension. The button designating the up direction shall be on top. (See Fig. 20.) Buttons shall be raised or flush. Objects mounted beneath hall call buttons shall not project into the elevator lobby more than 4 in (100 mm).

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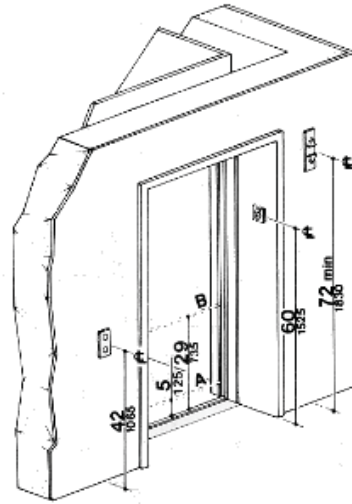


Figure 20
Hoistway and Elevator Entrances

NOTE:

The automatic door reopening device is activated if an object passes through either line A or line B. Line A and line B represent the vertical locations of the door reopening device not requiring contact.

4.10.4 Hall Lanterns. A visible and audible signal shall be provided at each hoistway entrance to indicate which car is answering a call. Audible signals shall sound once for the up direction and twice for the down direction or shall have verbal annunciators that say "up" or "down." Visible signals shall have the following features:

- (1) Hall lantern fixtures shall be mounted so that their centerline is at least 72 in (1830 mm) above the lobby floor. (See Fig. 20.)
- (2) Visual elements shall be at least 2-1/2 in (64 mm) in the smallest dimension.
- (3) Signals shall be visible from the vicinity of the hall call button (see Fig. 20). In-car lanterns located in cars, visible from the vicinity of hall call buttons, and conforming to the above requirements, shall be acceptable.

4.10.5 Raised and Braille Characters on Hoistway Entrances. All elevator hoistway entrances shall have raised and Braille floor designations provided on both jambs. The centerline of the characters shall be 60 in (1525 mm) above finish floor. Such characters shall be 2 in (50 mm) high and shall comply with [4.30.4](#). Permanently applied plates are acceptable if they are permanently fixed to the jambs. (See Fig. 20).

4.10.6* Door Protective and Reopening Device. Elevator doors shall open and close automatically. They shall be provided with a reopening device that will stop and reopen a car door and hoistway door automatically if the door becomes obstructed by an object or person. The device shall be capable of completing these operations without requiring contact for an obstruction passing through the opening at heights of 5 in and 29 in (125 mm and 735 mm) above finish floor (see Fig. 20). Door reopening devices shall remain effective for at least 20 seconds. After such an interval, doors may close in accordance with the requirements of ASME A17.1-1990. [Appendix Note](#)

4.10.7* Door and Signal Timing for Hall Calls. The minimum acceptable time from notification that a car is answering a call until the doors of that car start to close shall be calculated from the following equation:

$$T = D/(1.5 \text{ ft/s}) \text{ or } T = D/(445 \text{ mm/s})$$

where T total time in seconds and D distance (in feet or millimeters) from a point in the lobby or corridor 60 in (1525 mm) directly in front of the farthest call button controlling that car to the centerline of its hoistway door (see Fig. 21). For cars with in-car lanterns, T begins when the lantern is visible from the vicinity of hall call buttons and an audible signal is sounded. The minimum acceptable notification time shall be 5 seconds. [Appendix Note](#)

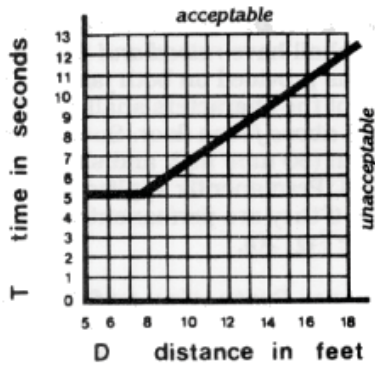
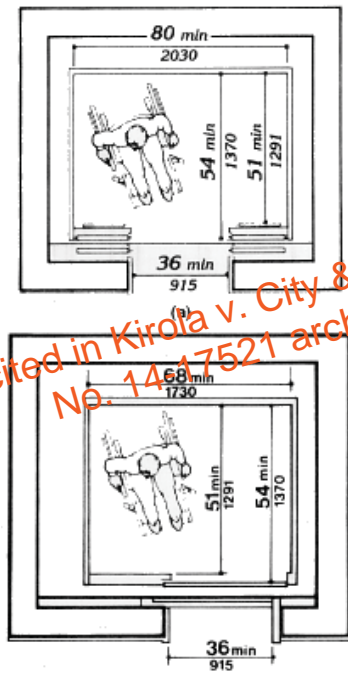


Figure 21
Graph of Timing Equation

4.10.8 Door Delay for Car Calls. The minimum time for elevator doors to remain fully open in response to a car call shall be 3 seconds.

4.10.9 Floor Plan of Elevator Cars. The floor area of elevator cars shall provide space for wheelchair users to enter the car, maneuver within reach of controls, and exit from the car. Acceptable door opening and inside dimensions shall be as shown in Fig. 22. The clearance between the car platform sill and the edge of any hoistway landing shall be no greater than 1-1/4 in (32 mm).



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Figure 22
Minimum Dimensions of Elevator Cars

4.10.10 Floor Surfaces. Floor surfaces shall comply with 4.5.

4.10.11 Illumination Levels. The level of illumination at the car controls, platform, and car threshold and landing sill shall be at least 5 footcandles (53.8 lux).

4.10.12* Car Controls. Elevator control panels shall have the following features:

(1) Buttons. All control buttons shall be at least 3/4 in (19 mm) in their smallest dimension. They shall be raised or flush.

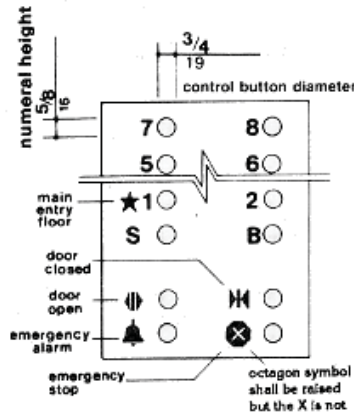
(2) Tactile, Braille, and Visual Control Indicators. All control buttons shall be designated by Braille and by raised standard alphabet characters for letters, arabic characters for numerals, or standard symbols as shown in Fig. 23(a), and as required in ASME A17.1-1990. Raised and Braille characters and symbols shall comply with 4.30. The call button for the main entry floor shall be designated by a raised star at the left of the floor designation (see Fig. 23(a)). All raised designations for control buttons shall be placed immediately to the left of the button to which they apply. Applied plates, permanently attached, are an

acceptable means to provide raised control designations. Floor buttons shall be provided with visual indicators to show when each call is registered. The visual indicators shall be extinguished when each call is answered.

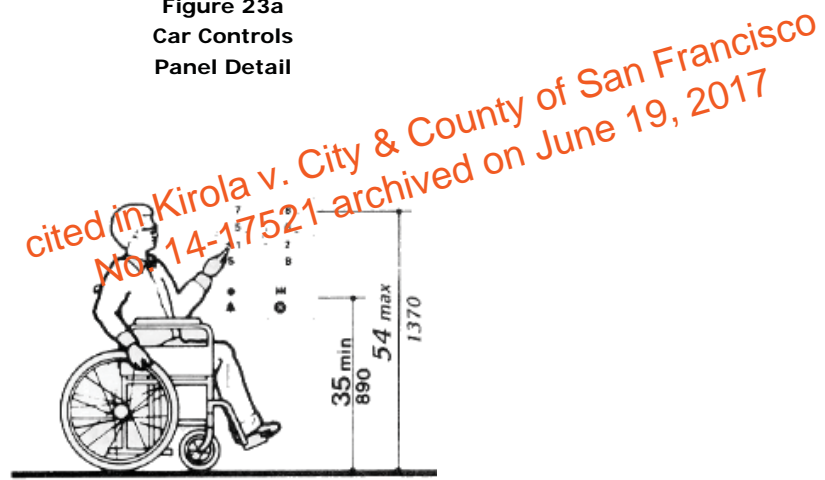
(3) Height. All floor buttons shall be no higher than 54 in (1370 mm) above the finish floor for side approach and 48 in (1220 mm) for front approach. Emergency controls, including the emergency alarm and emergency stop, shall be grouped at the bottom of the panel and shall have their centerlines no less than 35 in (890 mm) above the finish floor (see Fig. 23(a) and (b)).

(4) Location. Controls shall be located on a front wall if cars have center opening doors, and at the side wall or at the front wall next to the door if cars have side opening doors (see Fig. 23(c) and (d)).

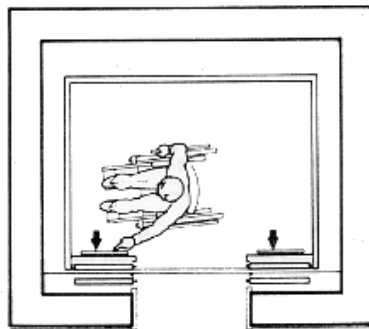
Appendix Note



**Figure 23a
Car Controls
Panel Detail**



**Figure 23b
Car Controls
Car Control Height**



**Figure 23c
Car Controls
Alternate Locations of Panel with Center Opening Door**

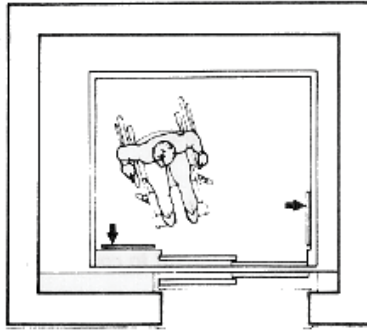


Figure 23d
Car Controls

Alternate Locations of Panel with Side Opening Door

4.10.13* Car Position Indicators. In elevator cars, a visual car position indicator shall be provided above the car control panel or over the door to show the position of the elevator in the hoistway. As the car passes or stops at a floor served by the elevators, the corresponding numerals shall illuminate, and an audible signal shall sound. Numerals shall be a minimum of 1/2 in (13 mm) high. The audible signal shall be no less than 20 decibels with a frequency no higher than 1500 Hz. An automatic verbal announcement of the floor number at which a car stops or which a car passes may be substituted for the audible signal.

Appendix Note

4.10.14* Emergency Communications. If provided, emergency two-way communication systems between the elevator and a point outside the hoistway shall comply with ASME A17.1-1990. The highest operable part of a two-way communication system shall be a maximum of 48 in (1220 mm) from the floor of the car. It shall be identified by a raised symbol and lettering complying with [4.30](#) and located adjacent to the device. If the system uses a handset then the length of the cord from the panel to the handset shall be at least 29 in (735 mm). If the system is located in a closed compartment the compartment door hardware shall conform to [4.27](#), Controls and Operating Mechanisms. The emergency intercommunication system shall not require voice communication. **Appendix Note**

4.11 Platform Lifts (Wheelchair Lifts).

4.11.1 Location. Platform lifts (wheelchair lifts) permitted by [4.1](#) shall comply with the requirements of [4.11](#).

4.11.2* Other Requirements. If platform lifts (wheelchair lifts) are used, they shall comply with [4.2.4](#), [4.5](#), [4.27](#), and ASME A17.1 Safety Code for Elevators and Escalators, Section XX, 1990. **Appendix Note**

4.11.3 Entrance. If platform lifts are used then they shall facilitate unassisted entry, operation, and exit from the lift in compliance with [4.11.2](#).

4.12 Windows.

4.12.1* General. (Reserved). **Appendix Note**

4.12.2* Window Hardware. (Reserved). **Appendix Note**

4.13 Doors.

4.13.1 General. Doors required to be accessible by [4.1](#) shall comply with the requirements of [4.13](#).

4.13.2 Revolving Doors and Turnstiles. Revolving doors or turnstiles shall not be the only means of passage at an accessible entrance or along an accessible route. An accessible gate or door shall be provided adjacent to the turnstile or revolving door and shall be so designed as to facilitate the same use pattern.

4.13.3 Gates. Gates, including ticket gates, shall meet all applicable specifications of [4.13](#).

4.13.4 Double-Leaf Doorways. If doorways have two independently operated door leaves, then at least one leaf shall meet the specifications in [4.13.5](#) and [4.13.6](#). That leaf shall be an active leaf.

4.13.5 Clear Width. Doorways shall have a minimum clear opening of 32 in (815 mm) with the door open 90 degrees, measured between the face of the door and the opposite stop (see Fig. 24(a), (b), (c), and (d)). Openings more than 24 in (610 mm) in depth shall comply with [4.2.1](#) and [4.3.3](#) (see Fig. 24(e)).

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EXCEPTION: Doors not requiring full user passage, such as shallow closets, may have the clear opening reduced to 20 in (510 mm) minimum.

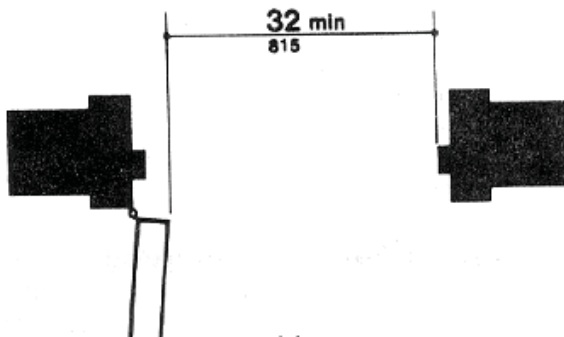


Figure 24a
Clear Doorway Width and Depth Detail

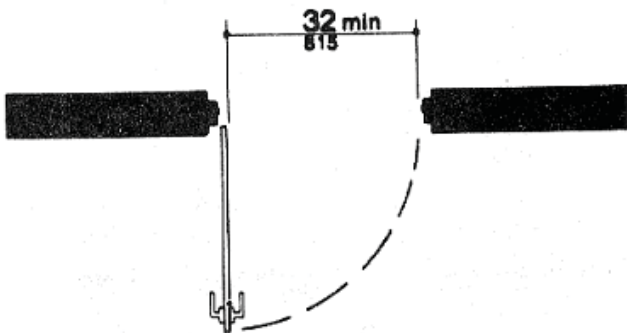


Figure 24b
Clear Doorway Width and Depth
Hinged Door

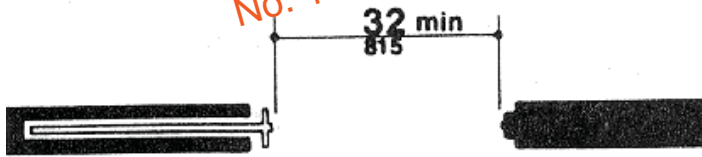


Figure 24c
Clear Doorway Width and Depth
Sliding Door

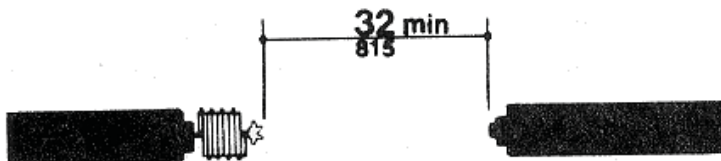


Figure 24d
Clear Doorway Width and Depth
Folding Door

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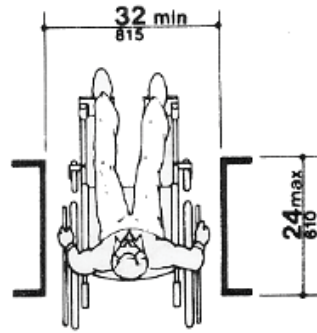


Figure 24e
Clear Doorway Width and Depth
Maximum Doorway Depth

4.13.6 Maneuvering Clearances at Doors. Minimum maneuvering clearances at doors that are not automatic or power-assisted shall be as shown in Fig. 25. The floor or ground area within the required clearances shall be level and clear.

EXCEPTION: Entry doors to acute care hospital bedrooms for in-patients shall be exempted from the requirement for space at the latch side of the door (see dimension "x" in Fig. 25) if the door is at least 44 in (1120 mm) wide.

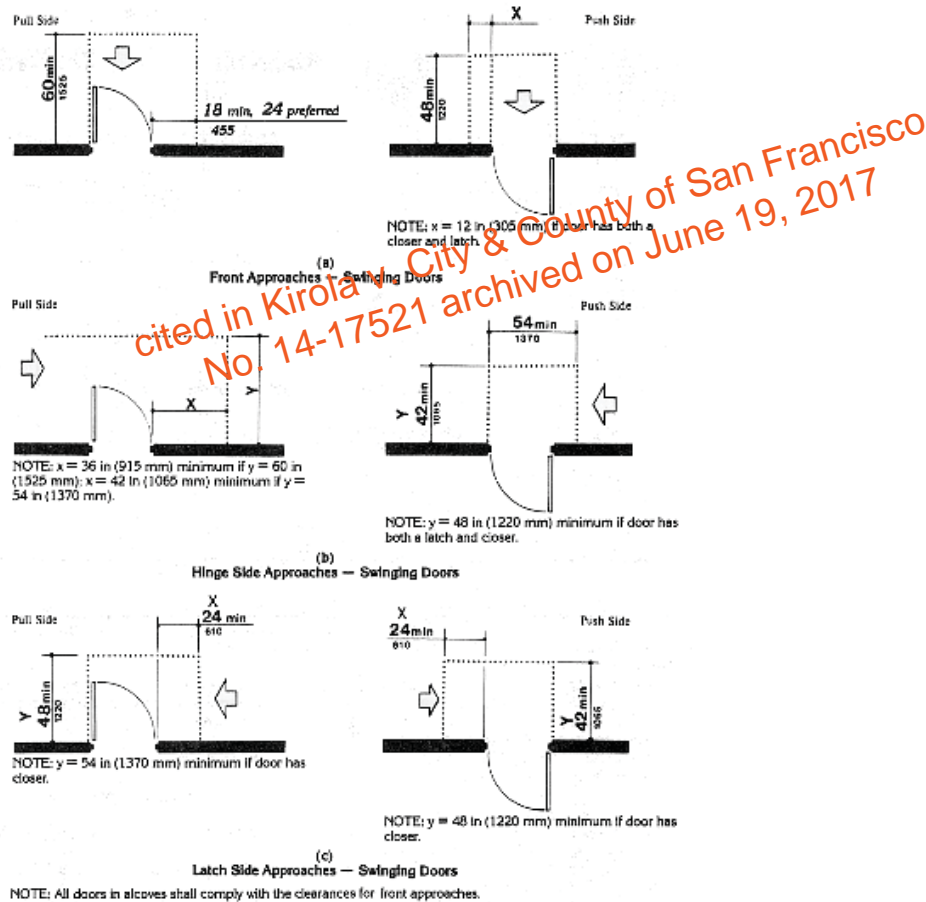


Figure 25
Maneuvering Clearances at Doors

4.13.7 Two Doors in Series. The minimum space between two hinged or pivoted doors in series shall be 48 in (1220 mm) plus the width of any door swinging into the space. Doors in series shall swing either in the same direction or away from the space between the doors (see Fig. 26).

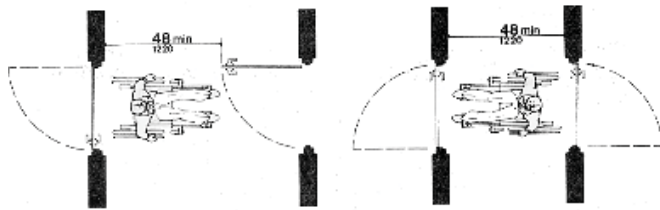


Figure 26
Two Hinged Doors in Series

4.13.8* Thresholds at Doorways. Thresholds at doorways shall not exceed 3/4 in (19 mm) in height for exterior sliding doors or 1/2 in (13 mm) for other types of doors. Raised thresholds and floor level changes at accessible doorways shall be beveled with a slope no greater than 1:2 (see [4.5.2](#)). [Appendix Note](#)

4.13.9* Door Hardware. Handles, pulls, latches, locks, and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist to operate. Lever-operated mechanisms, push-type mechanisms, and U-shaped handles are acceptable designs. When sliding doors are fully open, operating hardware shall be exposed and usable from both sides. Hardware required for accessible door passage shall be mounted no higher than 48 in (1220 mm) above finished floor. [Appendix Note](#)

4.13.10* Door Closers. If a door has a closer, then the sweep period of the closer shall be adjusted so that from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 in (75 mm) from the latch, measured to the leading edge of the door. [Appendix Note](#)

4.13.11* Door Opening Force. The maximum force for pushing or pulling open a door shall be as follows:

- (1) Fire doors shall have the minimum opening force allowable by the appropriate administrative authority.
- (2) Other doors.
 - (a) exterior hinged doors: (Reserved).
 - (b) interior hinged doors: 5 lbf (22.2N)
 - (c) sliding or folding doors: 5 lbf (22.2N)

These forces do not apply to the force required to retract latch bolts or disengage other devices that may hold the door in a closed position. [Appendix Note](#)

4.13.12* Automatic Doors and Power-Assisted Doors. If an automatic door is used, then it shall comply with ANSI/BHMA A156.10-1985. Slowly opening, low-powered, automatic doors shall comply with ANSI A156.19-1984. Such doors shall not open to back check faster than 3 seconds and shall require no more than 15 lbf (66.6N) to stop door movement. If a power-assisted door is used, its door-opening force shall comply with [4.13.11](#) and its closing shall conform to the requirements in ANSI A156.19-1984.

[Appendix Note](#)

4.14 Entrances.

4.14.1 Minimum Number. Entrances required to be accessible by [4.1](#) shall be part of an accessible route complying with [4.3](#). Such entrances shall be connected by an accessible route to public transportation stops, to accessible parking and passenger loading zones, and to public streets or sidewalks if available (see [4.3.2\(1\)](#)). They shall also be connected by an accessible route to all accessible spaces or elements within the building or facility.

4.14.2 Service Entrances. A service entrance shall not be the sole accessible entrance unless it is the only entrance to a building or facility (for example, in a factory or garage).

4.15 Drinking Fountains and Water Coolers.

4.15.1 Minimum Number. Drinking fountains or water coolers required to be accessible by [4.1](#) shall comply with 4.15.

4.15.2* Spout Height. Spouts shall be no higher than 36 in (915 mm), measured from the floor or ground surfaces to the spout outlet (see Fig. 27(a)). [Appendix Note](#)

4.15.3 Spout Location. The spouts of drinking fountains and water coolers shall be at the front of the unit and shall direct the water flow in a trajectory that is parallel or nearly parallel to the front of the unit.

The spout shall provide a flow of water at least 4 in (100 mm) high so as to allow the insertion of a cup or glass under the flow of water. On an accessible drinking fountain with a round or oval bowl, the spout must be positioned so the flow of water is within 3 in (75 mm) of the front edge of the fountain.

4.15.4 Controls. Controls shall comply with [4.27.4](#). Unit controls shall be front mounted or side mounted near the front edge.

4.15.5 Clearances.

(1) Wall- and post-mounted cantilevered units shall have a clear knee space between the bottom of the apron and the floor or ground at least 27 in (685 mm) high, 30 in (760 mm) wide, and 17 in to 19 in (430 mm to 485 mm) deep (see Fig. 27(a) and (b)). Such units shall also have a minimum clear floor space 30 in by 48 in (760 mm by 1220 mm) to allow a person in a wheelchair to approach the unit facing forward.

EXCEPTION: These clearances shall not be required at units used primarily by children ages 12 and younger where clear floor space for a parallel approach complying with [4.2.4](#) is provided and where the spout is no higher than 30 in (760 mm), measured from the floor or ground surface to the spout outlet.

(2) Free-standing or built-in units not having a clear space under them shall have a clear floor space at least 30 in by 48 in (760 mm by 1220 mm) that allows a person in a wheelchair to make a parallel approach to the unit (see Fig. 27(c) and (d)). This clear floor space shall comply with [4.2.4](#).

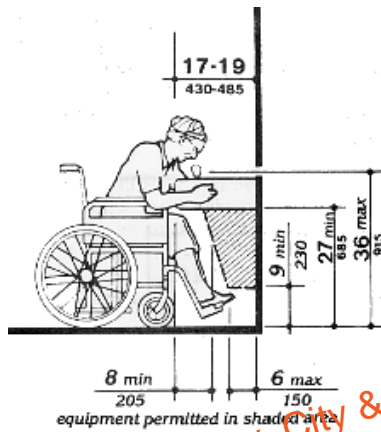


Figure 27a
Drinking Fountains and Water Coolers - Spout Height and Knee Clearance

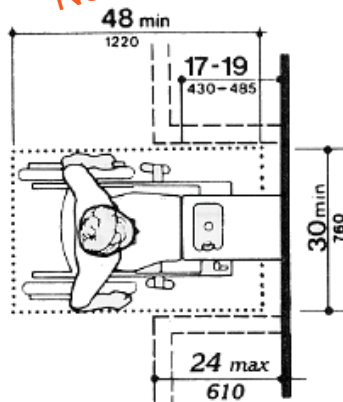


Figure 27b
Drinking Fountains and Water Coolers - Clear Floor Space

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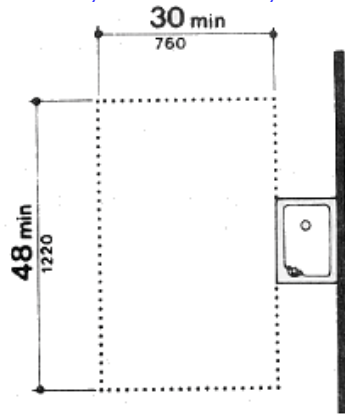


Figure 27c
Drinking Fountains and Water Coolers - Free-Standing Fountain or Cooler

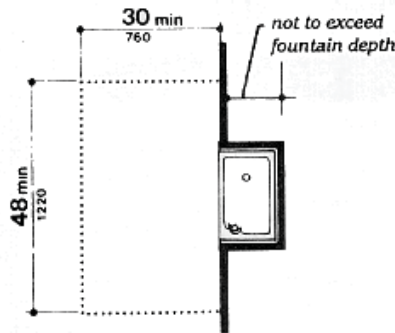


Figure 27d
Drinking Fountains and Water Coolers - Built-In Fountain or Cooler

4.16 Water Closets.

4.16.1 General. Accessible water closets shall comply with 4.16.2 through 4.16.6.

EXCEPTION: Water closets used primarily by children ages 12 and younger shall be permitted to comply with 4.16.7.

4.16.2 Clear Floor Space. Clear floor space for water closets not in stalls shall comply with Fig. 28. Clear floor space may be arranged to allow either a left-handed or right-handed approach.

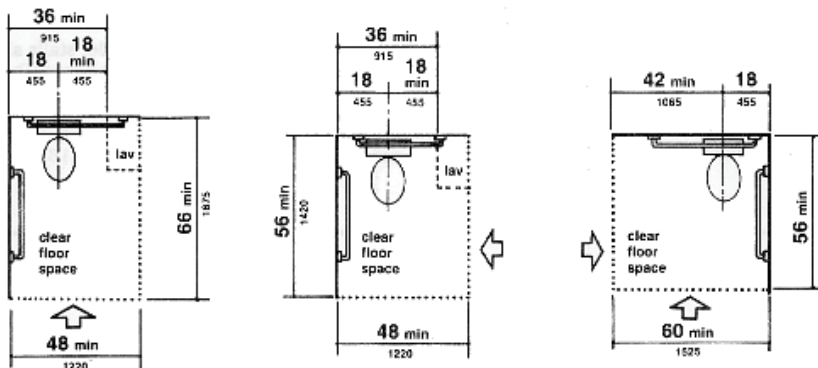


Figure 28
Clear Floor Space at Water Closets

4.16.3* Height. The height of water closets shall be 17 in to 19 in (430 mm to 485 mm), measured to the top of the toilet seat (see Fig. 29(b)). Seats shall not be sprung to return to a lifted position.

Appendix Note

4.16.4* Grab Bars. Grab bars for water closets not located in stalls shall comply with 4.26 and Fig. 29. The grab bar behind the water closet shall be 36 in (915 mm) minimum. **Appendix Note**

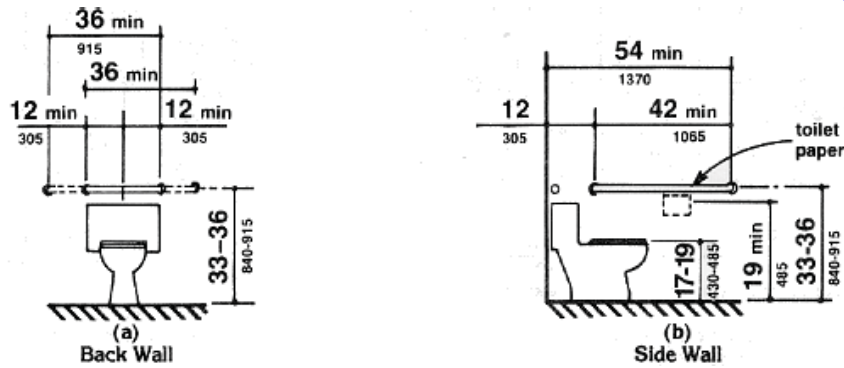


Figure 29
Grab Bars at Water Closets

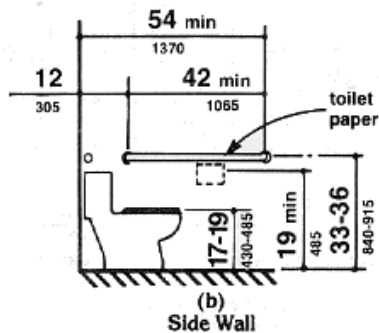


Figure 29b
Grab Bars at Water Closets
Side Wall

4.16.5* Flush Controls. Flush controls shall be hand operated or automatic and shall comply with **4.27.4**. Controls for flush valves shall be mounted on the wide side of toilet areas no more than 44 in (1120 mm) above the floor. **Appendix Note**

4.16.6 Dispensers. Toilet paper dispensers shall be installed within reach, as shown in Fig. 29(b). Dispensers that control delivery, or that do not permit continuous paper flow, shall not be used.

4.16.7* Water Closets for Children. Water closets used primarily by children ages 12 and younger shall comply with 4.16.7 as permitted by 4.16.1. **Appendix Note**

(1) Clear Floor Space. Clear floor space for water closets not in stalls shall comply with Fig. 28 except that the centerline of water closets shall be 12 in minimum to 18 in maximum (305 mm to 455 mm) from the side wall or partition. Clear floor space may be arranged to allow either a left- or right-hand approach.

(2) Height. The height of water closets shall be 11 in minimum to 17 in maximum (280 mm to 430 mm), measured to the top of the toilet seat. Seats shall not be sprung to return to a lifted position.

(3) Grab Bars. Grab bars for water closets not located in stalls shall comply with **4.26** and Fig. 29 except that grab bars shall be mounted 18 in minimum to 27 in maximum (455 mm to 685 mm) above the finish floor measured to the grab bar centerline. The grab bar behind the water closet shall be 36 in (915 mm) minimum.

EXCEPTION: If administrative authorities require flush controls for flush valves to be located in a position that conflicts with the location of the rear grab bar, then that grab bar may be split or, at water closets with a centerline placement below 15 in (380 mm), a rear grab bar 24 in (610 mm) minimum on the open side of the toilet area shall be permitted.

(4) Flush Controls. Flush controls shall be hand operated or automatic and shall comply with **4.27.4**. Controls for flush valves shall be mounted on the wide side of the toilet area no more than 36 in (915 mm) above the floor.

(5) Dispensers. Toilet paper dispensers shall be installed 14 in minimum to 19 in maximum (355 mm to

485 mm) above the finish floor measured to the dispenser centerline. Dispensers that control delivery, or that do not permit continuous paper flow, shall not be used.

4.17 Toilet Stalls.

4.17.1 Location. Accessible toilet stalls shall be on an accessible route and shall meet the requirements of 4.17.2 through 4.17.6.

EXCEPTION: Toilet stalls used primarily by children ages 12 and younger shall be permitted to comply with **4.17.7.**

4.17.2 Water Closets. Water closets in accessible stalls shall comply with **4.16.**

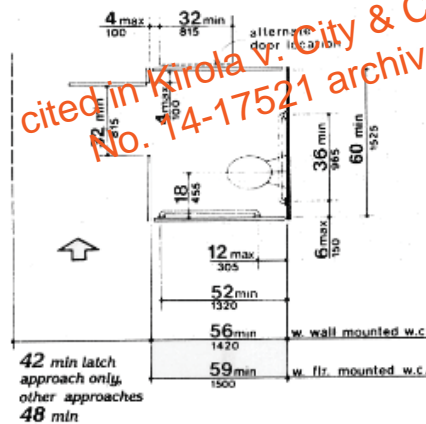
4.17.3* Size and Arrangement. The size and arrangement of the standard toilet stall shall comply with Fig. 30(a), Standard Stall. Standard toilet stalls with a minimum depth of 56 in (1420 mm) (see Fig. 30(a)) shall have wall-mounted water closets. If the depth of a standard toilet stall is increased at least 3 in (75 mm), then a floor-mounted water closet may be used. Arrangements shown for standard toilet stalls may be reversed to allow either a left- or right-hand approach. Additional stalls shall be provided in conformance with **4.22.4. Appendix Note**

EXCEPTION: In instances of alteration work where provision of a standard stall (Fig. 30(a)) is technically infeasible or where plumbing code requirements prevent combining existing stalls to provide space, either alternate stall (Fig. 30(b)) may be provided in lieu of the standard stall.

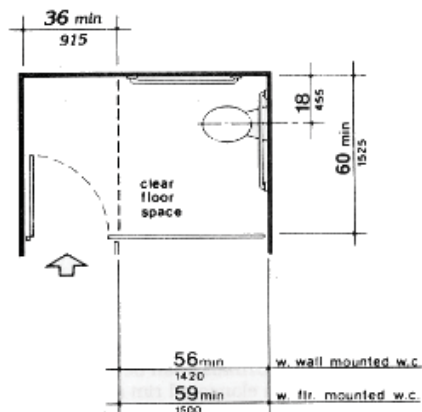
4.17.4 Toe Clearances. In standard stalls, the front partition and at least one side partition shall provide a toe clearance of at least 9 in (230 mm) above the floor. If the depth of the stall is greater than 60 in (1525 mm), then the toe clearance is not required.

4.17.5* Doors. Toilet stall doors, including door hardware, shall comply with **4.13.** If toilet stall approach is from the latch side of the stall door, clearance between the door side of the stall and any obstruction may be reduced to a minimum of 42 in (1065 mm) (Fig. 30). **Appendix Note**

4.17.6 Grab Bars. Grab bars complying with the length and positioning shown in Fig. 30(a), (b), (c), and (d) shall be provided. Grab bars may be mounted with any desired method as long as they have a gripping surface at the locations shown and do not obstruct the required clear floor area. Grab bars shall comply with **4.26.**



**Figure 30a
Toilet Stalls
Standard Stall**



**Figure 30d
Toilet Stalls**

4.17.7* Toilet Stalls for Children. Toilet stalls used primarily by children ages 12 and younger shall comply with 4.17.7 as permitted by 4.17.1. [Appendix Note](#)

(1) Water Closets. Water closets in accessible stalls shall comply with [4.16.7](#).

(2) Size and Arrangement. The size and arrangement of the standard toilet stall shall comply with [4.17.3](#) and Fig. 30(a), Standard Stall, except that the centerline of water closets shall be 12 in minimum to 18 in maximum (305 mm to 455 mm) from the side wall or partition and the minimum depth for stalls with wall-mounted water closets shall be 59 in (1500 mm). Alternate stalls complying with Fig. 30(b) may be provided where permitted by [4.17.3](#) except that the stall shall have a minimum depth of 69 in (1745 mm) where wall-mounted water closets are provided.

(3) Toe Clearances. In standard stalls, the front partition and at least one side partition shall provide a toe clearance of at least 12 in (305 mm) above the finish floor.

(4) Doors. Toilet stall doors shall comply with [4.17.5](#).

(5) Grab Bars. Grab bars shall comply with [4.17.6](#) and the length and positioning shown in Fig. 30(a), (b), (c), and (d) except that grab bars shall be mounted 18 in minimum to 27 in maximum (455 mm to 685 mm) above the finish floor measured to the grab bar centerline.

EXCEPTION: If administrative authorities require flush controls for flush valves to be located in a position that conflicts with the location of the rear grab bar, then that grab bar may be split or, at water closets with a centerline placement below 15 in (380 mm), a rear grab bar 24 in (610 mm) minimum on the open side of the toilet area shall be permitted.

4.18 Urinals.

4.18.1 General. Accessible urinals shall comply with 4.18.

4.18.2 Height. Urinals shall be stall-type or wall-hung with an elongated rim at a maximum of 17 in (430 mm) above the finish floor.

4.18.3 Clear Floor Space. A clear floor space 30 in by 48 in (760 mm by 1220 mm) shall be provided in front of urinals to allow forward approach. This clear space shall adjoin or overlap an accessible route and shall comply with [4.2.4](#). Urinal shields that do not extend beyond the front edge of the urinal rim may be provided with 29 in (735 mm) clearance between them.

4.18.4 Flush Controls. Flush controls shall be hand operated or automatic, and shall comply with [4.27.4](#), and shall be mounted no more than 44 in (1120 mm) above the finish floor.

4.19 Lavatories and Mirrors.

4.19.1 General. The requirements of 4.19 shall apply to lavatory fixtures, vanities, and built-in lavatories.

4.19.2 Height and Clearances. Lavatories shall be mounted with the rim or counter surface no higher than 34 in (865 mm) above the finish floor. Provide a clearance of at least 29 in (735 mm) above the finish floor to the bottom of the apron. Knee and toe clearance shall comply with [Fig. 31](#).

EXCEPTION 1: Lavatories used primarily by children ages 6 through 12 shall be permitted to have an apron clearance and a knee clearance 24 in (610 mm) high minimum provided that the rim or counter surface is no higher than 31 in (760 mm).

EXCEPTION 2: Lavatories used primarily by children ages 5 and younger shall not be required to meet these clearances if clear floor space for a parallel approach complying with [4.2.4](#) is provided.

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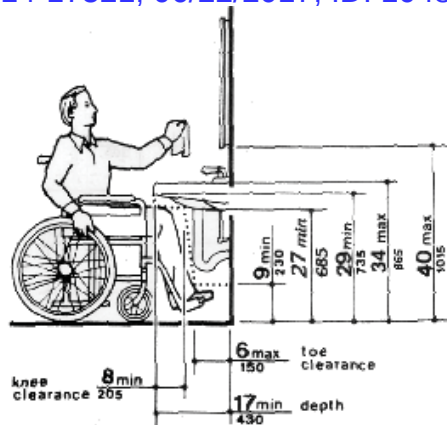


Figure 31
Lavatory Clearances

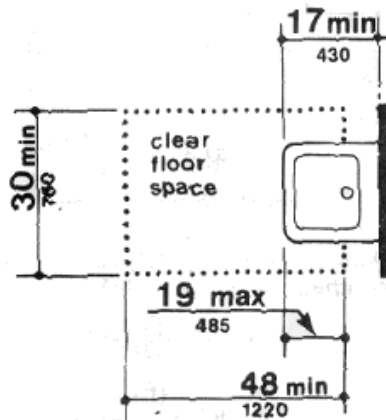


Figure 32
Clear Floor Space at Lavatories

4.19.3 Clear Floor Space. A clear floor space 30 in by 48 in (760 mm by 1220 mm) complying with 4.2.4 shall be provided in front of a lavatory to allow forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall extend a maximum of 19 in (485 mm) underneath the lavatory (see Fig. 32).

4.19.4 Exposed Pipes and Surfaces. Hot water and drain pipes under lavatories shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories.

4.19.5 Faucets. Faucets shall comply with 4.27.4. Lever-operated, push-type, and electronically controlled mechanisms are examples of acceptable designs. If self-closing valves are used the faucet shall remain open for at least 10 seconds.

4.19.6* Mirrors. Mirrors shall be mounted with the bottom edge of the reflecting surface no higher than 40 in (1015 mm) above the finish floor (see Fig. 31). [Appendix Note](#)

4.20 Bathtubs.

4.20.1 General. Accessible bathtubs shall comply with 4.20.

4.20.2 Floor Space. Clear floor space in front of bathtubs shall be as shown in Fig. 33.

4.20.3 Seat. An in-tub seat or a seat at the head end of the tub shall be provided as shown in Fig. 33 and 34. The structural strength of seats and their attachments shall comply with 4.26.3. Seats shall be mounted securely and shall not slip during use.

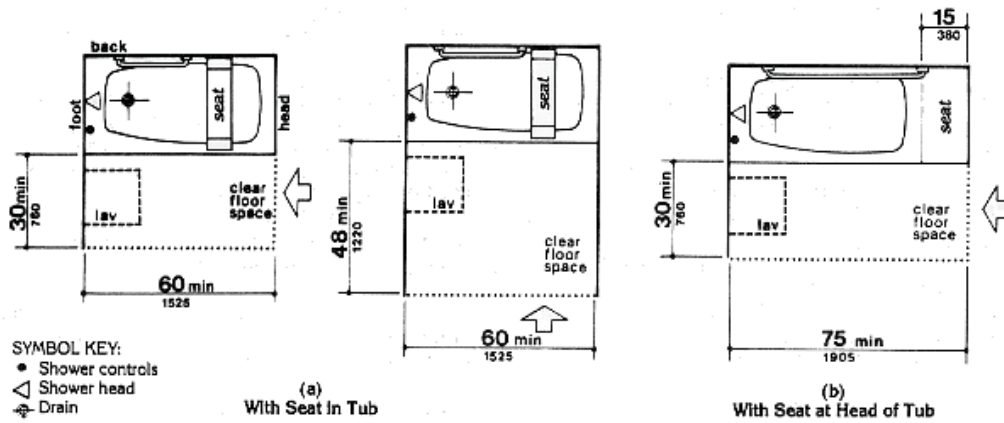


Figure 33
Clear Floor Space at Bathtubs

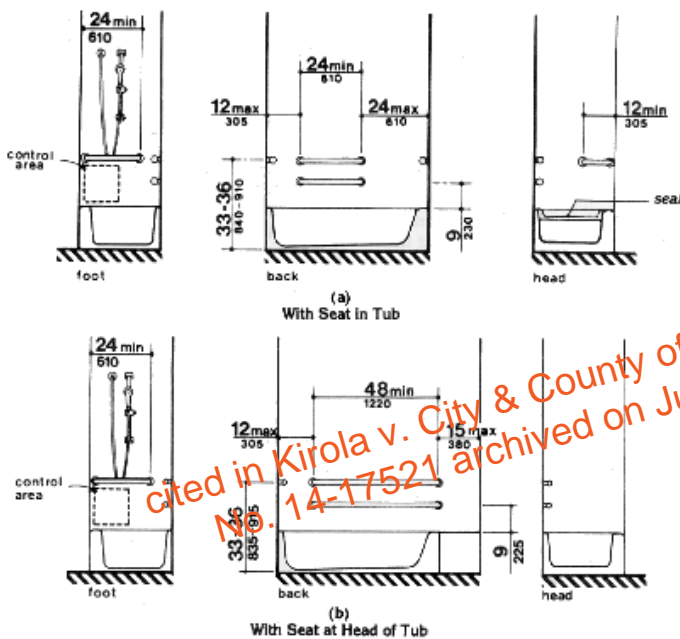


Figure 34
Grab Bars at Bathtubs

4.20.4 **Grab Bars.** Grab bars complying with 4.26 shall be provided as shown in Fig. 33 and 34.

4.20.5 **Controls.** Faucets and other controls complying with 4.27.4 shall be located as shown in Fig. 34.

4.20.6 **Shower Unit.** A shower spray unit with a hose at least 60 in (1525 mm) long that can be used both as a fixed shower head and as a hand-held shower shall be provided.

4.20.7 **Bathtub Enclosures.** If provided, enclosures for bathtubs shall not obstruct controls or transfer from wheelchairs onto bathtub seats or into tubs. Enclosures on bathtubs shall not have tracks mounted on their rims.

4.21 **Shower Stalls.**

4.21.1* **General.** Accessible shower stalls shall comply with 4.21. [Appendix Note](#)

4.21.2 **Size and Clearances.** Except as specified in 9.1.2, shower stall size and clear floor space shall comply with Fig. 35(a) or (b). The shower stall in Fig. 35(a) shall be 36 in by 36 in (915 mm by 915 mm). Shower stalls required by 9.1.2 shall comply with Fig. 57(a) or (b). The shower stall in Fig. 35(b) will fit into the space required for a bathtub.

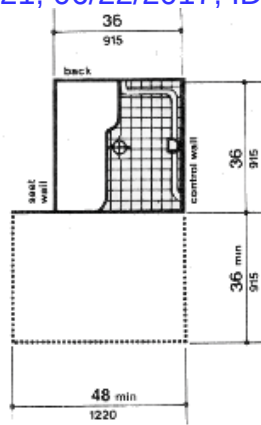


Figure 35a
Shower Size and Clearances
36-in by 36-in (760mm by 1525mm) Stall

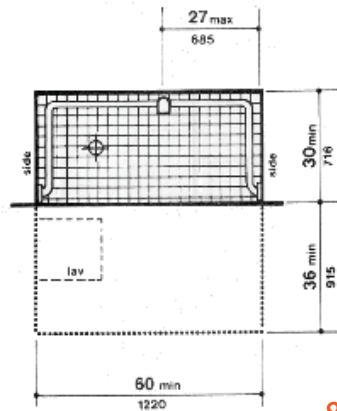


Figure 35b
Shower Size and Clearances
30-in by 60-in (915mm by 915mm) Stall

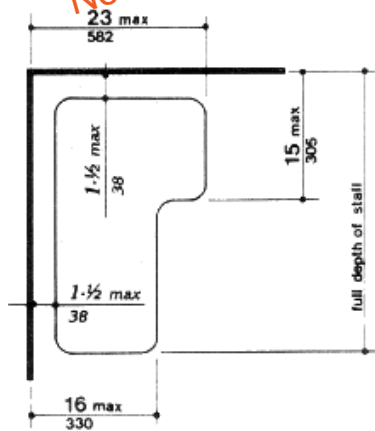


Figure 36
Shower Seat Design

4.21.3 Seat. A seat shall be provided in shower stalls 36 in by 36 in (915 mm by 915 mm) and shall be as shown in Fig. 36. The seat shall be mounted 17 in to 19 in (430 mm to 485 mm) from the bathroom floor and shall extend the full depth of the stall. In a 36 in by 36 in (915 mm by 915 mm) shower stall, the seat shall be on the wall opposite the controls. Where a fixed seat is provided in a 30 in by 60 in minimum (760 mm by 1525 mm) shower stall, it shall be a folding type and shall be mounted on the wall adjacent to the controls as shown in Fig. 57. The structural strength of seats and their attachments shall comply with [4.26.3](#).

4.21.4 Grab Bars. Grab bars complying with [4.26](#) shall be provided as shown in Fig. 37.

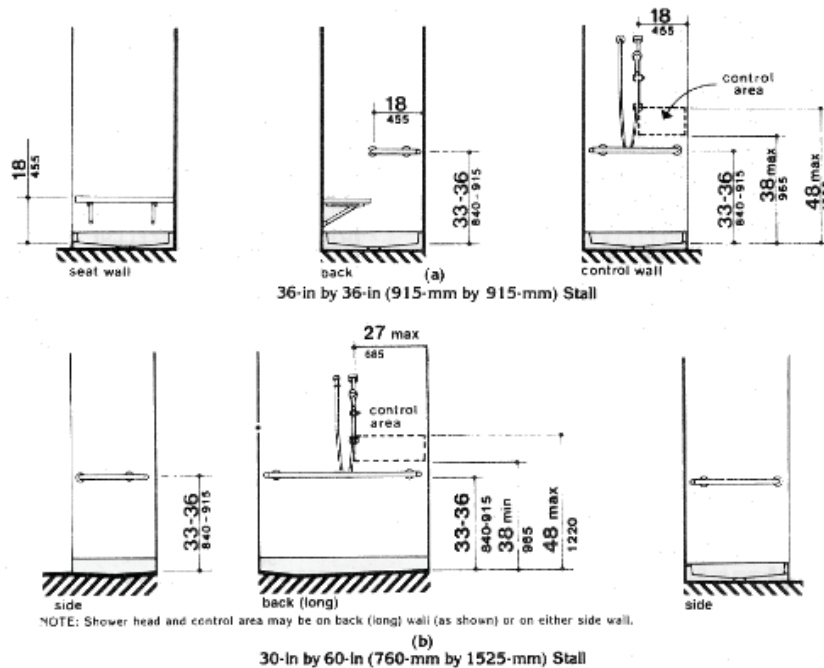


Figure 37
Grab Bars at Shower Stalls

4.21.5 Controls. Faucets and other controls complying with [4.27.4](#) shall be located as shown in Fig. 37. In shower stalls 36 in by 36 in (915 mm by 915 mm), all controls, faucets, and the shower unit shall be mounted on the side wall opposite the seat.

4.21.6 Shower Unit. A shower spray unit with a hose at least 60 in (1525 mm) long that can be used both as a fixed shower head and as a hand-held shower shall be provided.

EXCEPTION: In unmonitored facilities where vandalism is a consideration, a fixed shower head mounted at 48 in (1220 mm) above the shower floor may be used in lieu of a hand-held shower head.

4.21.7 Curbs. If provided, curbs in shower stalls 36 in by 36 in (915 mm by 915 mm) shall be no higher than 1/2 in (13 mm). Shower stalls that are 30 in by 60 in (760 mm by 1525 mm) minimum shall not have curbs.

4.21.8 Shower Enclosures. If provided, enclosures for shower stalls shall not obstruct controls or obstruct transfer from wheelchairs onto shower seats.

4.22 Toilet Rooms.

4.22.1 Minimum Number. Toilet facilities required to be accessible by 4.1 shall comply with 4.22. Accessible toilet rooms shall be on an accessible route.

4.22.2 Doors. All doors to accessible toilet rooms shall comply with [4.13](#). Doors shall not swing into the clear floor space required for any fixture.

4.22.3* Clear Floor Space. The accessible fixtures and controls required in [4.22.4](#), [4.22.5](#), [4.22.6](#), and [4.22.7](#) shall be on an accessible route. An unobstructed turning space complying with [4.2.3](#) shall be provided within an accessible toilet room. The clear floor space at fixtures and controls, the accessible route, and the turning space may overlap. [Appendix Note](#)

4.22.4 Water Closets. If toilet stalls are provided, then at least one shall be a standard toilet stall complying with [4.17](#); where 6 or more stalls are provided, in addition to the stall complying with [4.17.3](#), at least one stall 36 in (915 mm) wide with an outward swinging, self-closing door and parallel grab bars complying with Fig. 30(d) and [4.26](#) shall be provided. Water closets in such stalls shall comply with [4.16](#). If water closets are not in stalls, then at least one shall comply with [4.16](#).

4.22.5 Urinals. If urinals are provided, then at least one shall comply with [4.18](#).

4.22.6 Lavatories and Mirrors. If lavatories and mirrors are provided, then at least one of each shall comply with [4.19](#).

4.22.7 Controls and Dispensers. If controls, dispensers, receptacles, or other equipment are provided, then at least one of each shall be on an accessible route and shall comply with [4.27](#).

4.23 Bathrooms, Bathing Facilities, and Shower Rooms.

4.23.1 Minimum Number. Bathrooms, bathing facilities, or shower rooms required to be accessible by 4.1 shall comply with 4.23 and shall be on an accessible route.

4.23.2 Doors. Doors to accessible bathrooms shall comply with [4.13](#). Doors shall not swing into the floor space required for any fixture.

4.23.3* Clear Floor Space. The accessible fixtures and controls required in [4.23.4](#), [4.23.5](#), [4.23.6](#), [4.23.7](#), [4.23.8](#), and [4.23.9](#) shall be on an accessible route. An unobstructed turning space complying with [4.2.3](#) shall be provided within an accessible bathroom. The clear floor spaces at fixtures and controls, the accessible route, and the turning space may overlap. [Appendix Note](#)

4.23.4 Water Closets. If toilet stalls are provided, then at least one shall be a standard toilet stall complying with [4.17](#); where 6 or more stalls are provided, in addition to the stall complying with [4.17.3](#), at least one stall 36 in (915 mm) wide with an outward swinging, self-closing door and parallel grab bars complying with Fig. 30(d) and 4.26 shall be provided. Water closets in such stalls shall comply with [4.16](#). If water closets are not in stalls, then at least one shall comply with [4.16](#).

4.23.5 Urinals. If urinals are provided, then at least one shall comply with [4.18](#).

4.23.6 Lavatories and Mirrors. If lavatories and mirrors are provided, then at least one of each shall comply with [4.19](#).

4.23.7 Controls and Dispensers. If controls, dispensers, receptacles, or other equipment are provided, then at least one of each shall be on an accessible route and shall comply with [4.27](#).

4.23.8 Bathing and Shower Facilities. If tubs or showers are provided, then at least one accessible tub that complies with [4.20](#) or at least one accessible shower that complies with [4.21](#) shall be provided.

4.23.9* Medicine Cabinets. If medicine cabinets are provided, at least one shall be located with a usable shelf no higher than 44 in (1120 mm) above the floor space. The floor space shall comply with [4.2.4](#).

Appendix Note

4.24 Sinks.

4.24.1 General. Sinks required to be accessible by 4.1 shall comply with 4.24.

4.24.2 Height. Sinks shall be mounted with the counter or rim no higher than 34 in (865 mm) above the finish floor.

4.24.3 Knee Clearance. Knee clearance that is at least 27 in (685 mm) high, 30 in (760 mm) wide, and 19 in (485 mm) deep shall be provided underneath sinks.

EXCEPTION 1: Sinks used primarily by children ages 6 through 12 shall be permitted to have a knee clearance 24 in (610 mm) high minimum provided that the rim or counter surface is no higher than 31 in (760 mm).

EXCEPTION 2: Sinks used primarily by children ages 5 and younger shall not be required to provide knee clearance if clear floor space for a parallel approach complying with [4.2.4](#) is provided

4.24.4 Depth. Each sink shall be a maximum of 6-1/2 in (165 mm) deep.

4.24.5 Clear Floor Space. A clear floor space at least 30 in by 48 in (760 mm by 1220 mm) complying with 4.2.4 shall be provided in front of a sink to allow forward approach. The clear floor space shall be on an accessible route and shall extend a maximum of 19 in (485 mm) underneath the sink (see Fig. 32).

4.24.6 Exposed Pipes and Surfaces. Hot water and drain pipes exposed under sinks shall be insulated or otherwise configured so as to protect against contact. There shall be no sharp or abrasive surfaces under sinks.

4.24.7 Faucets. Faucets shall comply with 4.27.4. Lever-operated, push-type, touch-type, or electronically controlled mechanisms are acceptable designs.

4.25 Storage.

4.25.1 General. Fixed storage facilities such as cabinets, shelves, closets, and drawers required to be accessible by [4.1](#) shall comply with 4.25.

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4.25.2 Clear Floor Space. A clear floor space at least 30 in by 48 in (760 mm by 1220 mm) complying with [4.2.4](#) that allows either a forward or parallel approach by a person using a wheelchair shall be provided at accessible storage facilities.

4.25.3* Height. Accessible storage spaces shall be within at least one of the reach ranges specified in [4.2.5](#) and [4.2.6](#) (see [Fig. 5](#) and [Fig. 6](#)). Clothes rods or shelves shall be a maximum of 54 in (1370 mm) above the finish floor for a side approach. Where the distance from the wheelchair to the clothes rod or shelf exceeds 10 in (255 mm) (as in closets without accessible doors) the height and depth to the rod or shelf shall comply with [Fig. 38\(a\)](#) and [Fig. 38\(b\)](#). [Appendix Note](#)

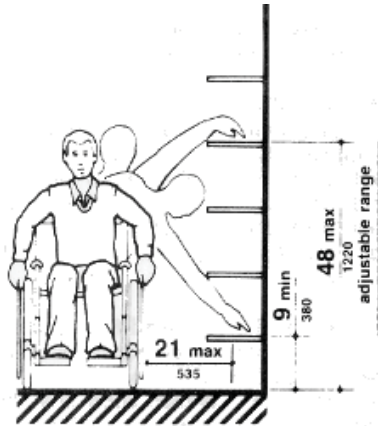


Figure 38a
Storage Shelves and Closets
Shelves

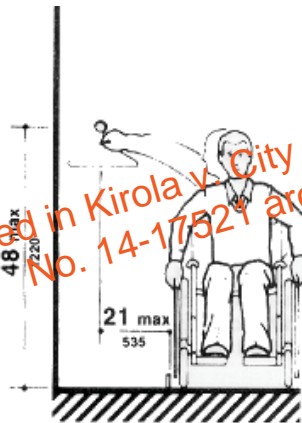


Figure 38b
Storage Shelves and Closets
Closets

4.25.4 Hardware. Hardware for accessible storage facilities shall comply with [4.27.4](#). Touch latches and U-shaped pulls are acceptable.

4.26 Handrails, Grab Bars, and Tub and Shower Seats.

4.26.1* General. All handrails, grab bars, and tub and shower seats required to be accessible by [4.1](#), [4.8](#), [4.9](#), [4.16](#), [4.17](#), [4.20](#) or [4.21](#) shall comply with 4.26. [Appendix Note](#)

4.26.2* Size and Spacing of Grab Bars and Handrails. The diameter or width of the gripping surfaces of a handrail or grab bar shall be 1-1/4 in to 1-1/2 in (32 mm to 38 mm), or the shape shall provide an equivalent gripping surface. If handrails or grab bars are mounted adjacent to a wall, the space between the wall and the grab bar shall be 1-1/2 in (38 mm) (see [Fig. 39\(a\)](#), [\(b\)](#), [\(c\)](#), and [\(e\)](#)). Handrails may be located in a recess if the recess is a maximum of 3 in (75 mm) deep and extends at least 18 in (455 mm) above the top of the rail (see [Fig. 39\(d\)](#)). [Appendix Note](#)

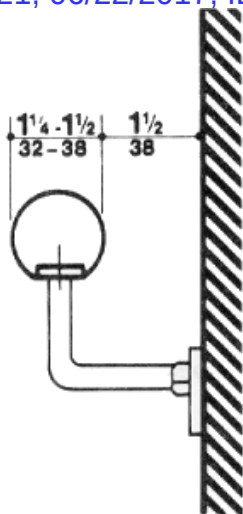
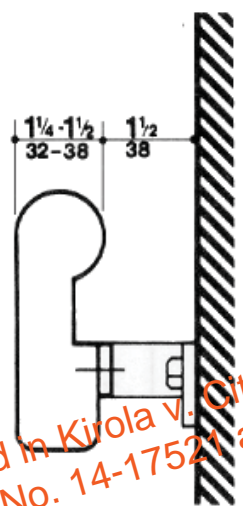


Figure 39a
Size and Spacing of Handrails and Grab Bars Handrail



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Figure 39b
Size and Spacing of Handrails and Grab Bars Handrail

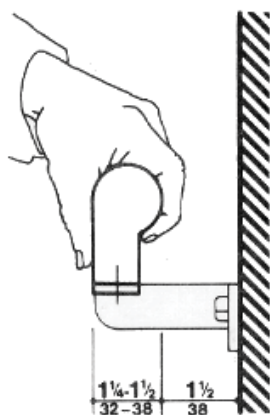


Figure 39c
Size and Spacing of Handrails and Grab Bars Handrail

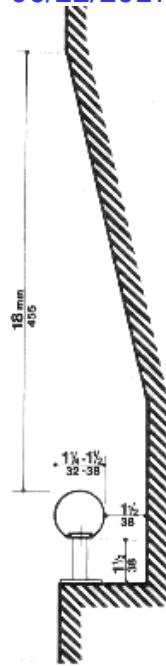


Figure 39d
Size and Spacing of Handrails and Grab Bars Handrail

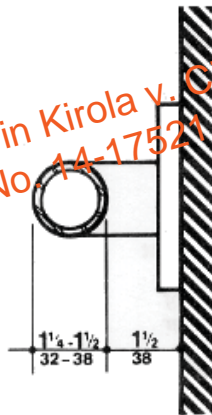


Figure 39e
Size and Spacing of Handrails and Grab Bars

*cited in Kirola v. City & County of San Francisco
 No. 14-17521 archived on June 19, 2017*

4.26.3 Structural Strength. The structural strength of grab bars, tub and shower seats, fasteners, and mounting devices shall meet the following specification:

- (1) Bending stress in a grab bar or seat induced by the maximum bending moment from the application of 250 lbf (1112N) shall be less than the allowable stress for the material of the grab bar or seat.
- (2) Shear stress induced in a grab bar or seat by the application of 250 lbf (1112N) shall be less than the allowable shear stress for the material of the grab bar or seat. If the connection between the grab bar or seat and its mounting bracket or other support is considered to be fully restrained, then direct and torsional shear stresses shall be totaled for the combined shear stress, which shall not exceed the allowable shear stress.
- (3) Shear force induced in a fastener or mounting device from the application of 250 lbf (1112N) shall be less than the allowable lateral load of either the fastener or mounting device or the supporting structure, whichever is the smaller allowable load.

(4) Tensile force induced in a fastener by a direct tension force of 250 lbf (1112N) plus the maximum moment from the application of 250 lbf (1112N) shall be less than the allowable withdrawal load between the fastener and the supporting structure.

(5) Grab bars shall not rotate within their fittings.

4.26.4 Eliminating Hazards. A handrail or grab bar and any wall or other surface adjacent to it shall be free of any sharp or abrasive elements. Edges shall have a minimum radius of 1/8 in (3.2 mm).

4.27 Controls and Operating Mechanisms.

4.27.1 General. Controls and operating mechanisms required to be accessible by [4.1](#) shall comply with 4.27.

4.27.2 Clear Floor Space. Clear floor space complying with [4.2.4](#) that allows a forward or a parallel approach by a person using a wheelchair shall be provided at controls, dispensers, receptacles, and other operable equipment.

4.27.3* Height. The highest operable part of controls, dispensers, receptacles, and other operable equipment shall be placed within at least one of the reach ranges specified in [4.2.5](#) and [4.2.6](#). Electrical and communications system receptacles on walls shall be mounted no less than 15 in (380 mm) above the floor. [Appendix Note](#)

EXCEPTION: These requirements do not apply where the use of special equipment dictates otherwise or where electrical and communications systems receptacles are not normally intended for use by building occupants.

4.27.4 Operation. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf (22.2 N).

4.28 Alarms.

4.28.1 General. Alarm systems required to be accessible by [4.1](#) shall comply with 4.28. At a minimum, visual signal appliances shall be provided in buildings and facilities in each of the following areas: restrooms and any other general usage areas (e.g., meeting rooms), hallways, lobbies, and any other area for common use.

4.28.2* Audible Alarms. If provided, audible emergency alarms shall produce a sound that exceeds the prevailing equivalent sound level in the room or space by at least 15 dbA or exceeds any maximum sound level with a duration of 60 seconds by 5 dbA, whichever is louder. Sound levels for alarm signals shall not exceed 120 dbA. [Appendix Note](#)

4.28.3* Visual Alarms. Visual alarm signal appliances shall be integrated into the building or facility alarm system. If single station audible alarms are provided then single station visual alarm signals shall be provided. Visual alarm signals shall have the following minimum photometric and location features:

- (1) The lamp shall be a xenon strobe type or equivalent.
- (2) The color shall be clear or nominal white (i.e., unfiltered or clear filtered white light).
- (3) The maximum pulse duration shall be two-tenths of one second (0.2 sec) with a maximum duty cycle of 40 percent. The pulse duration is defined as the time interval between initial and final points of 10 percent of maximum signal.
- (4) The intensity shall be a minimum of 75 candela.
- (5) The flash rate shall be a minimum of 1 Hz and a maximum of 3 Hz.
- (6) The appliance shall be placed 80 in (2030 mm) above the highest floor level within the space or 6 in (152 mm) below the ceiling, whichever is lower.
- (7) In general, no place in any room or space required to have a visual signal appliance shall be more than 50 ft (15 m) from the signal (in the horizontal plane). In large rooms and spaces exceeding 100 ft (30 m) across, without obstructions 6 ft (2 m) above the finish floor, such as auditoriums, devices may be placed around the perimeter, spaced a maximum 100 ft (30 m) apart, in lieu of suspending appliances from the ceiling.
- (8) No place in common corridors or hallways in which visual alarm signalling appliances are required shall be more than 50 ft (15 m) from the signal. [Appendix Note](#)

4.28.4* Auxiliary Alarms. Units and sleeping accommodations shall have a visual alarm connected to the building emergency alarm system or shall have a standard 110-volt electrical receptacle into which such an alarm can be connected and a means by which a signal from the building emergency alarm system can trigger such an auxiliary alarm. When visual alarms are in place the signal shall be visible in all areas of the unit or room. Instructions for use of the auxiliary alarm or receptacle shall be provided.

Appendix Note

4.29 Detectable Warnings.

4.29.1 General. Detectable warnings required by [4.1](#) and [4.7](#) shall comply with 4.29.

4.29.2* Detectable Warnings on Walking Surfaces. Detectable warnings shall consist of raised truncated domes with a diameter of nominal 0.9 in (23 mm), a height of nominal 0.2 in (5 mm) and a center-to-center spacing of nominal 2.35 in (60 mm) and shall contrast visually with adjoining surfaces, either light-on-dark, or dark-on-light. [Appendix Note](#)

The material used to provide contrast shall be an integral part of the walking surface. Detectable warnings used on interior surfaces shall differ from adjoining walking surfaces in resiliency or sound-on-cane contact.

4.29.3 Detectable Warnings on Doors To Hazardous Areas. (Reserved).

4.29.4 Detectable Warnings at Stairs. (Reserved).

4.29.5 Detectable Warnings at Hazardous Vehicular Areas. If a walk crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings, or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning which is 36 in (915 mm) wide, complying with [4.29.2](#).

4.29.6 Detectable Warnings at Reflecting Pools. The edges of reflecting pools shall be protected by railings, walls, curbs, or detectable warnings complying with [4.29.2](#).

4.29.7 Standardization. (Reserved).

4.30 Signage.

4.30.1* General. Signage required to be accessible by [4.1](#) shall comply with the applicable provisions of 4.30. [Appendix Note](#)

4.30.2* Character Proportion. Letters and numbers on signs shall have a width-to-height ratio between 3:5 and 1:1 and a stroke-width-to-height ratio between 1:5 and 1:10. [Appendix Note](#)

4.30.3 Character Height. Characters and numbers on signs shall be sized according to the viewing distance from which they are to be read. The minimum height is measured using an upper case X. Lower case characters are permitted.

Height Above Finished Floor	Minimum Character Height
Suspended or Projected Overhead in compliance with 4.4.2	3 in (75 mm) minimum

4.30.4* Raised and Brailled Characters and Pictorial Symbol Signs (Pictograms). Letters and numerals shall be raised 1/32 in (0.8 mm) minimum, upper case, sans serif or simple serif type and shall be accompanied with Grade 2 Braille. Raised characters shall be at least 5/8 in (16 mm) high, but no higher than 2 in (50 mm). Pictograms shall be accompanied by the equivalent verbal description placed directly below the pictogram. The border dimension of the pictogram shall be 6 in (152 mm) minimum in height. [Appendix Note](#)

4.30.5* Finish and Contrast. The characters and background of signs shall be eggshell, matte, or other non-glare finish. Characters and symbols shall contrast with their background -- either light characters on a dark background or dark characters on a light background. [Appendix Note](#)

4.30.6 Mounting Location and Height. Where permanent identification is provided for rooms and spaces, signs shall be installed on the wall adjacent to the latch side of the door. Where there is no wall space to the latch side of the door, including at double leaf doors, signs shall be placed on the nearest adjacent wall. Mounting height shall be 60 in (1525 mm) above the finish floor to the centerline of the sign. Mounting location for such signage shall be so that a person may approach within 3 in (76 mm) of signage without encountering protruding objects or standing within the swing of a door.

4.30.7* Symbols of Accessibility.

cited in *Kirola v. City & County of San Francisco*
No. 14-17521 archived on June 19, 2017

(1) Facilities and elements required to be identified as accessible by [4.1](#) shall use the international symbol of accessibility. The symbol shall be displayed as shown in Fig. 43(a) and (b).

(2) Volume Control Telephones. Telephones required to have a volume control by [4.1.3\(17\)\(b\)](#) shall be identified by a sign containing a depiction of a telephone handset with radiating sound waves.

(3) Text Telephones (TTYs). Text telephones (TTYs) required by [4.1.3\(17\)\(c\)](#) shall be identified by the international TTY symbol (Fig 43(c)). In addition, if a facility has a public text telephone (TTY), directional signage indicating the location of the nearest text telephone (TTY) shall be placed adjacent to all banks of telephones which do not contain a text telephone (TTY). Such directional signage shall include the international TTY symbol. If a facility has no banks of telephones, the directional signage shall be provided at the entrance (e.g., in a building directory).

(4) Assistive Listening Systems. In assembly areas where permanently installed assistive listening systems are required by [4.1.3\(19\)\(b\)](#) the availability of such systems shall be identified with signage that includes the international symbol of access for hearing loss (Fig 43(d)). [Appendix Note](#)



(a)
Proportions
International Symbol of Accessibility

Figure 43a
International Symbol of Accessibility
Proportions



(b)
Display Conditions
International Symbol of Accessibility

Figure 43b
International Symbol of Accessibility
Display Conditions



(c)
International TDD Symbol

Figure 43c
International TTY Symbol

*cited in Kirloska v. City & County of San Francisco
No. 14-17521 archived on June 19, 2017*



(d)
International Symbol of Access for Hearing Loss
Fig. 43
International Symbols

Figure 43d
International Symbol of Access for Hearing Loss

4.30.8* Illumination Levels. (Reserved). [Appendix Note](#)

4.31 Telephones.

4.31.1 General. Public telephones required to be accessible by [4.1](#) shall comply with 4.31.

4.31.2 Clear Floor or Ground Space. A clear floor or ground space at least 30 in by 48 in (760 mm by 1220 mm) that allows either a forward or parallel approach by a person using a wheelchair shall be provided at telephones (see Fig. 44). The clear floor or ground space shall comply with [4.2.4](#). Bases, enclosures, and fixed seats shall not impede approaches to telephones by people who use wheelchairs.

4.31.3* Mounting Height. The highest operable part of the telephone shall be within the reach ranges specified in [4.2.5](#) or [4.2.6](#). [Appendix Note](#)

4.31.4 Protruding Objects. Telephones shall comply with [4.4](#).

4.31.5 Hearing Aid Compatible and Volume Control Telephones Required by 4.1.

(1) Telephones shall be hearing aid compatible.

(2) Volume controls, capable of a minimum of 12 dbA and a maximum of 18 dbA above normal, shall be provided in accordance with [4.1.3](#). If an automatic reset is provided then 18 dbA may be exceeded.

4.31.6 Controls. Telephones shall have pushbutton controls where service for such equipment is available.

4.31.7 Telephone Books. Telephone books, if provided, shall be located in a position that complies with the reach ranges specified in [4.2.5](#) and [4.2.6](#).

4.31.8 Cord Length. The cord from the telephone to the handset shall be at least 29 in (735 mm) long.

4.31.9* Text Telephones (TTYs) Required by 4.1.

(1) Text telephones (TTYs) used with a pay telephone shall be permanently affixed within, or adjacent to, the telephone enclosure. If an acoustic coupler is used, the telephone cord shall be sufficiently long to allow connection of the text telephone (TTY) and the telephone receiver. [Appendix Note](#)

(2) Pay telephones designed to accommodate a portable text telephone (TTY) shall be equipped with a shelf and an electrical outlet within or adjacent to the telephone enclosure. The telephone handset shall be capable of being placed flush on the surface of the shelf. The shelf shall be capable of accommodating a text telephone (TTY) and shall have 6 in (152 mm) minimum vertical clearance in the area where the text telephone (TTY) is to be placed.

(3) Equivalent facilitation may be provided. For example, a portable text telephone (TTY) may be made available in a hotel at the registration desk if it is available on a 24-hour basis for use with nearby public pay telephones. In this instance, at least one pay telephone shall comply with paragraph 2 of this section. In addition, if an acoustic coupler is used, the telephone handset cord shall be sufficiently long so as to allow connection of the text telephone (TTY) and the telephone receiver. Directional signage shall be provided and shall comply with [4.30.7](#). [Appendix Note](#)

*cited in Kirda v. City & County of San Francisco
No. 14-17521 archived on June 19, 2017*

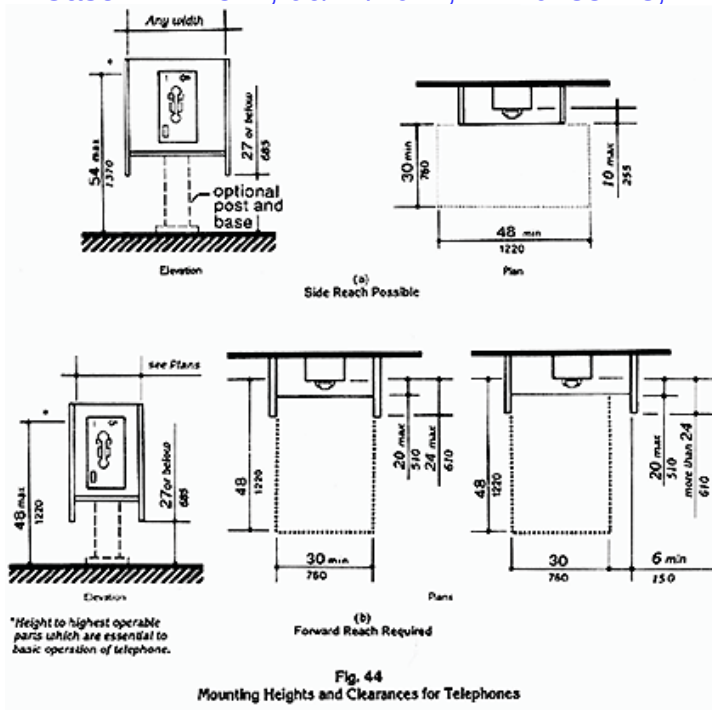


Figure 44
Mounting Height and Clearance for Telephones

4.32 Fixed or Built-in Seating and Tables.

4.32.1 Minimum Number. Fixed or built-in seating or tables required to be accessible by 4.1 shall comply with 4.32.2 through 4.32.4.

EXCEPTION: Fixed or built-in seating or tables used primarily by children ages 12 and younger shall be permitted to comply with 4.32.5.

4.32.2 Seating. If seating spaces for people in wheel chairs are provided at fixed tables or counters, clear floor space complying with 4.2.4 shall be provided. Such clear floor space shall not overlap knee space by more than 19 in (485 mm) (see Fig. 45).

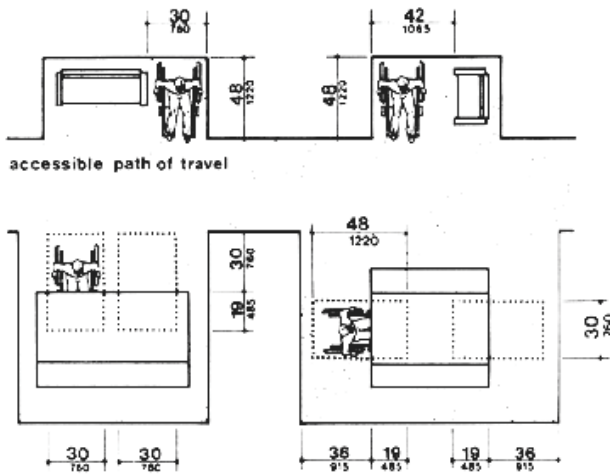


Fig. 45
Minimum Clearances for Seating and Tables

Figure 45
Minimum Clearances for Seats and Tables

4.32.3 Knee Clearances. If seating for people in wheelchairs is provided at tables or counters, knee spaces at least 27 in (685 mm) high, 30 in (760 mm) wide, and 19 in (485 mm) deep shall be provided (see Fig. 45).

4.32.4* Height of Tables or Counters. The tops of accessible tables and counters shall be from 28 in to

34 in (710 mm to 865 mm) above the finish floor or ground. [Appendix Note](#)

4.32.5 Children's Fixed or Built-in Seating and Tables. Fixed or built-in seating or tables used primarily by children ages 12 and younger shall comply with 4.32.5 as permitted by 4.32.1.

EXCEPTION: Fixed or built-in seating or tables used primarily by children ages 5 and younger shall not be required to comply with 4.32.5 if clear floor space complying with [4.2.4](#) parallel to fixed tables or counters is provided.

(1) Seating. If seating spaces for people in wheelchairs are provided at fixed tables or counters, clear floor space complying with [4.2.4](#) shall be provided. Such clear floor space shall not overlap knee space by more than 19 in (485 mm) (see Fig. 45).

(2) Knee Clearances. If seating for people in wheelchairs is provided at tables or counters, knee spaces at least 24 in (610 mm) high, 30 in (760 mm) wide, and 19 in (485 mm) deep shall be provided (see Fig. 45).

(3) Height of Tables or Counters. The tops of accessible tables and counters shall be from 26 in to 30 in (660 mm to 760 mm) above the finish floor or ground.

4.33 Assembly Areas.

4.33.1 Minimum Number. Assembly and associated areas required to be accessible by [4.1](#) shall comply with 4.33.

4.33.2* Size of Wheelchair Locations. Each wheelchair location shall provide minimum clear ground or floor spaces as shown in Fig. 46. [Appendix Note](#)

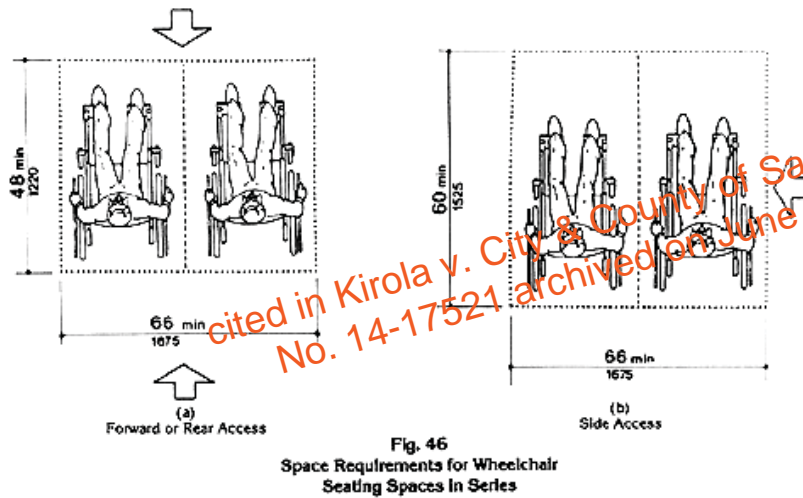


Figure 46
Space Requirements for Wheelchair Seating Spaces in Series

4.33.3* Placement of Wheelchair Locations. Wheelchair areas shall be an integral part of any fixed seating plan and shall be provided so as to provide people with physical disabilities a choice of admission prices and lines of sight comparable to those for members of the general public. They shall adjoin an accessible route that also serves as a means of egress in case of emergency. At least one companion fixed seat shall be provided next to each wheelchair seating area. When the seating capacity exceeds 300, wheelchair spaces shall be provided in more than one location. Readily removable seats may be installed in wheelchair spaces when the spaces are not required to accommodate wheelchair users. [Appendix Note](#)

EXCEPTION: Accessible viewing positions may be clustered for bleachers, balconies, and other areas having sight lines that require slopes of greater than 5 percent. Equivalent accessible viewing positions may be located on levels having accessible egress.

4.33.4 Surfaces. The ground or floor at wheelchair locations shall be level and shall comply with [4.5](#).

4.33.5 Access to Performing Areas. An accessible route shall connect wheelchair seating locations with performing areas, including stages, arena floors, dressing rooms, locker rooms, and other spaces used by performers.

4.33.6* Placement of Listening Systems. If the listening system provided serves individual fixed seats, then such seats shall be located within a 50 ft (15 m) viewing distance of the stage or playing area and shall have a complete view of the stage or playing area. [Appendix Note](#)

4.33.7* Types of Listening Systems. Assistive listening systems (ALS) are intended to augment standard public address and audio systems by providing signals which can be received directly by persons with special receivers or their own hearing aids and which eliminate or filter background noise. The type of assistive listening system appropriate for a particular application depends on the characteristics of the setting, the nature of the program, and the intended audience. Magnetic induction loops, infra-red and radio frequency systems are types of listening systems which are appropriate for various applications.

Appendix Note

4.34 Automated Teller Machines.

4.34.1 General. Each automated teller machine required to be accessible by [4.1.3](#) shall be on an accessible route and shall comply with 4.34.

4.34.2 Clear Floor Space. The automated teller machine shall be located so that clear floor space complying with [4.2.4](#) is provided to allow a person using a wheelchair to make a forward approach, a parallel approach, or both, to the machine.

4.34.3 Reach Ranges.

(1) Forward Approach Only. If only a forward approach is possible, operable parts of all controls shall be placed within the forward reach range specified in [4.2.5](#).

(2) Parallel Approach Only. If only a parallel approach is possible, operable parts of controls shall be placed as follows:

(a) Reach Depth Not More Than 10 in (255 mm). Where the reach depth to the operable parts of all controls as measured from the vertical plane perpendicular to the edge of the unobstructed clear floor space at the farthest protrusion of the automated teller machine or surround is not more than 10 in (255 mm), the maximum height above the finished floor or grade shall be 54 in (1370 mm).

(b) Reach Depth More Than 10 in (255 mm). Where the reach depth to the operable parts of any control as measured from the vertical plane perpendicular to the edge of the unobstructed clear floor space at the farthest protrusion of the automated teller machine or surround is more than 10 in (255 mm), the maximum height above the finished floor or grade shall be as follows:

Reach Depth		Maximum Height	
<i>inches</i>	<i>millimeters</i>	<i>inches</i>	<i>millimeters</i>
10	255	54	1370
11	280	53 1/2	1360
12	305	53	1345
13	330	52 1/2	1335
14	355	51 1/2	1310
15	380	51	1295
16	405	50 1/2	1285
17	430	50	1270
18	455	49 1/2	1255
19	485	49	1245
20	510	48 1/2	1230
21	535	47 1/2	1205
22	560	47	1195
23	585	46 1/2	180
24	610	46	1170

(3) Forward and Parallel Approach. If both a forward and parallel approach are possible, operable parts of controls shall be placed within at least one of the reach ranges in paragraphs (1) or (2) of this section.

(4) Bins. Where bins are provided for envelopes, waste paper, or other purposes, at least one of each type provided shall comply with the applicable reach ranges in paragraph (1), (2), or (3) of this section.

EXCEPTION: Where a function can be performed in a substantially equivalent manner by using an alternate control, only one of the controls needed to perform that function is required to comply with this section. If the controls are identified by tactile markings, such markings shall be provided on both controls.

4.34.4 Controls. Controls for user activation shall comply with [4.27.4](#).

4.34.5 Equipment for Persons with Vision Impairments. Instructions and all information for use shall be made accessible to and independently usable by persons with vision impairments.

4.35 Dressing, Fitting, and Locker Rooms.

cited in *Kirola v. City & County of San Francisco*
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4.35.1 General. Dressing, fitting, and locker rooms required to be accessible by [4.1](#) shall comply with 4.35 and shall be on an accessible route.

4.35.2 Clear Floor Space. A clear floor space allowing a person using a wheelchair to make a 180-degree turn shall be provided in every accessible dressing room entered through a swinging or sliding door. No door shall swing into any part of the turning space. Turning space shall not be required in a private dressing room entered through a curtained opening at least 32 in (815 mm) wide if clear floor space complying with section [4.2](#) renders the dressing room usable by a person using a wheelchair.

4.35.3 Doors. All doors to accessible dressing rooms shall be in compliance with section [4.13](#).

4.35.4 Bench. A bench complying with [4.37](#) shall be provided within the room.

4.35.5 Mirror. Where mirrors are provided in dressing rooms of the same use, then in an accessible dressing room, a full-length mirror, measuring at least 18 in wide by 54 in high (460 mm by 1370 mm), shall be mounted in a position affording a view to a person on the bench as well as to a person in a standing position.

4.36 Saunas and Steam Rooms.

4.36.1 General. Saunas and steam rooms required to be accessible by [4.1](#) shall comply with 4.36.

4.36.2* Wheelchair Turning Space. A wheelchair turning space complying with [4.2.3](#) shall be provided within the room. [Appendix Note](#)

EXCEPTION: Wheelchair turning space shall be permitted to be obstructed by readily removable seats.

4.36.3 Sauna and Steam Room Bench. Where seating is provided, at least one bench shall be provided and shall comply with [4.37](#).

4.36.4 Door Swing. Doors shall not swing into any part of the clear floor or ground space required at a bench complying with [4.37](#).

4.37 Benches.

4.37.1 General. Benches required to be accessible by [4.1](#) shall comply with 4.37.

4.37.2 Clear Floor or Ground Space. Clear floor or ground space complying with [4.2.4](#) shall be provided and shall be positioned for parallel approach to a short end of a bench seat.

EXCEPTION: Clear floor or ground space required by 4.37.2 shall be permitted to be obstructed by readily removable seats in saunas and steam rooms.

4.37.3* Size. Benches shall be fixed and shall have seats that are 20 inches (510 mm) minimum to 24 inches (610 mm) maximum in depth and 42 inches (1065 mm) minimum in length (see Fig. 47). [Appendix Note](#)

4.37.4 Back Support. Benches shall have back support that is 42 inches (1065 mm) minimum in length and that extends from a point 2 inches (51 mm) maximum above the seat to a point 18 inches (455 mm) minimum above the seat (see Fig. 48).

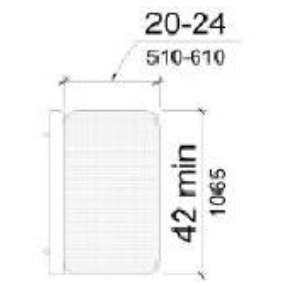


Fig. 47
Size of Bench

*Filed in Kirola v. City & County of San Francisco
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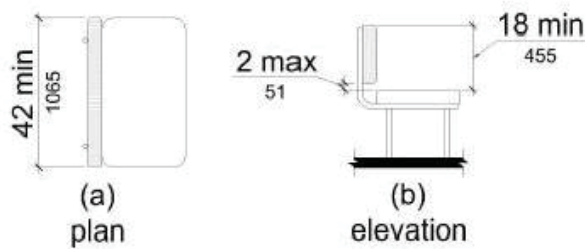


Fig. 48
Bench Back Support

4.37.5 Seat Height. Bench seats shall be 17 inches (430 mm) minimum to 19 inches (485 mm) maximum above the floor or ground.

4.37.6 Structural Strength. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 lbs. (1112 N) is applied at any point on the seat, fastener, mounting device, or supporting structure.

4.37.7 Wet Locations. The surface of benches installed in wet locations shall be slip-resistant and shall not accumulate water.

5. RESTAURANTS AND CAFETERIAS.

5.1* General. Except as specified or modified in this section, restaurants and cafeterias shall comply with the requirements of section 4. Where fixed tables (or dining counters where food is consumed but there is no service) are provided, at least 5 percent, but not less than one, of the fixed tables (or a portion of the dining counter) shall be accessible and shall comply with [4.32](#) as required in [4.14\(18\)](#). In establishments where separate areas are designated for smoking and non-smoking patrons, the required number of accessible fixed tables (or counters) shall be proportionally distributed between the smoking and non-smoking areas. In new construction, and where practicable in alterations, accessible fixed tables (or counters) shall be distributed throughout the space or facility. [Appendix Note](#)

5.2 Counters and Bars. Where food or drink is served at counters exceeding 34 in (865 mm) in height for consumption by customers seated on stools or standing at the counter, a portion of the main counter which is 60 in (1525 mm) in length minimum shall be provided in compliance with [4.32](#) or service shall be available at accessible tables within the same area.

5.3 Access Aisles. All accessible fixed tables shall be accessible by means of an access aisle at least 36 in (915 mm) clear between parallel edges of tables or between a wall and the table edges.

5.4 Dining Areas. In new construction, all dining areas, including raised or sunken dining areas, loggias, and outdoor seating areas, shall be accessible. In non-elevator buildings, an accessible means of vertical access to the mezzanine is not required under the following conditions: 1) the area of mezzanine seating measures no more than 33 percent of the area of the total accessible seating area; 2) the same services and decor are provided in an accessible space usable by the general public; and, 3) the accessible areas are not restricted to use by people with disabilities. In alterations, accessibility to raised or sunken dining areas, or to all parts of outdoor seating areas is not required provided that the same services and decor are provided in an accessible space usable by the general public and are not restricted to use by people with disabilities.

5.5 Food Service Lines. Food service lines shall have a minimum clear width of 36 in (915 mm), with a preferred clear width of 42 in (1065 mm) to allow passage around a person using a wheelchair. Tray slides shall be mounted no higher than 34 in (865 mm) above the floor (see [Fig. 53](#)). If self-service shelves are provided, at least 50 percent of each type must be within reach ranges specified in [4.2.5](#) and [4.2.6](#).

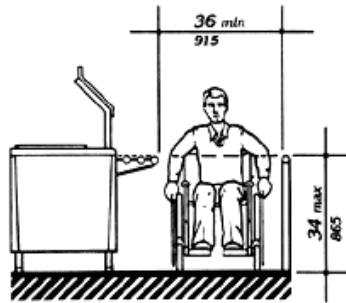


Fig. 53
Food Service Lines

Figure 53
Food Service Lines

5.6 Tableware and Condiment Areas. Self-service shelves and dispensing devices for tableware, dishware, condiments, food and beverages shall be installed to comply with [4.2](#) (see Fig. 54).

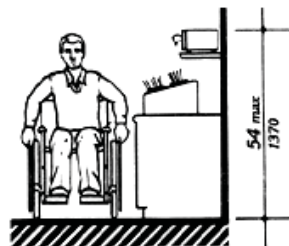


Fig. 54
Tableware Areas

Figure 54
Tableware Areas

5.7 Raised Platforms. In banquet rooms or spaces where a head table or speaker's lectern is located on a raised platform, the platform shall be accessible in compliance with [4.8](#) or [4.11](#). Open edges of a raised platform shall be protected by placement of tables or by a curb.

5.8 Vending Machines and Other Equipment. Spaces for vending machines and other equipment shall comply with [4.2](#) and shall be located on an accessible route.

5.9 Quiet Areas. (Reserved).

6. MEDICAL CARE FACILITIES.

6.1 General. Medical care facilities included in this section are those in which people receive physical or medical treatment or care and where persons may need assistance in responding to an emergency and where the period of stay may exceed 24 hours. In addition to the requirements of section 4, medical care facilities and buildings shall comply with 6.

(1) Hospitals - general purpose hospitals, psychiatric facilities, detoxification facilities - At least 10 percent of patient bedrooms and toilets, and all public use and common use areas are required to be designed and constructed to be accessible.

(2) Hospitals and rehabilitation facilities that specialize in treating conditions that affect mobility, or units within either that specialize in treating conditions that affect mobility - All patient bedrooms and toilets, and all public use and common use areas are required to be designed and constructed to be accessible.

(3) Long term care facilities, nursing homes - At least 50 percent of patient bedrooms and toilets, and all public use and common use areas are required to be designed and constructed to be accessible.

(4) Alterations to patient bedrooms.

(a) When patient bedrooms are being added or altered as part of a planned renovation of an entire wing, a department, or other discrete area of an existing medical facility, a percentage of the patient bedrooms that are being added or altered shall comply with [6.3](#). The percentage of accessible rooms provided shall

be consistent with the percentage of rooms required to be accessible by the applicable requirements of [6.1\(1\)](#), [6.1\(2\)](#), or [6.1\(3\)](#), until the number of accessible patient bedrooms in the facility equals the overall number that would be required if the facility were newly constructed. (For example, if 20 patient bedrooms are being altered in the obstetrics department of a hospital, 2 of the altered rooms must be made accessible. If, within the same hospital, 20 patient bedrooms are being altered in a unit that specializes in treating mobility impairments, all of the altered rooms must be made accessible.) Where toilet/bathrooms are part of patient bedrooms which are added or altered and required to be accessible, each such patient toilet/bathroom shall comply with [6.4](#).

(b) When patient bedrooms are being added or altered individually, and not as part of an alteration of the entire area, the altered patient bedrooms shall comply with [6.3](#), unless either: a) the number of accessible rooms provided in the department or area containing the altered patient bedroom equals the number of accessible patient bedrooms that would be required if the percentage requirements of [6.1\(1\)](#), [6.1\(2\)](#), or [6.1\(3\)](#) were applied to that department or area; or b) the number of accessible patient bedrooms in the facility equals the overall number that would be required if the facility were newly constructed. Where toilet/bathrooms are part of patient bedrooms which are added or altered and required to be accessible, each such toilet/bathroom shall comply with [6.4](#).

6.2 Entrances. At least one accessible entrance that complies with [4.14](#) shall be protected from the weather by canopy or roof overhang. Such entrances shall incorporate a passenger loading zone that complies with [4.6.6](#).

6.3 Patient Bedrooms. Provide accessible patient bedrooms in compliance with section 4. Accessible patient bedrooms shall comply with the following:

(1) Each bedroom shall have a door that complies with [4.13](#).

EXCEPTION: Entry doors to acute care hospital bedrooms for in- patients shall be exempted from the requirement in [4.13.6](#) for maneuvering space at the latch side of the door if the door is at least 44 in (1120 mm) wide.

(2) Each bedroom shall have adequate space to provide a maneuvering space that complies with [4.2.3.16](#). In rooms with two beds, it is preferable that this space be located between beds.

(3) Each bedroom shall have adequate space to provide a minimum clear floor space of 36 in (915 mm) along each side of the bed and to provide an accessible route complying with [4.3.3](#) to each side of each bed.

6.4 Patient Toilet Rooms. Where toilet/bathrooms are provided as a part of a patient bedroom, each patient bedroom that is required to be accessible shall have an accessible toilet/bathroom that complies with [4.22](#) or [4.23](#) and shall be on an accessible route.

7. BUSINESS, MERCANTILE AND CIVIC.

7.1 General. In addition to the requirements of section 4, the design of all areas used for business transactions with the public shall comply with 7.

7.2 Sales and Service Counters, Teller Windows, Information Counters.

(1) In areas used for transactions where counters have cash registers and are provided for sales or distribution of goods or services to the public, at least one of each type shall have a portion of the counter which is at least 36 in (915mm) in length with a maximum height of 36 in (915 mm) above the finish floor. It shall be on an accessible route complying with [4.3](#). Such counters shall include, but are not limited to, counters in retail stores, and distribution centers. The accessible counters must be dispersed throughout the building or facility. In alterations where it is technically infeasible to provide an accessible counter, an auxiliary counter meeting these requirements may be provided.

(2) In areas used for transactions that may not have a cash register but at which goods or services are sold or distributed including, but not limited to, ticketing counters, teller stations, registration counters in transient lodging facilities, information counters, box office counters and library check-out areas, either:

(i) a portion of the main counter which is a minimum of 36 in (915 mm) in length shall be provided with a maximum height of 36 in (915 mm); or

(ii) an auxiliary counter with a maximum height of 36 in (915 mm) in close proximity to the main counter shall be provided; or

(iii) equivalent facilitation shall be provided (e.g., at a hotel registration counter, equivalent facilitation might consist of: (1) provision of a folding shelf attached to the main counter on which an individual with a

disability can write, and (2) use of the space on the side of the counter or at the concierge desk, for handing materials back and forth).

All accessible sales and service counters shall be on an accessible route complying with [4.3](#).

(3)* In public facilities where counters or teller windows have solid partitions or security glazing to separate personnel from the public, at least one of each type shall provide a method to facilitate voice communication. Such methods may include, but are not limited to, grilles, slats, talk-through baffles, intercoms, or telephone handset devices. The method of communication shall be accessible to both individuals who use wheelchairs and individuals who have difficulty bending or stooping. If provided for public use, at least one telephone communication device shall be equipped with volume controls complying with [4.31.5](#). Hand-operable communications devices, if provided, shall comply with [4.27](#). [Appendix Note](#)

(4)* Assistive Listening Systems. (Reserved). [Appendix Note](#)

7.3* Check-out Aisles.

(1) In new construction, accessible check-out aisles shall be provided in conformance with the table below:

Total Check-out Aisles of Each Design	Minimum Number of Accessible Check-out Aisles (of each design)
1 - 4	1
5 - 8	2
9 - 15	3
over 15	3, plus 20% of additional aisles

EXCEPTION: In new construction, where the selling space is under 5000 square feet, only one check-out aisle is required to be accessible.

EXCEPTION: In alterations, at least one check-out aisle shall be accessible in facilities under 5000 square feet of selling space. In facilities of 5000 or more square feet of selling space, at least one of each design of check-out aisle shall be made accessible when altered until the number of accessible check-out aisles of each design equals the number required in new construction.

Examples of check-out aisles of different "design" include those which are specifically designed to serve different functions. Different "design" includes but is not limited to the following features - length of belt or no belt; or permanent signage designating the aisle as an express lane.

(2) Clear aisle width for accessible check-out aisles shall comply with [4.2.1](#) and maximum adjoining counter height shall not exceed 38 in (965 mm) above the finish floor. The top of the lip shall not exceed 40 in (1015 mm) above the finish floor.

(3) Signage identifying accessible check-out aisles shall comply with [4.30.7](#) and shall be mounted above the check-out aisle in the same location where the check-out number or type of check-out is displayed.

[Appendix Note](#)

7.4 Security Bollards. Any device used to prevent the removal of shopping carts from store premises shall not prevent access or egress to people in wheelchairs. An alternate entry that is equally convenient to that provided for the ambulatory population is acceptable.

8. LIBRARIES.

8.1 General. In addition to the requirements of [section 4](#), the design of all public areas of a library shall comply with 8, including reading and study areas, stacks, reference rooms, reserve areas, and special facilities or collections.

8.2 Reading and Study Areas. At least 5 percent or a minimum of one of each element of fixed seating, tables, or study carrels shall comply with [4.2](#) and [4.32](#). Clearances between fixed accessible tables and between study carrels shall comply with [4.3](#).

8.3 Check-Out Areas. At least one lane at each check-out area shall comply with [7.2\(1\)](#). Any traffic control or book security gates or turnstiles shall comply with [4.13](#).

8.4 Card Catalogs and Magazine Displays. Minimum clear aisle space at card catalogs and magazine displays shall comply with Fig. 55. Maximum reach height shall comply with [4.2](#), with a height of 48 in (1220 mm) preferred irrespective of approach allowed.

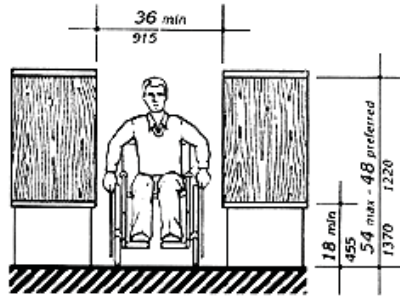


Fig. 55
Card Catalog

Figure 55
Card Catalog

8.5 Stacks. Minimum clear aisle width between stacks shall comply with 4.3, with a minimum clear aisle width of 42 in (1065 mm) preferred where possible. Shelf height in stack areas is unrestricted (see Fig. 56).

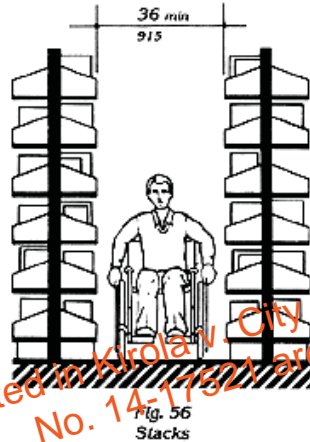


Fig. 56
Stacks

Figure 56
Stacks

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9. ACCESSIBLE TRANSIENT LODGING.

(1) Except as specified in the special technical provisions of this section, accessible transient lodging shall comply with the applicable requirements of section 4. Transient lodging includes facilities or portions thereof used for sleeping accommodations, when not classed as a medical care facility.

9.1 Hotels, Motels, Inns, Boarding Houses, Dormitories, Resorts and Other Similar Places of Transient Lodging.

9.1.1 General. All public use and common use areas are required to be designed and constructed to comply with section 4 (Accessible Elements and Spaces: Scope and Technical Requirements).

EXCEPTION: Sections 9.1 through 9.4 do not apply to an establishment located within a building that contains not more than five rooms for rent or hire and that is actually occupied by the proprietor of such establishment as the residence of such proprietor.

9.1.2 Accessible Units, Sleeping Rooms, and Suites. Accessible sleeping rooms or suites that comply with the requirements of 9.2 (Requirements for Accessible Units, Sleeping Rooms, and Suites) shall be provided in conformance with the table below. In addition, in hotels, of 50 or more sleeping rooms or suites, additional accessible sleeping rooms or suites that include a roll-in shower shall also be provided in conformance with the table below. Such accommodations shall comply with the requirements of 9.2, 4.21, and Figure 57(a) or (b).

Number of Rooms	Accessible Rooms	Rooms with Roll-in Showers
1 to 25	1	

26 to 50	2	
51 to 75	3	1
76 to 100	4	1
101 to 150	5	2
151 to 200	6	2
201 to 300	7	3
301 to 400	8	4
401 to 500	9	4 plus 1 for each additional 100 over 400
501 to 1000	2% of total	
1001 and over	20 plus 1 for each 100 over 1000	

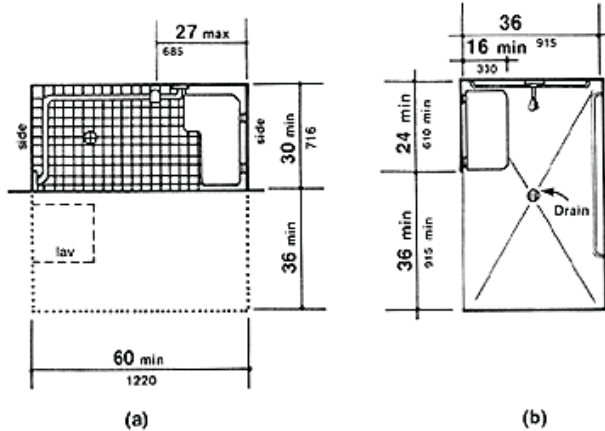


Fig. 57
Roll-in Shower with Folding Seat

Figure 57
Roll-In Shower with Folding Seat

9.1.3 Sleeping Accommodations for Persons with Hearing Impairments. In addition to those accessible sleeping rooms and suites required by 9.1.2, sleeping rooms and suites that comply with 9.3 (Visual Alarms, Notification Devices, and Telephones) shall be provided in conformance with the following table:

Number of Elements	Accessible Elements
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2% of total
1001 and over	20 plus 1 for each 100 over 1000

9.1.4 Classes of Sleeping Accommodations.

(1) In order to provide persons with disabilities a range of options equivalent to those available to other persons served by the facility, sleeping rooms and suites required to be accessible by 9.1.2 shall be dispersed among the various classes of sleeping accommodations available to patrons of the place of transient lodging. Factors to be considered include room size, cost, amenities provided, and the number of beds provided.

(2) Equivalent Facilitation. For purposes of this section, it shall be deemed equivalent facilitation if the operator of a facility elects to limit construction of accessible rooms to those intended for multiple occupancy, provided that such rooms are made available at the cost of a single occupancy room to an individual with disabilities who requests a single-occupancy room.

9.1.5. Alterations to Accessible Units, Sleeping Rooms, and Suites. When sleeping rooms are being altered in an existing facility, or portion thereof, subject to the requirements of this section, at least one sleeping room or suite that complies with the requirements of 9.2 (Requirements for Accessible Units,

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Sleeping Rooms, and Suites) shall be provided for each 25 sleeping rooms, or fraction thereof, of rooms being altered until the number of such rooms provided equals the number required to be accessible with [9.1.2](#). In addition, at least one sleeping room or suite that complies with the requirements of [9.3](#) (Visual Alarms, Notification Devices, and Telephones) shall be provided for each 25 sleeping rooms, or fraction thereof, of rooms being altered until the number of such rooms equals the number required to be accessible by [9.1.3](#).

9.2 Requirements for Accessible Units, Sleeping Rooms and Suites.

9.2.1 General. Units, sleeping rooms, and suites required to be accessible by [9.1](#) shall comply with 9.2.

9.2.2 Minimum Requirements. An accessible unit, sleeping room or suite shall be on an accessible route complying with [4.3](#) and have the following accessible elements and spaces.

(1) Accessible sleeping rooms shall have a 36 in (915 mm) clear width maneuvering space located along both sides of a bed, except that where two beds are provided, this requirement can be met by providing a 36 in (915 mm) wide maneuvering space located between the two beds.

(2) An accessible route complying with [4.3](#) shall connect all accessible spaces and elements, including telephones, within the unit, sleeping room, or suite. This is not intended to require an elevator in multi-story units as long as the spaces identified in [9.2.2\(6\)](#) and (7) are on accessible levels and the accessible sleeping area is suitable for dual occupancy.

(3) Doors and doorways designed to allow passage into and within all sleeping rooms, suites or other covered units shall comply with [4.13](#).

(4) If fixed or built-in storage facilities such as cabinets, shelves, closets, and drawers are provided in accessible spaces, at least one of each type provided shall contain storage space complying with [4.25](#). Additional storage may be provided outside of the dimensions required by 4.25.

(5) All controls in accessible units, sleeping rooms, and suites shall comply with [4.27](#).

(6) Where provided as part of an accessible unit, sleeping room, or suite, the following spaces shall be accessible and shall be on an accessible route:

(a) the living area.

(b) the dining area.

(c) at least one sleeping area.

(d) patios, terraces, or balconies.

EXCEPTION: The requirements of [4.13.8](#) and [4.3.8](#) do not apply where it is necessary to utilize a higher door threshold or a change in level to protect the integrity of the unit from wind/water damage. Where this exception results in patios, terraces or balconies that are not at an accessible level, equivalent facilitation shall be provided (e.g., equivalent facilitation at a hotel patio or balcony might consist of providing raised decking or a ramp to provide accessibility).

(e) at least one full bathroom (i.e., one with a water closet, a lavatory, and a bathtub or shower).

(f) if only half baths are provided, at least one half bath.

(g) carports, garages or parking spaces.

(7) Kitchens, Kitchenettes, or Wet Bars. When provided as accessory to a sleeping room or suite, kitchens, kitchenettes, wet bars, or similar amenities shall be accessible. Clear floor space for a front or parallel approach to cabinets, counters, sinks, and appliances shall be provided to comply with [4.2.4](#). Countertops and sinks shall be mounted at a maximum height of 34 in (865 mm) above the floor. At least fifty percent of shelf space in cabinets or refrigerator/freezers shall be within the reach ranges of [4.2.5](#) or [4.2.6](#) and space shall be designed to allow for the operation of cabinet and/or appliance doors so that all cabinets and appliances are accessible and usable. Controls and operating mechanisms shall comply with [4.27](#).

(8) Sleeping room accommodations for persons with hearing impairments required by [9.1](#) and complying with [9.3](#) shall be provided in the accessible sleeping room or suite.

9.3 Visual Alarms, Notification Devices and Telephones.

9.3.1 General. In sleeping rooms required to comply with this section, auxiliary visual alarms shall be provided and shall comply with [4.28.4](#). Visual notification devices shall also be provided in units, sleeping

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rooms and suites to alert room occupants of incoming telephone calls and a door knock or bell. Notification devices shall *not* be connected to auxiliary visual alarm signal appliances. Permanently installed telephones shall have volume controls complying with [4.31.5](#); an accessible electrical outlet within 4 ft (1220 mm) of a telephone connection shall be provided to facilitate the use of a text telephone.

9.3.2 Equivalent Facilitation. For purposes of this section, equivalent facilitation shall include the installation of electrical outlets (including outlets connected to a facility's central alarm system) and telephone wiring in sleeping rooms and suites to enable persons with hearing impairments to utilize portable visual alarms and communication devices provided by the operator of the facility.

9.4 Other Sleeping Rooms and Suites. Doors and doorways designed to allow passage into and within all sleeping units or other covered units shall comply with [4.13.5](#).

9.5 Transient Lodging in Homeless Shelters, Halfway Houses, Transient Group Homes, and Other Social Service Establishments.

9.5.1 New Construction. In new construction all public use and common use areas are required to be designed and constructed to comply with section [4](#). At least one of each type of amenity (such as washers, dryers and similar equipment installed for the use of occupants) in each common area shall be accessible and shall be located on an accessible route to any accessible unit or sleeping accommodation. EXCEPTION: Where elevators are not provided as allowed in [4.1.3\(5\)](#), accessible amenities are not required on inaccessible floors as long as one of each type is provided in common areas on accessible floors.

9.5.2 Alterations.

(1) Social service establishments which are not homeless shelters:

(a) The provisions of [9.5.3](#) and [9.1.5](#) shall apply to sleeping rooms and beds.

(b) Alteration of other areas shall be consistent with the new construction provisions of [9.5.1](#).

(2) Homeless shelters. If the following elements are altered, the following requirements apply:

(a) at least one public entrance shall allow a person with mobility impairments to approach, enter, and exit including a minimum clear door width of 32 in (815 mm).

(b) sleeping space for homeless persons as provided in the scoping provisions of [9.1.2](#) shall include doors to the sleeping area with a minimum clear width of 32 in (815 mm) and maneuvering space around the beds for persons with mobility impairments complying with [9.2.2\(1\)](#).

(c) at least one toilet room for each gender or one unisex toilet room shall have a minimum clear door width of 32 in (815 mm), minimum turning space complying with [4.2.3](#), one water closet complying with [4.16](#), one lavatory complying with [4.19](#) and the door shall have a privacy latch; and, if provided, at least one tub or shower shall comply with [4.20](#) or [4.21](#), respectively.

(d) at least one common area which a person with mobility impairments can approach, enter and exit including a minimum clear door width of 32 in (815 mm).

(e) at least one route connecting elements (a), (b), (c) and (d) which a person with mobility impairments can use including minimum clear width of 36 in (915 mm), passing space complying with [4.3.4](#), turning space complying with [4.2.3](#) and changes in levels complying with [4.3.8](#).

(f) homeless shelters can comply with the provisions of (a)- (e) by providing the above elements on one accessible floor.

9.5.3. Accessible Sleeping Accommodations in New Construction. Accessible sleeping rooms shall be provided in conformance with the table in [9.1.2](#) and shall comply with [9.2](#) Accessible Units, Sleeping Rooms and Suites (where the items are provided). Additional sleeping rooms that comply with [9.3](#) Sleeping Accommodations for Persons with Hearing Impairments shall be provided in conformance with the table provided in [9.1.3](#).

In facilities with multi-bed rooms or spaces, a percentage of the beds equal to the table provided in [9.1.2](#) shall comply with [9.2.2\(1\)](#).

10. TRANSPORTATION FACILITIES.

10.1 General. Every station, bus stop, bus stop pad, terminal, building or other transportation facility, shall comply with the applicable provisions of section 4, the special application sections, and the applicable

provisions of this section.

10.2 Bus Stops and Terminals.

10.2.1 New Construction.

(1) Where new bus stop pads are constructed at bus stops, bays or other areas where a lift or ramp is to be deployed, they shall have a firm, stable surface; a minimum clear length of 96 inches (measured from the curb or vehicle roadway edge) and a minimum clear width of 60 inches (measured parallel to the vehicle roadway) to the maximum extent allowed by legal or site constraints; and shall be connected to streets, sidewalks or pedestrian paths by an accessible route complying with [4.3](#) and [4.4](#). The slope of the pad parallel to the roadway shall, to the extent practicable, be the same as the roadway. For water drainage, a maximum slope of 1:50 (2%) perpendicular to the roadway is allowed.

(2) Where provided, new or replaced bus shelters shall be installed or positioned so as to permit a wheelchair or mobility aid user to enter from the public way and to reach a location, having a minimum clear floor area of 30 inches by 48 inches, entirely within the perimeter of the shelter. Such shelters shall be connected by an accessible route to the boarding area provided under paragraph (1) of this section.

(3) Where provided, all new bus route identification signs shall comply with [4.30.5](#). In addition, to the maximum extent practicable, all new bus route identification signs shall comply with [4.30.2](#) and [4.30.3](#). Signs that are sized to the maximum dimensions permitted under legitimate local, state or federal regulations or ordinances shall be considered in compliance with [4.30.2](#) and [4.30.3](#) for purposes of this section.

EXCEPTION: Bus schedules, timetables, or maps that are posted at the bus stop or bus bay are not required to comply with this provision.

10.2.2 Bus Stop Siting and Alterations.

(1) Bus stop sites shall be chosen such that, to the maximum extent practicable, the areas where lifts or ramps are to be deployed comply with section [10.2.1\(1\)](#) and [\(2\)](#).

(2) When new bus route identification signs are installed or old signs are replaced, they shall comply with the requirements of [10.2.1\(3\)](#).

10.3 Fixed Facilities and Stations.

10.3.1 New Construction. New stations in rapid rail, light rail, commuter rail, intercity bus, intercity rail, high speed rail, and other fixed guideway systems (e.g. automated guideway transit, monorails, etc.) shall comply with the following provisions, as applicable:

(1) Elements such as ramps, elevators or other circulation devices, fare vending or other ticketing areas, and fare collection areas shall be placed to minimize the distance which wheelchair users and other persons who cannot negotiate steps may have to travel compared to the general public. The circulation path, including an accessible entrance and an accessible route, for persons with disabilities shall, to the maximum extent practicable, coincide with the circulation path for the general public. Where the circulation path is different, signage complying with [4.30.1](#), [4.30.2](#), [4.30.3](#), [4.30.5](#), and [4.30.7\(1\)](#) shall be provided to indicate direction to and identify the accessible entrance and accessible route.

(2) In lieu of compliance with [4.1.3\(8\)](#), at least one entrance to each station shall comply with [4.14](#), Entrances. If different entrances to a station serve different transportation fixed routes or groups of fixed routes, at least one entrance serving each group or route shall comply with [4.14](#), Entrances. All accessible entrances shall, to the maximum extent practicable, coincide with those used by the majority of the general public.

(3) Direct connections to commercial, retail, or residential facilities shall have an accessible route complying with [4.3](#) from the point of connection to boarding platforms and all transportation system elements used by the public. Any elements provided to facilitate future direct connections shall be on an accessible route connecting boarding platforms and all transportation system elements used by the public.

(4) Where signs are provided at entrances to stations identifying the station or the entrance, or both, at least one sign at each entrance shall comply with [4.30.4](#) and [4.30.6](#). Such signs shall be placed in uniform locations at entrances within the transit system to the maximum extent practicable.

EXCEPTION: Where the station has no defined entrance, but signage is provided, then the accessible signage shall be placed in a central location.

(5) Stations covered by this section shall have identification signs complying with [4.30.1](#), [4.30.2](#), [4.30.3](#), and [4.30.5](#). Signs shall be placed at frequent intervals and shall be clearly visible from within the vehicle on both sides when not obstructed by another train. When station identification signs are placed close to

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vehicle windows (i.e., on the side opposite from boarding) each shall have the top of the highest letter or symbol below the top of the vehicle window and the bottom of the lowest letter or symbol above the horizontal mid-line of the vehicle window.

(6) Lists of stations, routes, or destinations served by the station and located on boarding areas, platforms, or mezzanines shall comply with [4.30.1](#), [4.30.2](#), [4.30.3](#), and [4.30.5](#). A minimum of one sign identifying the specific station and complying with [4.30.4](#) and [4.30.6](#) shall be provided on each platform or boarding area. All signs referenced in this paragraph shall, to the maximum extent practicable, be placed in uniform locations within the transit system.

(7)* Automatic fare vending, collection and adjustment (e.g., add-fare) systems shall comply with [4.34.2](#), [4.34.3](#), [4.34.4](#), and [4.34.5](#). At each accessible entrance such devices shall be located on an accessible route. If self-service fare collection devices are provided for the use of the general public, at least one accessible device for entering, and at least one for exiting, unless one device serves both functions, shall be provided at each accessible point of entry or exit. Accessible fare collection devices shall have a minimum clear opening width of 32 inches; shall permit passage of a wheelchair; and, where provided, coin or card slots and controls necessary for operation shall comply with [4.27](#). Gates which must be pushed open by wheelchair or mobility aid users shall have a smooth continuous surface extending from 2 inches above the floor to 27 inches above the floor and shall comply with [4.13](#). Where the circulation path does not coincide with that used by the general public, accessible fare collection systems shall be located at or adjacent to the accessible point of entry or exit. [Appendix Note](#)

(8) Platform edges bordering a drop-off and not protected by platform screens or guard rails shall have a detectable warning. Such detectable warnings shall comply with [4.29.2](#) and shall be 24 inches wide running the full length of the platform drop-off.

(9) In stations covered by this section, rail-to-platform height in new stations shall be coordinated with the floor height of new vehicles so that the vertical difference, measured when the vehicle is at rest, is within plus or minus 5/8 inch under normal passenger load conditions. For rapid rail, light rail, commuter rail, high speed rail, and intercity rail systems in new stations, the horizontal gap, measured when the new vehicle is at rest, shall be no greater than 3 inches. For slow moving automated guideway "people mover" transit systems, the horizontal gap in new stations shall be no greater than 1 inch.

EXCEPTION 1: Existing vehicles operating in new stations may have a vertical difference with respect to the new platform within plus or minus 1-1/2 inches.

EXCEPTION 2: In light rail, commuter rail and intercity rail systems where it is not operationally or structurally feasible to meet the horizontal gap or vertical difference requirements, mini-high platforms, car-borne or platform-mounted lifts, ramps or bridge plates, or similar manually deployed devices, meeting the applicable requirements of 36 [C.F.R. part 1192](#), or 49 C.F.R. part 38 shall suffice.

(10) Stations shall not be designed or constructed so as to require persons with disabilities to board or alight from a vehicle at a location other than one used by the general public.

(11) Illumination levels in the areas where signage is located shall be uniform and shall minimize glare on signs. Lighting along circulation routes shall be of a type and configuration to provide uniform illumination.

(12) Text Telephones: The following shall be provided in accordance with [4.31.9](#):

(a) If an interior public pay telephone is provided in a transit facility (as defined by the Department of Transportation) at least one interior public text telephone shall be provided in the station.

(b) Where four or more public pay telephones serve a particular entrance to a rail station and at least one is in an interior location, at least one interior public text telephone shall be provided to serve that entrance. Compliance with this section constitutes compliance with section [4.1.3\(17\)\(c\)](#).

(13) Where it is necessary to cross tracks to reach boarding platforms, the route surface shall be level and flush with the rail top at the outer edge and between the rails, except for a maximum 2-1/2 inch gap on the inner edge of each rail to permit passage of wheel flanges. Such crossings shall comply with [4.29.5](#). Where gap reduction is not practicable, an above-grade or below-grade accessible route shall be provided.

(14) Where public address systems are provided to convey information to the public in terminals, stations, or other fixed facilities, a means of conveying the same or equivalent information to persons with hearing loss or who are deaf shall be provided.

(15) Where clocks are provided for use by the general public, the clock face shall be uncluttered so that its elements are clearly visible. Hands, numerals, and/or digits shall contrast with the background either light-on-dark or dark-on-light. Where clocks are mounted overhead, numerals and/or digits shall comply with [4.30.3](#). Clocks shall be placed in uniform locations throughout the facility and system to the

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maximum extent practicable.

(16) Where provided in below grade stations, escalators shall have a minimum clear width of 32 inches. At the top and bottom of each escalator run, at least two contiguous treads shall be level beyond the comb plate before the risers begin to form. All escalator treads shall be marked by a strip of clearly contrasting color, 2 inches in width, placed parallel to and on the nose of each step. The strip shall be of a material that is at least as slip resistant as the remainder of the tread. The edge of the tread shall be apparent from both ascending and descending directions.

(17) Where provided, elevators shall be glazed or have transparent panels to allow an unobstructed view both in to and out of the car. Elevators shall comply with [4.10](#).

EXCEPTION: Elevator cars with a clear floor area in which a 60 inch diameter circle can be inscribed may be substituted for the minimum car dimensions of 4.10, [Fig. 22](#).

(18) Where provided, ticketing areas shall permit persons with disabilities to obtain a ticket and check baggage and shall comply with [7.2](#).

(19) Where provided, baggage check-in and retrieval systems shall be on an accessible route complying with [4.3](#), and shall have space immediately adjacent complying with [4.2](#). If unattended security barriers are provided, at least one gate shall comply with [4.13](#). Gates which must be pushed open by wheelchair or mobility aid users shall have a smooth continuous surface extending from 2 inches above the floor to 27 inches above the floor.

10.3.2 Existing Facilities: Key Stations.

(1) Rapid, light and commuter rail key stations, as defined under criteria established by the Department of Transportation in subpart C of 49 C.F.R. part 37 and existing intercity rail stations shall provide at least one accessible route from an accessible entrance to those areas necessary for use of the transportation system.

(2) The accessible route required by [10.3.2\(1\)](#) shall include the features specified in 10.3.1(1), (4)-(9), (11)-(15), and (17)-(19).

(3) Where technical infeasibility in existing stations requires the accessible route to lead from the public way to a paid area of the transit system, an accessible fare collection system, complying with [10.3.1\(7\)](#), shall be provided along such accessible route.

(4) In light rail, rapid rail and commuter rail key stations, the platform or a portion thereof and the vehicle floor shall be coordinated so that the vertical difference, measured when the vehicle is at rest, is within plus or minus 1-1/2 inches under all normal passenger load conditions, and the horizontal gap, measured when the vehicle is at rest, is no greater than 3 inches for at least one door of each vehicle or car required to be accessible by [49 C.F.R. part 37](#).

EXCEPTION 1: Existing vehicles retrofitted to meet the requirements of [49 C.F.R. 37.93](#) (one-car-per-train rule) shall be coordinated with the platform such that, for at least one door, the vertical difference between the vehicle floor and the platform, measured when the vehicle is at rest with 50% normal passenger capacity, is within plus or minus 2 inches and the horizontal gap is no greater than 4 inches.

EXCEPTION 2: Where it is not structurally or operationally feasible to meet the horizontal gap or vertical difference requirements, mini-high platforms, car-borne or platform mounted lifts, ramps or bridge plates, or similar manually deployed devices, meeting the applicable requirements of [36 C.F.R. part 1192](#), or 49 C.F.R. part 38, shall suffice.

(5) New direct connections to commercial, retail, or residential facilities shall, to the maximum extent feasible, have an accessible route complying with [4.3](#) from the point of connection to boarding platforms and all transportation system elements used by the public. Any elements provided to facilitate future direct connections shall be on an accessible route connecting boarding platforms and all transportation system elements used by the public.

10.3.3 Existing Facilities: Alterations.

(1) For the purpose of complying with [4.1.6\(2\)](#) (Alterations to an Area Containing a Primary Function), an area of primary function shall be as defined by applicable provisions of [49 C.F.R. 37.43\(c\)](#); (Department of Transportation's ADA Rule) or [28 C.F.R. 36.403](#) (Department of Justice's ADA Rule).

10.4. Airports.

10.4.1 New Construction.

(1) Elements such as ramps, elevators or other vertical circulation devices, ticketing areas, security

checkpoints, or passenger waiting areas shall be placed to minimize the distance which wheelchair users and other persons who cannot negotiate steps may have to travel compared to the general public.

(2) The circulation path, including an accessible entrance and an accessible route, for persons with disabilities shall, to the maximum extent practicable, coincide with the circulation path for the general public. Where the circulation path is different, directional signage complying with [4.30.1](#), [4.30.2](#), [4.30.3](#) and [4.30.5](#) shall be provided which indicates the location of the nearest accessible entrance and its accessible route.

(3) Ticketing areas shall permit persons with disabilities to obtain a ticket and check baggage and shall comply with [7.2](#).

(4) Where public pay telephones are provided, and at least one is at an interior location, a public text telephone (TTY) shall be provided in compliance with [4.31.9](#). Additionally, if four or more public pay telephones are located in any of the following locations, at least one public text telephone (TTY) shall also be provided in that location:

- (a) a main terminal outside the security areas;
- (b) a concourse within the security areas; or
- (c) a baggage claim area in a terminal.

Compliance with this section constitutes compliance with section [4.1.3\(17\)\(c\)](#).

(5) Baggage check-in and retrieval systems shall be on an accessible route complying with [4.3](#), and shall have space immediately adjacent complying with [4.2.4](#). If unattended security barriers are provided, at least one gate shall comply with [4.13](#). Gates which must be pushed open by wheelchair or mobility aid users shall have a smooth continuous surface extending from 2 inches above the floor to 27 inches above the floor.

(6) Terminal information systems which broadcast information to the general public through a public address system shall provide a means to provide the same or equivalent information to persons with a hearing loss or who are deaf. Such methods may include, but are not limited to, visual paging systems using video monitors and computer technology. For persons with certain types of hearing loss such methods may include, but are not limited to, an assistive listening system complying with [4.33.7](#).

(7) Where clocks are provided for use by the general public the clock face shall be uncluttered so that its elements are clearly visible. Hands, numerals, and/or digits shall contrast with their background either light-on-dark or dark-on-light. Where clocks are mounted overhead, numerals and/or digits shall comply with [4.30.3](#). Clocks shall be placed in uniform locations throughout the facility to the maximum extent practicable.

(8)* Security Systems. In public facilities that are airports, at least one accessible route complying with [4.3](#) shall be provided through fixed security barriers at each single barrier or group of security barriers. A group is two or more security barriers immediately adjacent to each other at a single location. Where security barriers incorporate equipment such as metal detectors, fluoroscopes, or other similar devices which cannot be made accessible, an accessible route shall be provided adjacent to such security screening devices to facilitate an equivalent circulation path. The circulation path shall permit persons with disabilities passing through security barriers to maintain visual contact with their personal items to the same extent provided other members of the general public. [Appendix Note](#)
EXCEPTION: Doors, doorways, and gates designed to be operated only by security personnel shall be exempt from [4.13.9](#), [4.13.11](#), and [4.13.12](#).

10.5 Boat and Ferry Docks. [Reserved]

NOTE: Section 11 has not been incorporated in the Department of Justice accessibility standards and therefore is not enforceable.

11. JUDICIAL, LEGISLATIVE AND REGULATORY FACILITIES.

11.1 General. In addition to the requirements in section 4 and 11.1, judicial facilities shall comply with [11.2](#) and legislative and regulatory facilities shall comply with [11.3](#).

11.1.1 Entrances. Where provided, at least one restricted entrance and one secured entrance to the facility shall be accessible in addition to the entrances required to be accessible by [4.1.3\(8\)](#). Restricted entrances are those entrances used only by judges, public officials, facility personnel or other authorized parties on a controlled basis. Secured entrances are those entrances to judicial facilities used only by

detainees and detention officers.

EXCEPTION: At secured entrances, doors and doorways operated only by security personnel shall be exempt from [4.13.9](#), [4.13.10](#), [4.13.11](#) and [4.13.12](#).

11.1.2 Security Systems. An accessible route complying with [4.3](#) shall be provided through fixed security barriers at required accessible entrances. Where security barriers incorporate equipment such as metal detectors, fluoroscopes, or other similar devices which cannot be made accessible, an accessible route shall be provided adjacent to such security screening devices to facilitate an equivalent circulation path.

11.1.3* Two-Way Communication Systems. Where a two-way communication system is provided to gain admittance to a facility or to restricted areas within the facility, the system shall provide both visual and audible signals and shall comply with [4.27](#). [Appendix Note](#)

11.2 Judicial Facilities.

11.2.1 Courtrooms.

(1) Where provided, the following elements and spaces shall be on an accessible route complying with [4.3](#). Areas that are raised or depressed and accessed by ramps or platform lifts with entry ramps shall provide unobstructed turning space complying with [4.2.3](#).

EXCEPTION: Vertical access to raised judges' benches or courtroom stations need not be installed provided that the requisite areas, maneuvering spaces, and, if appropriate, electrical service are installed at the time of initial construction to allow future installation of a means of vertical access complying with [4.8](#), [4.10](#), or [4.11](#) without requiring substantial reconstruction of the space.

(a) Spectator, Press, and Other Areas with Fixed Seats. Where spectator, press or other areas with fixed seats are provided, each type of seating area shall comply with [4.1.3\(19\)\(a\)](#).

(b) Jury Boxes and Witness Stands. Each jury box and witness stand shall have within its defined area clear floor space complying with [4.2.4](#).

EXCEPTION: In alterations, accessible wheelchair spaces are not required to be located within the defined area of raised jury boxes or witness stands and may be located outside these spaces where ramp or lift access poses a hazard by restricting or projecting into a means of egress required by the appropriate administrative authority.

(c) Judges' Benches and Courtroom Stations. Judges' benches, clerks' stations, bailiffs' stations, deputy clerks' stations, court reporters' stations and litigants' and counsel stations shall comply with [4.32](#).

(2)* Permanently installed assistive listening systems complying with [4.33](#) shall be provided in each courtroom. The minimum number of receivers shall be four percent of the room occupant load, as determined by applicable State or local codes, but not less than two receivers. An informational sign indicating the availability of an assistive listening system and complying with [4.30.1](#), [4.30.2](#), [4.30.3](#), [4.30.5](#), and [4.30.7\(4\)](#) shall be posted in a prominent place. [Appendix Note](#)

11.2.2 Jury Assembly Areas and Jury Deliberation Areas. Where provided in areas used for jury assembly or deliberation, the following elements or spaces shall be on an accessible route complying with [4.3](#) and shall comply with the following provisions:

(1) Refreshment Areas. Refreshment areas, kitchenettes and fixed or built-in refreshment dispensers shall comply with the technical provisions of [9.2.2\(7\)](#).

(2) Drinking Fountains. Where provided in rooms covered under 11.2.2, there shall be a drinking fountain in each room complying with [4.15](#).

11.2.3 Courthouse Holding Facilities.

(1) Holding Cells - Minimum Number. Where provided, facilities for detainees, including central holding cells and court-floor holding cells, shall comply with the following:

(a) Central Holding Cells. Where separate central holding cells are provided for adult male, juvenile male, adult female, or juvenile female, one of each type shall comply with [11.2.3\(2\)](#). Where central-holding cells are provided, which are not separated by age or sex, at least one cell complying with [11.2.3\(2\)](#) shall be provided.

(b) Court-Floor Holding Cells. Where separate court-floor holding cells are provided for adult male, juvenile male, adult female, or juvenile female, each courtroom shall be served by one cell of each type complying with [11.2.3\(2\)](#). Where court-floor holding cells are provided, which are not separated by age or sex, courtrooms shall be served by at least one cell complying with [11.2.3\(2\)](#). Cells may serve more than one courtroom.

*cited in Kirolav, City & County of San Francisco
No. 14-17521 archived on June 19, 2017*

(2) Requirements for Accessible Cells. Accessible cells shall be on an accessible route complying with [4.3](#). Where provided, the following elements or spaces serving accessible cells shall be accessible and on an accessible route:

(a) Doors and Doorways. All doors and doorways to accessible spaces and on an accessible route shall comply with [4.13](#).

EXCEPTION: Doors and doorways operated only by security personnel shall be exempt from [4.13.9](#), [4.13.10](#), [4.13.11](#) and [4.13.12](#).

(b)* Toilet and Bathing Facilities. Toilet facilities shall comply with [4.22](#) and bathing facilities shall comply with [4.23](#). Privacy screens shall not intrude on the clear floor space required for fixtures or the accessible route. [Appendix Note](#)

(c)* Beds. Beds shall have maneuvering space at least 36 in (915 mm) wide along one side. Where more than one bed is provided in a cell, the maneuvering space provided at adjacent beds may overlap.

[Appendix Note](#)

(d) Drinking Fountains and Water Coolers. Drinking fountains shall be accessible to individuals who use wheelchairs in accordance with [4.15](#) and shall be accessible to those who have difficulty bending or stooping. This can be accomplished by the use of a "hi-lo" fountain; by providing one fountain accessible to those who use wheelchairs and one fountain at a standard height convenient for those who have difficulty bending; by providing a fountain accessible under [4.15](#) and a water cooler; or by other such means as would achieve the required accessibility for each group.

(e) Fixed or Built-in Seating and Tables. Fixed or built-in seating, tables or counters shall comply with [4.32](#).

(f) Fixed Benches. Fixed benches shall be mounted at 17 in to 19 in (430 mm to 485 mm) above the finish floor and provide back support (e.g., attachment to wall). The structural strength of the bench attachments shall comply with [4.26.3](#).

(3)* Visiting Areas. The following elements, where provided, shall be located on an accessible route complying with [4.3](#) and shall comply with the following provisions:

(a) Cubicles and Counters. Five percent, but not less than one of fixed cubicles shall comply with [4.32](#) on both the visitor and detainee sides. Where counters are provided, a portion at least 36 in (915 mm) in length shall comply with [4.32](#) on both the visitor and detainee sides.

(b) Partitions. Solid partitions or security glazing that separate visitors from detainees shall comply with [7.2\(3\)](#). [Appendix Note](#)

11.3* Legislative and Regulatory Facilities. Assembly areas designated for public use, including public meeting rooms, hearing rooms, and chambers shall comply with 11.3. [Appendix Note](#)

11.3.1 Where provided, the following elements and spaces shall be on an accessible route complying with [4.3](#). Areas that are raised or depressed and accessed by ramps or platform lifts with entry ramps shall provide unobstructed turning space complying with [4.2.3](#).

(1) Raised Speakers' Platforms. Where raised speakers' platforms are provided, at least one of each type shall be accessible.

(2) Spectator, Press, and Other Areas with Fixed Seats. Where spectator, press or other areas with fixed seats are provided, each type of seating area shall comply with [4.1.3\(19\)\(a\)](#).

11.3.2* Each assembly area provided with a permanently installed audio-amplification system shall have a permanently installed assistive listening system. The minimum number of receivers shall be four percent of the room occupant load, as determined by applicable State or local codes, but not less than two receivers. An informational sign indicating the availability of an assistive listening system and complying with [4.30.1](#), [4.30.2](#), [4.30.3](#), [4.30.5](#), and [4.30.7\(4\)](#) shall be posted in a prominent place. [Appendix Note](#)

NOTE: Section 12 has not been incorporated in the Department of Justice accessibility standards and therefore is not enforceable.

12. DETENTION AND CORRECTIONAL FACILITIES.

12.1* General. This section applies to jails, holding cells in police stations, prisons, juvenile detention centers, reformatories, and other institutional occupancies where occupants are under some degree of

restraint or restriction for security reasons. Except as specified in this section, detention and correctional facilities shall comply with the applicable requirements of section 4. All common use areas serving accessible cells or rooms and all public use areas are required to be designed and constructed to comply with section 4. [Appendix Note](#)

EXCEPTIONS: Requirements for areas of rescue assistance in [4.1.3\(9\)](#), [4.3.10](#), and [4.3.11](#) do not apply. Compliance with requirements for elevators in [4.1.3\(5\)](#) and stairs [4.1.3\(4\)](#) is not required in multi-story housing facilities where accessible cells or rooms, all common use areas serving them, and all public use areas are on an accessible route. Compliance with [4.1.3\(16\)](#) is not required in areas other than public use areas.

12.2 Entrances and Security Systems.

12.2.1* Entrances. Entrances used by the public, including those that are secured, shall be accessible as required by [4.1.3\(8\)](#). [Appendix Note](#)

EXCEPTION: Compliance with [4.13.9](#), [4.13.10](#), [4.13.11](#) and [4.13.12](#) is not required at entrances, doors, or doorways that are operated only by security personnel or where security requirements prohibit full compliance with these provisions.

12.2.2 Security Systems. Where security systems are provided at public or other entrances required to be accessible by 12.2.1 or 12.2.2, an accessible route complying with [4.3](#) shall be provided through fixed security barriers. Where security barriers incorporate equipment such as metal detectors, fluoroscopes, or other similar devices which cannot be made accessible, an accessible route shall be provided adjacent to such security screening devices to facilitate an equivalent circulation path.

12.3* Visiting Areas. In non-contact visiting areas where inmates or detainees are separated from visitors, the following elements, where provided, shall be accessible and located on an accessible route complying with [4.3](#):

(1) Cubicles and Counters. Five percent, but not less than one, of fixed cubicles shall comply with [4.32](#) on both the visitor and detainee or inmate sides. Where counters are provided, a portion at least 36 in (915 mm) in length shall comply with [4.32](#) on both the visitor and detainee or inmate sides.

EXCEPTION: At non-contact visiting areas not serving accessible cells or rooms, the requirements of 12.3(1) do not apply to the inmate or detainee side of cubicles or counters.

(2) Partitions. Solid partitions or security glazing separating visitors from inmates or detainees shall comply with [7.2\(3\)](#). [Appendix Note](#)

12.4 Holding and Housing Cells or Rooms: Minimum Number.

12.4.1* Holding Cells and General Housing Cells or Rooms. At least two percent, but not less than one, of the total number of housing or holding cells or rooms provided in a facility shall comply with [12.5](#). [Appendix Note](#)

12.4.2* Special Holding and Housing Cells or Rooms. In addition to the requirements of 12.4.1, where special holding or housing cells or rooms are provided, at least one serving each purpose shall comply with [12.5](#). An accessible special holding or housing cell or room may serve more than one purpose. Cells or rooms subject to this requirement include, but are not limited to, those used for purposes of orientation, protective custody, administrative or disciplinary detention or segregation, detoxification, and medical isolation. [Appendix Note](#)

EXCEPTION: Cells or rooms specially designed without protrusions and to be used solely for purposes of suicide prevention are exempt from the requirement for grab bars at water closets in [4.16.4](#).

12.4.3* Accessible Cells or Rooms for Persons with Hearing Impairments. In addition to the requirements of [12.4.1](#), two percent, but not less than one, of general housing or holding cells or rooms equipped with audible emergency warning systems or permanently installed telephones within the cell or room shall comply with the applicable requirements of [12.6](#). [Appendix Note](#)

12.4.4 Medical Care Facilities. Medical care facilities providing physical or medical treatment or care shall comply with the applicable requirements of section [6.1](#), [6.3](#) and [6.4](#), if persons may need assistance in emergencies and the period of stay may exceed 24 hours. Patient bedrooms or cells required to be accessible under [6.1](#) and [6.3](#) shall be provided in addition to any medical isolation cells required to be accessible under [12.4.2](#).

12.4.5 Alterations to Cells or Rooms. (Reserved.)

12.5 Requirements for Accessible Cells or Rooms.

12.5.1 General. Cells or rooms required to be accessible by 12.4 shall comply with 12.5.

12.5.2* Minimum Requirements. Accessible cells or rooms shall be on an accessible route complying

with [4.3](#). Where provided to serve accessible housing or holding cells or rooms, the following elements or spaces shall be accessible and connected by an accessible route. [Appendix Note](#)

- (1) Doors and Doorways. All doors and doorways on an accessible route shall comply with [4.13](#). EXCEPTION: Compliance with [4.13.9](#), [4.13.10](#), [4.13.11](#) and [4.13.12](#) is not required at entrances, doors, or doorways that are operated only by security personnel or where security requirements prohibit full compliance with these provisions.
- (2)* Toilet and Bathing Facilities. At least one toilet facility shall comply with [4.22](#) and one bathing facility shall comply with [4.23](#). Privacy screens shall not intrude on the clear floor space required for fixtures and the accessible route. [Appendix Note](#)
- (3)* Beds. Beds shall have maneuvering space at least 36 in (915 mm) wide along one side. Where more than one bed is provided in a room or cell, the maneuvering space provided at adjacent beds may overlap. [Appendix Note](#)
- (4) Drinking Fountains and Water Coolers. At least one drinking fountain shall comply with [4.15](#).
- (5) Fixed or Built-in Seating or Tables. Fixed or built-in seating, tables and counters shall comply with [4.32](#).
- (6) Fixed Benches. At least one fixed bench shall be mounted at 17 in to 19 in (430 mm to 485 mm) above the finish floor and provide back support (e.g., attachment to wall). The structural strength of the bench attachments shall comply with [4.26.3](#).
- (7) Storage. Fixed or built-in storage facilities, such as cabinets, shelves, closets, and drawers, shall contain storage space complying with [4.25](#).
- (8) Controls. All controls intended for operation by inmates shall comply with [4.27](#).
- (9) Accommodations for persons with hearing impairments required by [12.4.3](#) and complying with [12.6](#) shall be provided in accessible cells or rooms.

12.6 Visual Alarms and Telephones.

Where audible emergency warning systems are provided to serve the occupants of holding or housing cells or rooms, visual alarms complying with [4.28.4](#) shall be provided. Where permanently installed telephones are provided within holding or housing cells or rooms, they shall have volume controls complying with [4.31.5](#).

EXCEPTION: Visual alarms are not required where inmates or detainees are not allowed independent means of egress.

13. RESIDENTIAL HOUSING [RESERVED]

14. PUBLIC RIGHTS-OF-WAY [RESERVED]

NOTE: Section 15 has not been incorporated in the Department of Justice accessibility standards and therefore is not enforceable.

15* RECREATION FACILITIES.

- [15.1 Amusement Rides](#)
- [15.2 Boating Facilities](#)
- [15.3 Fishing Piers and Platforms](#)
- [15.4 Golf](#)
- [15.5 Miniature Golf](#)
- [15.6 Play Areas](#)
- [15.7 Exercise Equipment and Machines, Bowling Lanes, and Shooting Facilities](#)
- [15.8 Swimming Pools, Wading Pools, and Spas](#)

Newly designed or newly constructed and altered recreation facilities shall comply with the applicable requirements of section 4 and the special application sections, except as modified or otherwise provided in this section. [Appendix Note](#)

15.1* Amusement Rides [Appendix Note](#)

15.1.1 General. Newly designed or newly constructed and altered amusement rides shall comply with 15.1.

EXCEPTION 1*: Mobile or portable amusement rides shall not be required to comply with 15.1. [Appendix](#)

Note

EXCEPTION 2*: Amusement rides which are controlled or operated by the rider shall be required to comply only with [15.1.4](#) and [15.1.5](#). [Appendix Note](#)

EXCEPTION 3*: Amusement rides designed primarily for children, where children are assisted on and off the ride by an adult, shall be required to comply only with [15.1.4](#) and [15.1.5](#). [Appendix Note](#)

EXCEPTION 4: Amusement rides without amusement ride seats shall be required to comply only with [15.1.4](#) and [15.1.5](#).

15.1.2* Alterations to Amusement Rides. A modification to an existing amusement ride is an alteration subject to 15.1 if one or more of the following conditions apply:

1. The amusement ride's structural or operational characteristics are changed to the extent that the ride's performance differs from that specified by the manufacturer or the original design criteria; or
2. The load and unload area of the amusement ride is newly designed and constructed. [Appendix Note](#)

15.1.3 Number Required. Each amusement ride shall provide at least one wheelchair space complying with 15.1.7, or at least one amusement ride seat designed for transfer complying with [15.1.8](#), or at least one transfer device complying with [15.1.9](#).

15.1.4* Accessible Route. When in the load and unload position, amusement rides required to comply with 15.1 shall be served by an accessible route complying with [4.3](#). Any part of an accessible route serving amusement rides with a slope greater than 1:20 shall be considered a ramp and shall comply with [4.8](#). [Appendix Note](#)

EXCEPTION 1: The maximum slope specified in [4.8.2](#) shall not apply in the load and unload areas or on the amusement ride where compliance is structurally or operationally infeasible, provided that the slope of the ramp shall not exceed 1:8.

EXCEPTION 2: Handrails shall not be required in the load and unload areas or on the amusement ride where compliance is structurally or operationally infeasible.

EXCEPTION 3: Limited-use/limited-application elevators and platform lifts complying with [4.11](#) shall be permitted to be part of an accessible route serving the load and unload area.

15.1.5 Load and Unload Areas. Load and unload areas serving amusement rides required to comply with 15.1 shall provide a maneuvering space complying with [4.2.3](#). The maneuvering space shall have a slope not steeper than 1:48.

15.1.6 Signage. Signage shall be provided at the entrance of the queue or waiting line for each amusement ride to identify the type of access provided. Where an accessible unload area also serves as the accessible load area, signage shall be provided at the entrance to the queue or waiting line indicating the location of the accessible load and unload area.

15.1.7 Amusement Rides with Wheelchair Spaces. Amusement rides with wheelchair spaces shall comply with 15.1.7.

15.1.7.1 Floor or Ground Surface. The floor or ground surface of wheelchair spaces shall comply with 15.1.7.1.

15.1.7.1.1 Slope. The floor or ground surface of wheelchair spaces shall have a slope not steeper than 1:48 when in the load and unload position and shall be stable and firm.

15.1.7.1.2* Gaps. Floors of amusement rides with wheelchair spaces and floors of load and unload areas shall be coordinated so that, when the amusement rides are at rest in the load and unload position, the vertical difference between the floors shall be within plus or minus 5/8 inches (16 mm) and the horizontal gap shall be no greater than 3 inches (75 mm) under normal passenger load conditions. [Appendix Note](#)

EXCEPTION: Where compliance is not operationally or structurally feasible, ramps, bridge plates, or similar devices complying with the applicable requirements of 36 C.F.R. 1192.83(c) shall be provided.

15.1.7.2 Clearances. Clearances for wheelchair spaces shall comply with 15.1.7.2.

EXCEPTION 1: Where provided, securement devices shall be permitted to overlap required clearances.

EXCEPTION 2: Wheelchair spaces shall be permitted to be mechanically or manually repositioned.

EXCEPTION 3*: Wheelchair spaces shall not be required to comply with [4.4.2](#). [Appendix Note](#)

15.1.7.2.1 Width and Length. Wheelchair spaces shall provide a clear width of 30 inches (760 mm) minimum and a clear length of 48 inches (1220 mm) minimum measured to 9 inches (230 mm) minimum above the floor surface.

15.1.7.2.2* Wheelchair Spaces - Side Entry. Where the wheelchair space can be entered only from the side, the ride shall be designed to permit sufficient maneuvering space for individuals using a wheelchair or mobility device to enter and exit the ride. [Appendix Note](#)

15.1.7.2.3 Protrusions in Wheelchair Spaces. Objects are permitted to protrude a distance of 6 inches (150 mm) maximum along the front of the wheelchair space where located 9 inches (230 mm) minimum and 27 inches (685 mm) maximum above the floor or ground surface of the wheelchair space. Objects are permitted to protrude a distance of 25 inches (635 mm) maximum along the front of the wheelchair space, where located more than 27 inches (685 mm) above the floor or ground surface of the wheelchair space (see Fig. 58).

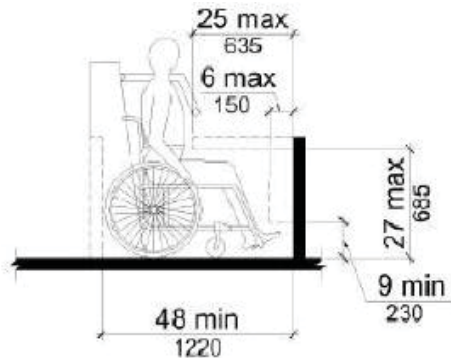


Fig. 58
Protrusions in Wheelchair Spaces

15.1.7.3 Openings. Where openings are provided to access wheelchair spaces on amusement rides, the entry shall provide a 32 inch (815 mm) minimum clear opening.

15.1.7.4 Approach. One side of the wheelchair space shall adjoin an accessible route.

15.1.7.5 Companion Seats. Where the interior width of the amusement ride is greater than 53 inches (1346 mm), seating is provided for more than one rider, and the wheelchair is not required to be centered within the amusement ride, a companion seat shall be provided for each wheelchair space.

15.1.7.5.1 Shoulder-to-Shoulder Seating. Where an amusement ride provides shoulder-to-shoulder seating, companion seats shall be shoulder-to-shoulder with the adjacent wheelchair space.

EXCEPTION: Where shoulder-to-shoulder companion seating is not operationally or structurally feasible, compliance with this provision shall be required to the maximum extent feasible.

15.1.8* Amusement Ride Seats Designed for Transfer. Amusement ride seats designed for transfer shall comply with 15.1.8 when positioned for loading and unloading. [Appendix Note](#)

15.1.8.1 Clear Floor or Ground Space. Clear floor or ground space complying with [4.2.4](#) shall be provided in the load and unload area adjacent to the amusement ride seats designed for transfer.

15.1.8.2 Transfer Height. The height of the amusement ride seats shall be 14 inches (355 mm) minimum to 24 inches (610mm) maximum measured above the load and unload surface.

15.1.8.3 Transfer Entry. Where openings are provided to transfer to amusement ride seats, the space shall be designed to provide clearance for transfer from a wheelchair or mobility device to the amusement ride seat.

15.1.8.4 Wheelchair Storage Space. Wheelchair storage spaces complying with [4.2.4](#) shall be provided in or adjacent to unload areas for each required amusement ride seat designed for transfer and shall not overlap any required means of egress or accessible route.

15.1.9* Transfer Devices for Use with Amusement Rides. Transfer devices for use with amusement rides shall comply with 15.1.9 when positioned for loading and unloading. [Appendix Note](#)

15.1.9.1 Clear Floor or Ground Space. Clear floor or ground space complying with [4.2.4](#) shall be

provided in the load and unload area adjacent to the transfer devices.

15.1.9.2 Transfer Height. The height of the transfer device seats shall be 14 inches (355 mm) minimum to 24 inches (610 mm) maximum measured above the load and unload surface.

15.1.9.3 Wheelchair Storage Space. Wheelchair storage spaces complying with [4.2.4](#) shall be provided in or adjacent to unload areas for each required transfer device and shall not overlap any required means of egress or accessible route.

15.2 Boating Facilities.

15.2.1 General. Newly designed or newly constructed and altered boating facilities shall comply with 15.2.

15.2.2* Accessible Route. Accessible routes, including gangways that are part of accessible routes, shall comply with [4.3](#). [Appendix Note](#)

EXCEPTION 1. Where an existing gangway or series of gangways is replaced or altered, an increase in the length of the gangway is not required to comply with 15.2.2, unless required by [4.1.6\(2\)](#).

EXCEPTION 2. The maximum rise specified in [4.8.2](#) shall not apply to gangways.

EXCEPTION 3. Where the total length of the gangway or series of gangways serving as part of a required accessible route is at least 80 feet (24 m), the maximum slope specified in [4.8.2](#) shall not apply to the gangways.

EXCEPTION 4. In facilities containing fewer than 25 boat slips and where the total length of the gangway or series of gangways serving as part of a required accessible route is at least 30 feet (9140 mm), the maximum slope specified in [4.8.2](#) shall not apply to the gangways.

EXCEPTION 5. Where gangways connect to transition plates, landings specified by [4.8.4](#) shall not be required.

EXCEPTION 6. Where gangways and transition plates connect and are required to have handrails, handrail extensions specified by [4.8.5](#) shall not be required. Where handrail extensions are provided on gangways or transition plates, such extensions are not required to be parallel with the ground or floor surface.

EXCEPTION 7. The cross slope of gangways, transition plates, and floating piers that are part of an accessible route shall be 1:50 maximum measured in the static position.

EXCEPTION 8. Limited-use/limited-application elevators or platform lifts complying with [4.11](#) shall be permitted in lieu of gangways complying with [4.3](#).

15.2.3* Boat Slips: Minimum Number. Where boat slips are provided, boat slips complying with 15.2.5 shall be provided in accordance with Table 15.2.3. Where the number of boat slips is not identified, each 40 feet (12 m) of boat slip edge provided along the perimeter of the pier shall be counted as one boat slip for the purpose of this section. [Appendix Note](#)

Table 15.2.3

Total Boat Slips in Facility	Minimum Number of Required Accessible Boat Slips
1 to 25	1
26 to 50	2
51 to 100	3
101 to 150	4
151 to 300	5
301 to 400	6
401 to 500	7
501 to 600	8
601 to 700	9
701 to 800	10
801 to 900	11
901 to 1000	12
1001 and over	12, plus 1 for each 100 or fraction thereof over 1000

15.2.3.1* Dispersion. Accessible boat slips shall be dispersed throughout the various types of slips provided. This provision does not require an increase in the minimum number of boat slips required to be

accessible. [Appendix Note](#)

15.2.4* Boarding Piers at Boat Launch Ramps. Where boarding piers are provided at boat launch ramps, at least 5 percent, but not less than one of the boarding piers shall comply with 15.2.4 and shall be served by an accessible route complying with [4.3. Appendix Note](#)

EXCEPTION 1. Accessible routes serving floating boarding piers shall be permitted to use exceptions 1, 2, 5, 6, 7, and 8 in [15.2.2](#).

EXCEPTION 2. Where the total length of the gangway or series of gangways serving as part of a required accessible route is at least 30 feet (9140 mm), the maximum slope specified by [4.8.2](#) shall not apply to the gangways.

EXCEPTION 3. Where the accessible route serving a floating boarding pier or skid pier is located within a boat launch ramp, the portion of the accessible route located within the boat launch ramp shall not be required to comply with [4.8](#).

15.2.4.1* Boarding Pier Clearances. The entire length of the piers shall comply with 15.2.5. [Appendix Note](#)

15.2.5* Accessible Boat Slips. Accessible boat slips shall comply with 15.2.5. [Appendix Note](#)

15.2.5.1 Clearances. Accessible boat slips shall be served by clear pier space 60 inches (1525 mm) wide minimum and at least as long as the accessible boat slips. Every 10 feet (3050 mm) maximum of linear pier edge serving the accessible boat slips shall contain at least one continuous clear opening 60 inches (1525 mm) minimum in width (see Fig. 59).

EXCEPTION 1: The width of the clear pier space shall be permitted to be 36 inches (915 mm) minimum for a length of 24 inches (610 mm) maximum, provided that multiple 36 inch (915mm) wide segments are separated by segments that are 60 inches (1525 mm) minimum clear in width and 60 inches (1525 mm) minimum clear in length. (see Fig. 60)

EXCEPTION 2: Edge protection 4 inches (100 mm) high maximum and 2 inches (51mm) deep maximum shall be permitted at the continuous clear openings. (see Fig. 61)

EXCEPTION 3*: In alterations to existing facilities, clear pier space shall be permitted to be located perpendicular to the boat slip and shall extend the width of the boat slip where the facility has at least one boat slip complying with 15.2.5, and further compliance with 15.2.5 would result in a reduction in the number of boat slips available or result in a reduction of the widths of existing slips. [Appendix Note](#)

15.2.5.2 Cleats and Other Boat Securement Devices. Cleats and other boat securement devices shall not be required to comply with [4.27.3](#).

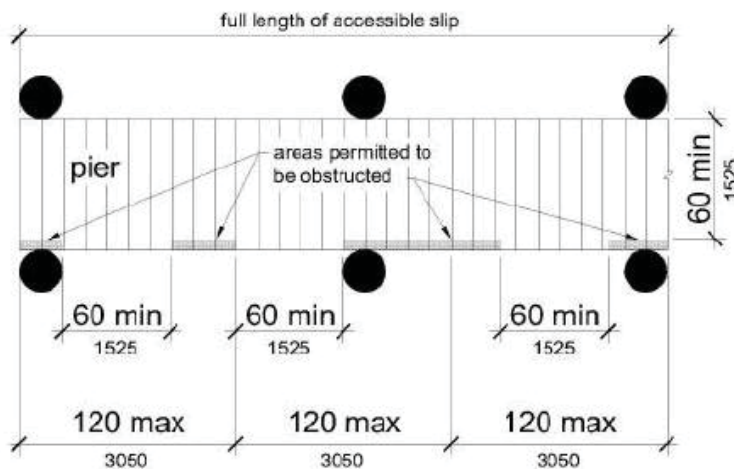


Fig. 59
Pier Clearances

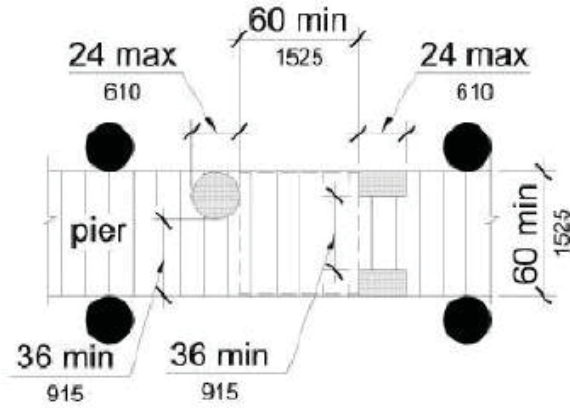


Fig. 60
Pier Clear Space Reduction

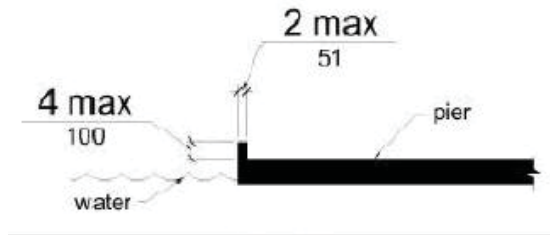


Fig. 61
Edge Protection at Pier

15.3 Fishing Piers and Platforms

15.3.1 General. Newly designed or newly constructed and altered fishing piers and platforms shall comply with 15.3.

15.3.2 Accessible Route. Accessible routes, including gangways that are part of accessible routes, serving fishing piers and platforms shall comply with [4.3](#).

EXCEPTION 1: Accessible routes serving floating fishing piers and platforms shall be permitted to use exceptions 1, 2, 5, 6, 7, and 8 in [15.2.2](#).

EXCEPTION 2*: Where the total length of the gangway or series of gangways serving as part of a required accessible route is at least 30 feet (9140 mm), the maximum slope specified by [4.8.2](#) shall not apply to the gangways. [Appendix Note](#)

15.3.3 Railings. Where railings, guards, or handrails are provided, they shall comply with 15.3.3.

15.3.3.1* Edge Protection. Edge protection shall be provided and shall extend 2 inches (51mm) minimum above the ground or deck surface. [Appendix Note](#)

EXCEPTION: Where the railing, guard, or handrail is 34 inches (865 mm) or less above the ground or deck surface, edge protection shall not be required if the deck surface extends 12 inches (305 mm) minimum beyond the inside face of the railing. Toe clearance shall be 9 inches (230 mm) minimum above the ground or deck surface beyond the railing. Toe clearance shall be 30 inches (760 mm) minimum wide (see Fig. 62).

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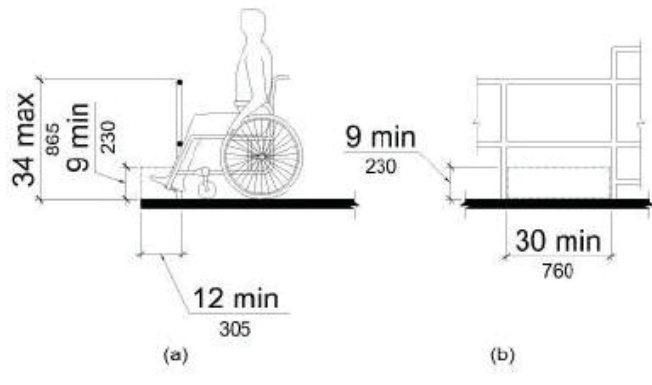


Fig. 62
Edge Protection at Fishing Piers

15.3.3.2 Height. At least 25 percent of the railings, guard, or handrail shall be 34 inches (865 mm) maximum above the ground or deck surface.

Exception: This provision shall not apply to that portion of a fishing pier or platform where a guard which complies with sections 1003.2.12.1 (Height) and 1003.2.12.2 (Opening limitations) of the International Building Code (incorporated by reference, see [2.3.2](#)) is provided.

15.3.3.3* Dispersion. Railings required to comply with 15.3.3.2 shall be dispersed throughout a fishing pier or platform. [Appendix Note](#)

15.3.4 Clear Floor or Ground Space. At least one clear floor or ground space complying with [4.2.4](#) shall be provided where the railing height required by 15.3.3.2 is located. Where no railings are provided, at least one clear floor or ground space complying with [4.2.4](#) shall be provided.

15.3.5 Maneuvering Space. At least one maneuvering space complying with [4.2.3](#) shall be provided on the fishing pier or platform.

15.4 Golf.

15.4.1 General. Newly designed or newly constructed and altered golf courses, driving ranges, practice putting greens, and practice teeing grounds shall comply with 15.4.

15.4.2* Accessible Route - Golf Course. An accessible route shall connect accessible elements and spaces within the boundary of the golf course. In addition, an accessible route shall connect the golf car rental area, bag drop areas, practice putting greens, accessible practice teeing grounds, course toilet rooms, and course weather shelters. The accessible route required by this section shall be 48 inches (1220 mm) minimum wide. Where handrails are provided, the accessible route shall be 60 inches (1525 mm) minimum wide. [Appendix Note](#)

EXCEPTION 1: A golf car passage complying with [15.4.7](#) shall be permitted in lieu of all or part of an accessible route required by 15.4.2.

EXCEPTION 2: The handrail requirements of [4.8.5](#) shall not apply to an accessible route located within the boundary of a golf course.

15.4.3* Accessible Route - Driving Ranges. An accessible route shall connect accessible teeing stations at driving ranges with accessible parking spaces and shall be 48 inches (1220 mm) wide minimum. Where handrails are provided, the accessible route shall be 60 inches (1525 mm) wide minimum. [Appendix Note](#)

EXCEPTION: A golf car passage complying with [15.4.7](#) shall be permitted in lieu of all or part of an accessible route required by 15.4.3.

15.4.4 Teeing Grounds. Teeing grounds shall comply with 15.4.4.

15.4.4.1 Number Required. Where one or two teeing grounds are provided for a hole, at least one teeing ground serving the hole shall comply with 15.4.4.3. Where three or more teeing grounds are provided for a hole, at least two teeing grounds shall comply with 15.4.4.3.

15.4.4.2 Forward Teeing Ground. The forward teeing ground shall be accessible.

EXCEPTION: In alterations, the forward teeing ground shall not be required to be accessible where compliance is not feasible due to terrain.

15.4.4.3 Teeing Grounds. Teeing grounds required by 15.4.4.1 and 15.4.4.2 shall be designed and constructed so that a golf car can enter and exit the teeing ground.

15.4.5 Teeing Stations at Driving Ranges and Practice Teeing Grounds. Where teeing stations or practice teeing grounds are provided, at least 5 percent of the practice teeing stations or practice teeing grounds, but not less than one, shall comply with 15.4.4.3.

15.4.6 Weather Shelters. Where weather shelters are provided on a golf course, each weather shelter shall have a clear floor or ground space 60 inches (1525 mm) minimum by 96 inches (2440 mm) minimum and shall be designed and constructed so that a golf car can enter and exit.

15.4.7 Golf Car Passage. Where curbs or other constructed barriers are provided along a golf car passage to prohibit golf cars from entering a fairway, openings at least 60 inches (1525 mm) wide shall be provided at intervals not to exceed 75 yds (69 m).

15.4.7.1 Width. The golf car passage shall be 48 inches (1220 mm) minimum wide.

15.4.8 Putting Greens. Each putting green shall be designed and constructed so that a golf car can enter and exit the putting green.

15.5* Miniature Golf. [Appendix Note](#)

15.5.1 General. Newly designed or newly constructed and altered miniature golf courses shall comply with 15.5.

15.5.2 Accessible Holes. At least fifty percent of holes on a miniature golf course shall comply with 15.5.3 through 15.5.5 and shall be consecutive.

EXCEPTION: One break in the sequence of consecutive accessible holes shall be permitted, provided that the last hole on a miniature golf course is the last hole in the sequence.

15.5.3* Accessible Route. An accessible route complying with [4.3](#) shall connect the course entrance with the first accessible hole and the start of play area on each accessible hole. The course shall be configured to allow exit from the last accessible hole to the course exit or entrance and shall not require travel back through other holes. [Appendix Note](#)

15.5.3.1 Accessible Route - Located On the Playing Surface. Where the accessible route is located on the playing surface of the accessible hole, exceptions 1-5 shall be permitted.

EXCEPTION 1: Where carpet is provided, the requirements of [4.5.3](#) shall not apply.

EXCEPTION 2: Where the accessible route intersects the playing surface of a hole, a 1 inch (26 mm) maximum curb shall be permitted for a width of 32 inches (815 mm) minimum.

EXCEPTION 3: A slope of 1:4 maximum for a 4 inch (100 mm) maximum rise shall be permitted.

EXCEPTION 4: Landings required by [4.8.4](#) shall be permitted to be 48 inches (1220 mm) in length minimum. Landing size required by [4.8.4\(3\)](#) shall be permitted to be 48 inches (1220 mm) minimum by 60 inches (1525 mm) minimum. Landing slopes shall be permitted to be 1:20 maximum.

EXCEPTION 5: Handrail requirements of [4.8.5](#) shall not apply.

15.5.3.2 Accessible Route - Adjacent to the Playing Surface. Where the accessible route is located adjacent to the playing surface, the requirements of [4.3](#) shall apply.

15.5.4 Start of Play Areas. Start of play areas at holes required to comply with 15.5.2 shall have a slope not steeper than 1:48 and shall be 48 inches (1220 mm) minimum by 60 inches (1525 mm) minimum.

15.5.5* Golf Club Reach Range. All areas within accessible holes where golf balls rest shall be within 36 inches (915 mm) maximum of an accessible route having a maximum slope of 1:20 for 48 inches (1220 mm) in length (see Fig. 63). [Appendix Note](#)

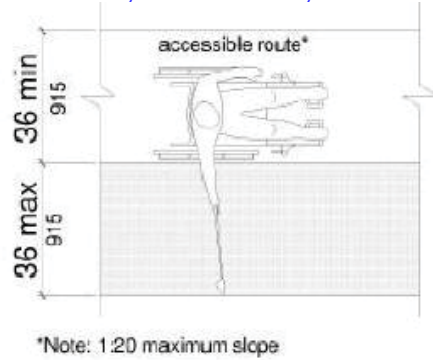


Fig. 63
Golf Club Reach Range

15.6 Play Areas.

15.6.1* General. Newly designed and newly constructed play areas for children ages 2 and over and altered portions of existing play areas shall comply with the applicable provisions of section 4, except as modified or otherwise provided by this section. Where separate play areas are provided within a site for specified age groups, each play area shall comply with this section. Where play areas are designed or constructed in phases, this section shall be applied so that when each successive addition is completed, the entire play area complies with all the applicable provisions of this section. [Appendix Note](#)

EXCEPTION 1: Play areas located in family child care facilities where the proprietor actually resides shall not be required to comply with 15.6.

EXCEPTION 2: Where play components are relocated in existing play areas for the purpose of creating safe use zones, 15.6 shall not apply, provided that the ground surface is not changed or extended for more than one use zone.

EXCEPTION 3: Where play components are altered and the ground surface is not altered, the ground surface shall not be required to comply with [15.6.7](#), unless required by [4.0.6\(2\)](#).

EXCEPTION 4: The provisions of 15.6.1 through 15.6.7 shall not apply to amusement attractions.

EXCEPTION 5: Compliance with [4.4](#) shall not be required within the boundary of the play area.

EXCEPTION 6: Stairs shall not be required to comply with [4.9](#).

15.6.2* Ground Level Play Components. Ground level play components shall be provided in the number and types required by 15.6.2.1 and 15.6.2.2. Ground level play components that are provided to comply with 15.6.2.1 shall be permitted to satisfy the number required by 15.6.2.2, provided that the minimum required types of play components are provided. Where more than one ground level play component required by 15.6.2.1 and 15.6.2.2 is provided, the play components shall be integrated in the play area. [Appendix Note](#)

15.6.2.1 General. Where ground level play components are provided, at least one of each type provided shall be located on an accessible route complying with [15.6.4](#) and shall comply with [15.6.6](#).

15.6.2.2 Additional Number and Types. Where elevated play components are provided, ground level play components shall be provided in accordance with Table 15.6.2.2. Ground level play components required by 15.6.2.2 shall be located on an accessible route complying with [15.6.4](#) and shall comply with [15.6.6](#).

EXCEPTION: If at least 50 percent of the elevated play components are connected by a ramp, and if at least 3 of the elevated play components connected by the ramp are different types of play components, 15.6.2.2 shall not apply.

**Table 15.6.2.2 Number and Types of Ground Level Play Components
Required to be on Accessible Route**

Number of Elevated Play Components Provided	Minimum Number of Ground Level Play Components Required to be on Accessible Route	Minimum Number of Different Types of Ground Level Play Components Required to be on Accessible Route

	Not applicable	Not applicable
1		
2 to 4	1	1
5 to 7	2	2
8 to 10	3	3
11 to 13	4	3
14 to 16	5	3
17 to 19	6	3
20 to 22	7	4
23 to 25	8	4
More than 25	8 plus 1 for each additional 3 over 25, or fraction thereof	5

15.6.3* Elevated Play Components. Where elevated play components are provided, at least 50 percent shall be located on an accessible route complying with [15.6.4](#). Elevated play components connected by a ramp shall comply with [15.6.6. Appendix Note](#)

15.6.4* Accessible Routes. At least one accessible route complying with [4.3](#), as modified by 15.6.4, shall be provided. [Appendix Note](#)

EXCEPTION 1: Transfer systems complying with [15.6.5](#) shall be permitted to connect elevated play components, except where 20 or more elevated play components are provided, no more than 25 percent of the elevated play components shall be permitted to be connected by transfer systems.

EXCEPTION 2: Where transfer systems are provided, an elevated play component shall be permitted to connect to another elevated play component in lieu of an accessible route.

EXCEPTION 3: Platform lifts (wheelchair lifts) complying with [4.11](#) and applicable State or local codes shall be permitted to be used as part of an accessible route.

15.6.4.1 Location. Accessible routes shall be located within the boundary of the play area and shall connect ground level play components as required by [15.6.2.1](#) and [15.6.2.2](#) and elevated play components as required by [15.6.3](#), including entry and exit points of the play components.

15.6.4.2 Protrusions. Objects shall not protrude into ground level accessible routes at or below 80 in (2030 mm) above the ground or floor surface.

15.6.4.3 Clear Width. The clear width of accessible routes within play areas shall comply with 15.6.4.3.

15.6.4.3.1 Ground Level. The clear width of accessible routes at ground level shall be 60 in (1525 mm) minimum.

EXCEPTION 1: In play areas less than 1,000 square feet, the clear width of accessible routes shall be permitted to be 44 in (1120 mm) minimum, provided that at least one turning space complying with [4.2.3](#) is provided where the restricted accessible route exceeds 30 feet (9.14 m) in length.

EXCEPTION 2: The clear width of accessible routes shall be permitted to be 36 in (915 mm) minimum for a distance of 60 in (1525 mm) maximum, provided that multiple reduced width segments are separated by segments that are 60 in (1525 mm) minimum in width and 60 in (1525 mm) minimum in length.

15.6.4.3.2 Elevated. The clear width of accessible routes connecting elevated play components shall be 36 in (915 mm).

EXCEPTION 1: The clear width of accessible routes connecting elevated play components shall be permitted to be reduced to 32 in (815 mm) minimum for a distance of 24 in (610 mm) maximum provided that reduced width segments are separated by segments that are 48 in (1220 mm) minimum in length and 36 in (915 mm) minimum in width.

EXCEPTION 2: The clear width of transfer systems connecting elevated play components shall be permitted to be 24 in (610 mm) minimum.

15.6.4.4 Ramp Slope and Rise. Any part of an accessible route with a slope greater than 1:20 shall be considered a ramp and shall comply with [4.8](#), as modified by 15.6.4.4.

15.6.4.4.1 Ground Level. The maximum slope for ramps connecting ground level play components within the boundary of a play area shall be 1:16.

15.6.4.4.2 Elevated. Where a ramp connects elevated play components, the maximum rise of any ramp run shall be 12 in (305 mm).

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15.6.4.5 Handrails. Where required on ramps, handrails shall comply with [4.8.5](#), as modified by 15.6.4.5.

EXCEPTION 1: Handrails shall not be required at ramps located within ground level use zones.

EXCEPTION 2: Handrail extensions shall not be required.

15.6.4.5.1 Handrail Gripping Surface. Handrails shall have a diameter or width of 0.95 in (24.1 mm) minimum to 1.55 in (39.4 mm) maximum, or the shape shall provide an equivalent gripping surface.

15.6.4.5.2 Handrail Height. The top of handrail gripping surfaces shall be 20 in (510 mm) minimum to 28 in (710 mm) maximum above the ramp surface.

15.6.5* Transfer Systems. Where transfer systems are provided to connect elevated play components, the transfer systems shall comply with 15.6.5. [Appendix Note](#)

15.6.5.1 Transfer Platforms. Transfer platforms complying with 15.6.5.1 shall be provided where transfer is intended to be from a wheelchair or other mobility device (see Fig. 64).

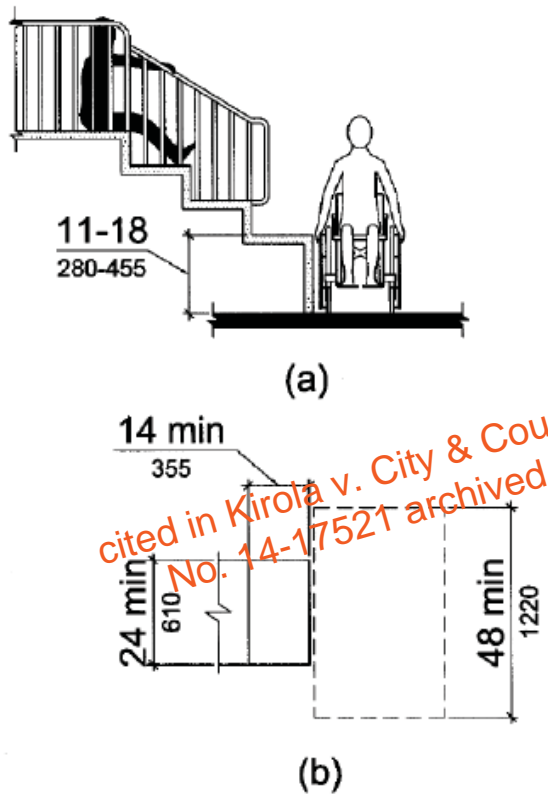


Fig. 64

15.6.5.1.1 Size. Platforms shall have a level surface 14 in (355 mm) minimum in depth and 24 in (610 mm) minimum in width.

15.6.5.1.2 Height. Platform surfaces shall be 11 in (280 mm) minimum to 18 in (455 mm) maximum above the ground or floor surface.

15.6.5.1.3 Transfer Space. A level space complying with [4.2.4](#) shall be centered on the 48 in (1220 mm) long dimension parallel to the 24 in (610 mm) minimum long unobstructed side of the transfer platform.

15.6.5.1.4 Transfer Supports. A means of support for transferring shall be provided.

15.6.5.2 Transfer Steps. Transfer steps complying with 15.6.5.2 shall be provided where movement is intended from a transfer platform to a level with elevated play components required to be located on an accessible route (see Fig. 65).

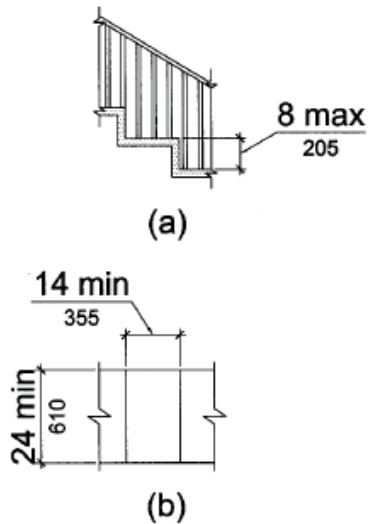


Fig. 65

15.6.5.2.1 Size. Transfer steps shall have a level surface 14 in (355 mm) minimum in depth and 24 in (610 mm) minimum in width.

15.6.5.2.2 Height. Each transfer step shall be 8 in (205 mm) maximum high.

15.6.5.2.3 Transfer Supports. A means of support for transferring shall be provided.

15.6.6* Play Components. Ground level play components located on accessible routes and elevated play components connected by ramps shall comply with 15.6.6. [Appendix Note](#)

15.6.6.1 Maneuvering Space. Maneuvering space complying with [4.2.3](#) shall be provided on the same level as the play components. Maneuvering space shall have a slope not steeper than 1:48 in all directions. The maneuvering space required for a swing shall be located immediately adjacent to the swing.

15.6.6.2 Clear Floor or Ground Space. Clear floor or ground space shall be provided at the play components and shall be 30 in (760 mm) by 48 in (1220 mm) minimum. Clear floor or ground space shall have a slope not steeper than 1:48 in all directions.

15.6.6.3 Play Tables: Height and Clearances. Where play tables are provided, knee clearance 24 in (610 mm) high minimum, 17 in deep (430 mm) minimum, and 30 in (760 mm) wide minimum shall be provided. The tops of rims, curbs, or other obstructions shall be 31 in (785 mm) high maximum.

EXCEPTION: Play tables designed or constructed primarily for children ages 5 and under shall not be required to provide knee clearance if the clear floor or ground space required by 15.6.6.2 is arranged for a parallel approach and if the rim surface is 31 in (785 mm) high maximum.

15.6.6.4 Entry Points and Seats: Height. Where a play component requires transfer to the entry point or seat, the entry point or seat shall be 11 in (280 mm) minimum and 24 in (610mm) maximum above the clear floor or ground space.

EXCEPTION: The entry point of a slide shall not be required to comply with 15.6.6.4.

15.6.6.5 Transfer Supports. Where a play component requires transfer to the entry point or seat, a means of support for transferring shall be provided.

15.6.7* Ground Surfaces. Ground surfaces along accessible routes, clear floor or ground spaces, and maneuvering spaces within play areas shall comply with [4.5.1](#) and 15.6.7. [Appendix Note](#)

15.6.7.1 Accessibility. Ground surfaces shall comply with ASTM F 1951 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment (incorporated by reference, see [2.3.2](#)). Ground surfaces shall be inspected and maintained regularly and frequently to

ensure continued compliance with ASTM F 1951.

15.6.7.2 Use Zones. If located within use zones, ground surfaces shall comply with ASTM F 1292 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment (incorporated by reference, see [2.3.2](#)).

15.6.8 Soft Contained Play Structures. Soft contained play structures shall comply with 15.6.8.

15.6.8.1 Accessible Routes to Entry Points. Where three or fewer entry points are provided, at least one entry point shall be located on an accessible route. Where four or more entry points are provided, at least two entry points shall be located on an accessible route. Accessible routes shall comply with [4.3](#).

EXCEPTION: Transfer systems complying with [15.6.5](#) or platform lifts (wheelchair lifts) complying with [4.11](#) and applicable State or local codes shall be permitted to be used as part of an accessible route.

15.7 Exercise Equipment and Machines, Bowling Lanes, and Shooting Facilities.

15.7.1 General. Newly designed or newly constructed and altered exercise equipment and machines, bowling lanes, and shooting facilities shall comply with 15.7.

15.7.2* Exercise Equipment and Machines. At least one of each type of exercise equipment and machines shall be provided with clear floor or ground space complying with [4.2.4](#) and shall be served by an accessible route. Clear floor or ground space shall be positioned for transfer or for use by an individual seated in a wheelchair. Clear floor or ground spaces for more than one piece of equipment shall be permitted to overlap. [Appendix Note](#)

15.7.3 Bowling Lanes. Where bowling lanes are provided, at least 5 percent, but not less than one of each type of lane shall be served by an accessible route.

15.7.4* Shooting Facilities. Where fixed firing positions are provided at a site, at least 5 percent, but not less than one, of each type of firing position shall comply with 15.7.4.1. [Appendix Note](#)

15.7.4.1 Fixed Firing Position. Fixed firing positions shall contain a 60 inch (1525 mm) diameter space and shall have a slope not steeper than 1:48.

15.8 Swimming Pools, Wading Pools, and Spas.

15.8.1 General. Newly designed or newly constructed and altered swimming pools, wading pools, and spas shall comply with 15.8.

EXCEPTION: An accessible route shall not be required to serve raised diving boards or diving platforms.

15.8.2* Swimming Pools. At least two accessible means of entry shall be provided for each public use and common use swimming pool. The primary means of entry shall comply with [15.8.5](#) (Swimming Pool Lifts) or [15.8.6](#) (Sloped Entries). The secondary means of entry shall comply with one of the following: [15.8.5](#) (Swimming Pool Lifts), [15.8.6](#) (Sloped Entries), [15.8.7](#) (Transfer Walls), [15.8.8](#) (Transfer Systems), or [15.8.9](#) (Pool Stairs). [Appendix Note](#)

EXCEPTION 1*: Where a swimming pool has less than 300 linear feet (91 m) of swimming pool wall, at least one accessible means of entry shall be provided and shall comply with [15.8.5](#) (Swimming Pool Lifts) or [15.8.6](#) (Sloped Entries). [Appendix Note](#)

EXCEPTION 2: Wave action pools, leisure rivers, sand bottom pools, and other pools where user access is limited to one area, shall provide at least one accessible means of entry that complies with [15.8.5](#) (Swimming Pool Lifts), [15.8.6](#) (Sloped Entries), or [15.8.8](#) (Transfer Systems).

EXCEPTION 3: Catch pools shall be required only to be served by an accessible route that connects to the pool edge.

15.8.3 Wading Pools. At least one accessible means of entry complying with [15.8.6](#) (Sloped Entries) shall be provided for each wading pool.

15.8.4 Spas. At least one accessible means of entry complying with [15.8.5](#) (Swimming Pool Lifts), [15.8.7](#) (Transfer Walls), or [15.8.8](#) (Transfer Systems) shall be provided for each spa.

EXCEPTION: Where spas are provided in a cluster, 5 percent, but not less than one, in each cluster shall be accessible.

15.8.5* Pool Lifts. Pool lifts shall comply with 15.8.5. [Appendix Note](#)

15.8.5.1 Pool Lift Location. Pool lifts shall be located where the water level does not exceed 48 inches

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(1220 mm).

EXCEPTION 1: Where the entire pool depth is greater than 48 inches (1220 mm), 15.8.5.1 shall not apply.

EXCEPTION 2: Where multiple pool lift locations are provided, no more than one shall be required to be located in an area where the water level does not exceed 48 inches (1220 mm).

15.8.5.2 Seat Location. In the raised position, the centerline of the seat shall be located over the deck and 16 inches (405 mm) minimum from the edge of the pool. The deck surface between the centerline of the seat and the pool edge shall have a slope not greater than 1:48 (see Fig. 68).

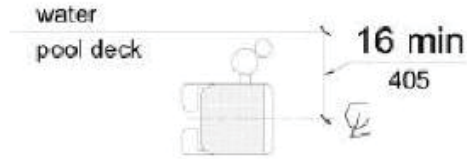


Fig. 68
Pool Lift Seat Location

15.8.5.3 Clear Deck Space. On the side of the seat opposite the water, a clear deck space shall be provided parallel with the seat. The space shall be 36 inches (915 mm) wide minimum and shall extend forward 48 inches (1220 mm) minimum from a line located 12 inches (305 mm) behind the rear edge of the seat. The clear deck space shall have a slope not greater than 1:48 (see Fig. 69).



Fig. 69
Clear Deck Space at Pool Lifts

15.8.5.4 Seat Height. The height of the lift seat shall be designed to allow a stop at 16 inches (405 mm) minimum to 19 inches (485 mm) maximum measured from the deck to the top of the seat surface when in the raised (load) position (see Fig. 70).

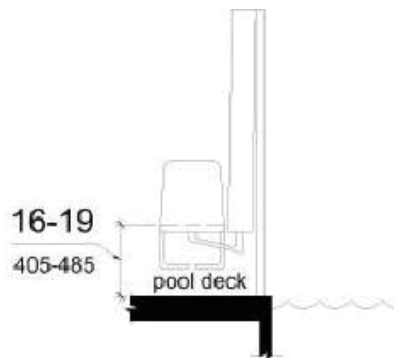


Fig. 70
Pool Lift Seat Height

15.8.5.5 Seat Width. The seat shall be 16 inches (405 mm) minimum wide.

15.8.5.6* Footrests and Armrests. Footrests shall be provided and shall move with the seat. If provided, armrests positioned opposite the water shall be removable or shall fold clear of the seat when the seat is in the raised (load) position. [Appendix Note](#)

EXCEPTION: Footrests shall not be required on pool lifts provided in spas.

15.8.5.7* Operation. The lift shall be capable of unassisted operation from both the deck and water levels. Controls and operating mechanisms shall be unobstructed when the lift is in use and shall comply with [4.27.4](#). [Appendix Note](#)

15.8.5.8 Submerged Depth. The lift shall be designed so that the seat will submerge to a water depth of 18 inches (455 mm) minimum below the stationary water level (see Fig. 71).

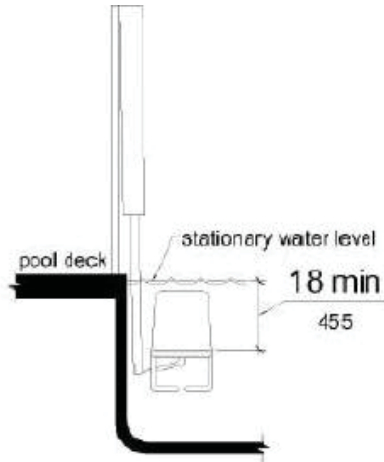


Fig 71
Pool Lift Submerged Depth

15.8.5.9* Lifting Capacity. Single person pool lifts shall have a minimum weight capacity of 300 lbs. (136 kg) and be capable of sustaining a static load of at least one and a half times the rated load.

[Appendix Note](#)

15.8.6 Sloped Entries. Sloped entries designed to provide access into the water shall comply with 15.8.6.

15.8.6.1* Sloped Entries. Sloped entries shall comply with [4.3](#), except as modified below. [Appendix Note](#)

EXCEPTION: Where sloped entries are provided, the surfaces shall not be required to be slip resistant.

15.8.6.2 Submerged Depth. Sloped entries shall extend to a depth of 24 inches (610 mm) minimum to 30 inches (760 mm) maximum below the stationary water level. Where landings are required by [4.8](#), at least one landing shall be located 24 inches (610 mm) minimum to 30 inches (760 mm) maximum below the stationary water level (see Fig. 72).

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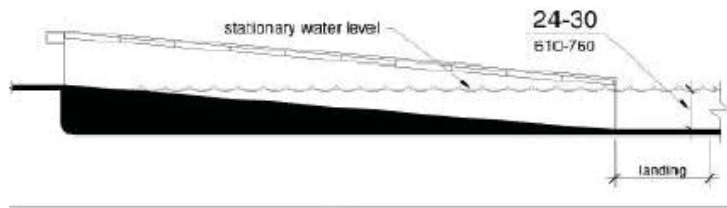


Fig. 72
Sloped Entry Submerged Depth

EXCEPTION: In wading pools, the sloped entry and landings, if provided, shall extend to the deepest part of the wading pool.

15.8.6.3* Handrails. Handrails shall be provided on both sides of the sloped entry and shall comply with [4.8.5](#). The clear width between handrails shall be 33 inches (840 mm) minimum and 38 inches (965 mm) maximum (see Fig. 73). [Appendix Note](#)

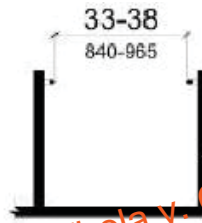


Fig. 73
Sloped Entry Handrails

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EXCEPTION 1: Handrail extensions specified by [4.8.5](#) shall not be required at the bottom landing serving a sloped entry.

EXCEPTION 2: Where a sloped entry is provided for wave action pools, leisure rivers, sand bottom pools, and other pools where user access is limited to one area, the required clear width between handrails shall not apply.

EXCEPTION 3: The handrail requirements of [4.8.5](#) and 15.8.6.3 shall not be required on sloped entries in wading pools.

15.8.7 Transfer Walls. Transfer walls shall comply with 15.8.7.

15.8.7.1 Clear Deck Space. A clear deck space of 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum with a slope not steeper than 1:48 shall be provided at the base of the transfer wall. Where one grab bar is provided, the clear deck space shall be centered on the grab bar. Where two grab bars are provided, the clear deck space shall be centered on the clearance between the grab bars (see Fig. 74).

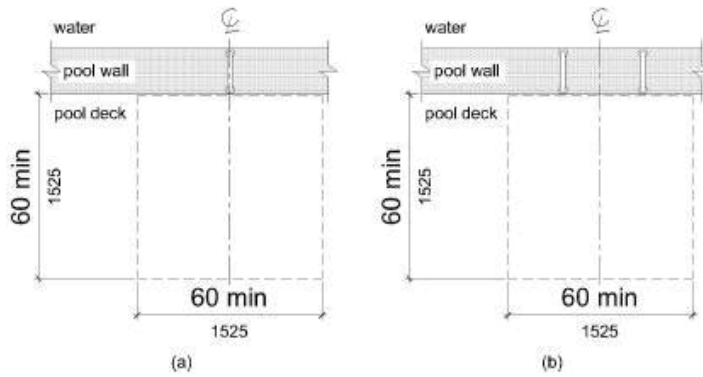


Fig. 74
Clear Deck Space at Transfer Walls

15.8.7.2 Height. The height of the transfer wall shall be 16 inches (405 mm) minimum to 19 inches (485 mm) maximum measured from the deck (see Fig. 75).



Fig. 75
Transfer Wall Height

15.8.7.3 Wall Depth and Length. The depth of the transfer wall shall be 12 inches (305 mm) minimum to 16 inches (405 mm) maximum. The length of the transfer wall shall be 60 inches (1525 mm) minimum and shall be centered on the clear deck space (see Fig. 76).

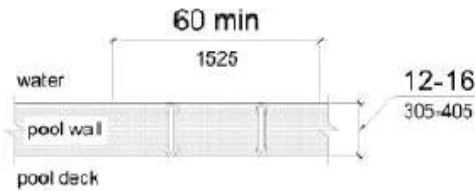


Fig. 76
Transfer Wall Depth and Length

15.8.7.4 Surface. Surfaces of transfer walls shall not be sharp and shall have rounded edges.

15.8.7.5 Grab Bars. At least one grab bar shall be provided on the transfer wall. Grab bars shall be perpendicular to the pool wall and shall extend the full depth of the transfer wall. The top of the gripping surface shall be 4 inches (100 mm) minimum and 6 inches (150 mm) maximum above walls. Where one grab bar is provided, clearance shall be 24 inches (610 mm) minimum on both sides of the grab bar. Where two grab bars are provided, clearance between grab bars shall be 24 inches (610 mm) minimum. Grab bars shall comply with [4.26](#) (see Fig. 77).

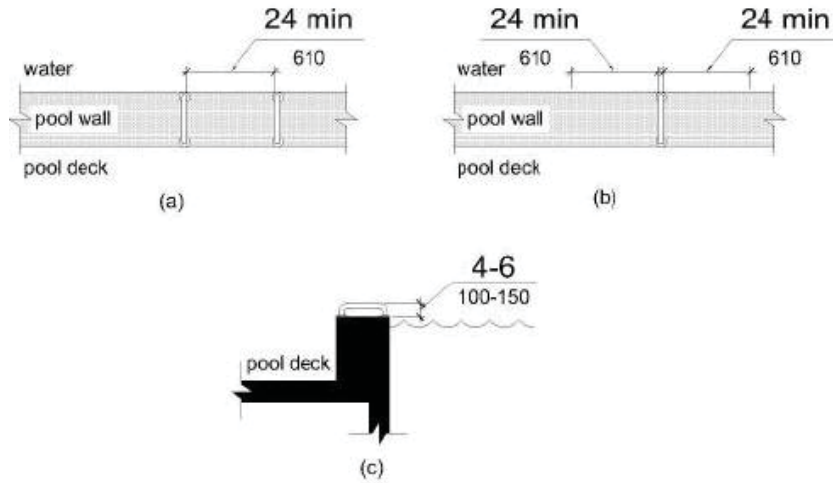


Fig. 77
Grab Bars at Transfer Walls

15.8.8 Transfer Systems. Transfer systems shall comply with 15.8.8.

15.8.8.1 Transfer Platform. A transfer platform 19 inches (485 mm) minimum clear depth by 24 inches (610 mm) minimum clear width shall be provided at the head of each transfer system (see Fig. 78).

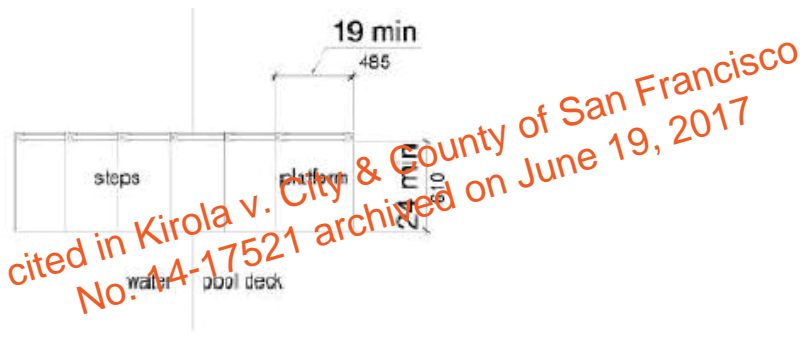


Fig. 78
Transfer System Platform

15.8.8.2 Clear Deck Space. A clear deck space of 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum with a slope not steeper than 1:48 shall be provided at the base of the transfer platform surface and shall be centered along a 24 inch (610 mm) minimum unobstructed side of the transfer platform (see Fig. 79).

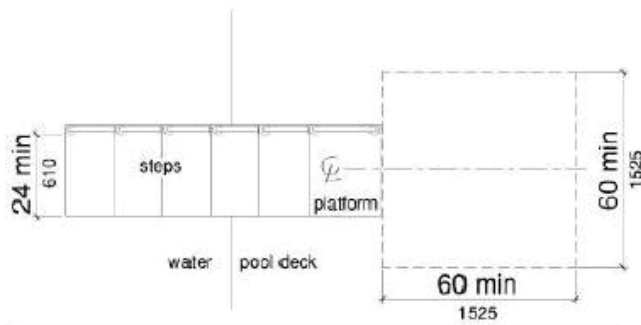


Fig. 79
Clear Deck Space at Transfer Systems

15.8.8.3 Height. The height of the transfer platform shall comply with [15.8.7.2](#).

15.8.8.4* Transfer Steps. Transfer step height shall be 8 inches (205 mm) maximum. Transfer steps shall extend to a water depth of 18 inches (455 mm) minimum below the stationary water level (see Fig. 80). [Appendix Note](#)

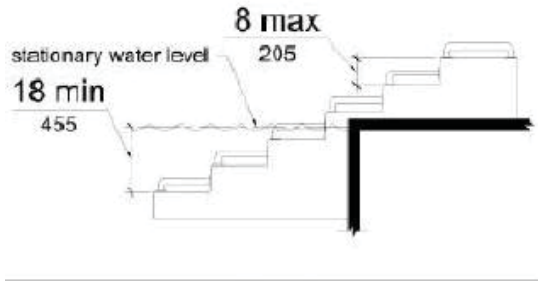


Fig. 80
Transfer System Steps

15.8.8.5 Surface. The surface of the transfer system shall not be sharp and shall have rounded edges.

15.8.8.6 Size. Each transfer step shall have a tread clear depth of 14 inches (355 mm) minimum and 17 inches (430 mm) maximum and shall have a tread clear width of 24 inches (610 mm) minimum (see Fig. 81).

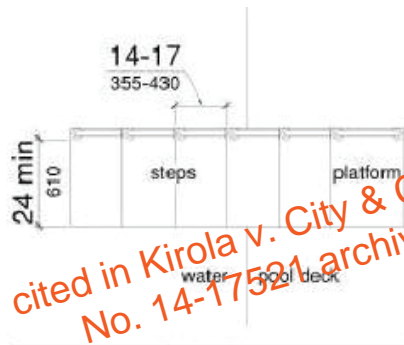


Fig. 81
Size of Transfer System Steps

15.8.8.7* Grab Bars. At least one grab bar on each transfer step and the transfer platform, or a continuous grab bar serving each transfer step and the transfer platform, shall be provided. Where provided, the top of the gripping surface shall be 4 inches (100 mm) minimum and 6 inches (150 mm) maximum above each step and transfer platform. Where a continuous grab bar is provided, the top of the gripping surface shall be 4 inches (100 mm) minimum and 6 inches (150 mm) maximum above the step nosing and transfer platform. Grab bars shall comply with [4.26](#) and be located on at least one side of the transfer system. The grab bar located at the transfer platform shall not obstruct transfer (see Fig. 82).

[Appendix Note](#)

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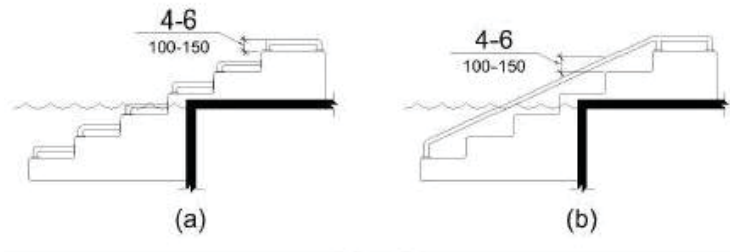


Fig. 82
Grab Bars at Transfer Systems

15.8.9 Pool Stairs. Pool stairs shall comply with 15.8.9.

15.8.9.1 Pool Stairs. Pool stairs shall comply with [4.9](#), except as modified below.

15.8.9.2 Handrails. The width between handrails shall be 20 inches (510 mm) minimum and 24 inches (610 mm) maximum. Handrail extensions required by [4.9.4](#) shall not be required at the bottom landing serving a pool stair.

15.8.10* Water Play Components. Where water play components are provided, the provisions of [15.6](#) and [4.3](#) shall apply, except as modified or otherwise provided in this section. [Appendix Note](#)

EXCEPTION 1: Where the surface of the accessible route, clear floor or ground spaces and maneuvering spaces connecting play components is submerged, the provisions of [15.6](#) and [4.3](#) for cross slope, running slope, and surface shall not apply.

EXCEPTION 2: Transfer systems complying with [15.6.5](#) shall be permitted to be used in lieu of ramps to connect elevated play components.

APPENDIX

This appendix contains materials of an advisory nature and provides additional information that should help the reader to understand the minimum requirements of the guidelines or to design buildings or facilities for greater accessibility. The paragraph numbers correspond to the sections or paragraphs of the guideline to which the material relates and are therefore not consecutive (for example, A4.2.1 contains additional information relevant to 4.2.1). Sections of the guidelines for which additional material appears in this appendix have been indicated by an asterisk. Nothing in this appendix shall in any way obviate any obligation to comply with the requirements of the guidelines itself.

A2.0 General.

A2.2 Equivalent Facilitation.

Specific examples of equivalent facilitation are found in the following sections:

- 4.1.6(3)(c) Elevators in Alterations
- 4.31.9 Text Telephones
- 7.2 Sales and Service Counters, Teller Windows, Information Counters
- 9.1.4 Classes of Sleeping Accommodations
- 9.2.2(6)(d) Requirements for Accessible Units, Sleeping Rooms, and Suites

A3.0 Miscellaneous Instructions and Definitions.

A3.5 Definitions.

Transient Lodging. The Department of Justice's policy and rules further define what is covered as transient lodging.

A4.0 Accessible Elements and Spaces: Scope and Technical Requirements.

A4.1.1 Application.

A4.1.1(3) Areas Used Only by Employees as Work Areas. Where there are a series of individual work stations of the same type (e.g., laboratories, service counters, ticket booths), 5%, but not less than one, of each type of work station should be constructed so that an individual with disabilities can maneuver within the work stations. Rooms housing individual offices in a typical office building must meet the requirements of the guidelines concerning doors, accessible routes, etc. but do not need to allow for maneuvering space around individual desks. Modifications required to permit maneuvering within the work area may be accomplished as a reasonable accommodation to individual employees with disabilities under Title I of the ADA. Consideration should also be given to placing shelves in employee work areas at a convenient height for accessibility or installing commercially available shelving that is adjustable so that reasonable accommodations can be made in the future.

If work stations are made accessible they should comply with the applicable provisions of 4.2 through 4.35.

A4.1.2 Accessible Sites and Exterior Facilities: New Construction.

A4.1.2(2)(b) Court Sports: The accessible route must be direct and connect both sides of the court without requiring players on one side of the court to traverse through or around another court to get to the other side of the court. [A4.1.2\(4\)](#)

A4.1.2(4) Exception 1. An accessible route is required to connect to the boundary of the area of sport activity. The term "area of sport activity" distinguishes that portion of a room or space where the play or practice of a sport occurs from adjacent areas. Examples of areas of sport activity include: basketball courts, baseball fields, running tracks, bowling lanes, skating rinks, and the area surrounding a piece of gymnastic equipment. While the size of an area of sport activity may vary from sport to sport, each includes only the space needed to play. The following example is provided for additional clarification.

Example. Boundary lines define the field where a football game is played. A safety border is also provided around the field. The game may temporarily be played in the space between the boundary lines and the safety border when players are pushed out of bounds or momentum carries them forward while receiving a pass. In the game of football, the space between the boundary line and the safety border is used to play the game. This space and the football field are included in the area of sport activity.

A4.1.2(4) Exception 2. Public circulation routes where animals may also travel, such as in petting zoos and passageways alongside animal pens in State fairs, are not eligible for the exception.

A4.1.2(5)(e) Valet parking is not always usable by individuals with disabilities. For instance, an individual may use a type of vehicle controls that render the regular controls inoperable or the driver's seat in a van may be removed. In these situations, another person cannot park the vehicle. It is recommended that some self-parking spaces be provided at valet parking facilities for individuals whose vehicles cannot be parked by another person and that such spaces be located on an accessible route to the entrance of the facility.

A4.1.3 Accessible Buildings: New Construction.

A4.1.3(1)(b) Court Sports: The accessible route must be direct and connect both sides of the court without requiring players on one side of the court to traverse through or around another court to get to the other side of the court.

A4.1.3(3) Exception 1. An accessible route is required to connect to the boundary of the area of sport activity. The term "area of sport activity" distinguishes that portion of a room or space where the play or practice of a sport occurs from adjacent areas. Examples of areas of sport activity include: basketball courts, baseball fields, running tracks, bowling lanes, skating rinks, and the area surrounding a piece of gymnastic equipment. While the size of an area of sport activity may vary from sport to sport, each includes only the space needed to play. The following example is provided for additional clarification.

Example. Boundary lines define the field where a football game is played. A safety border is also provided around the field. The game may temporarily be played in the space between the boundary lines and the safety border when players are pushed out of bounds or momentum carries them forward while receiving a pass. In the game of football, the space between the boundary line and the safety border is used to play the game. This space and the football field are included in the area of sport activity.

A4.1.3(3) Exception 2. Public circulation routes where animals may also travel, such as in petting zoos and passageways alongside animal pens in State fairs, are not eligible for the exception.

A4.1.3(5) Only passenger elevators are covered by the accessibility provisions of 4.10. Materials and equipment hoists, freight elevators not intended for passenger use, dumbwaiters, and construction elevators are not covered by these guidelines. If a building is exempt from the elevator requirement, it is not necessary to provide a platform lift or other means of vertical access in lieu of an elevator.

Under Exception 4, platform lifts are allowed where existing conditions make it impractical to install a ramp or elevator. Such conditions generally occur where it is essential to provide access to small raised or lowered areas where space may not be available for a ramp. Examples include, but are not limited to, raised pharmacy platforms, commercial offices raised above a sales floor, or radio and news booths.

While the use of platform lifts is allowed, ramps are recommended to provide access to player seating areas serving an area of sport activity.

A4.1.3(9) Supervised automatic sprinkler systems have built in signals for monitoring features of the system such as the opening and closing of water control valves, the power supplies for needed pumps, water tank levels, and for indicating conditions that will impair the satisfactory operation of the sprinkler system. Because of these monitoring features, supervised automatic sprinkler systems have a high level of satisfactory performance and response to fire conditions.

A4.1.3(10) If an odd number of drinking fountains is provided on a floor, the requirement in 4.1.3(10)(b) may be met by rounding down the odd number to an even number and calculating 50% of the even number. When more than one drinking fountain on a floor is required to comply with 4.15, those fountains should be dispersed to allow wheelchair users convenient access. For example, in a large facility such as a convention center that has water fountains at several locations on a floor, the accessible water fountains should be located so that wheelchair users do not have to travel a greater distance than other people to use a drinking fountain.

A4.1.3(12)(c) Different types of lockers may include full-size and half-size lockers, as well as those specifically designed for storage of various sports equipment.

A4.1.3(17)(b) In addition to the requirements of section 4.1.3(17)(b), the installation of additional volume controls is encouraged. Volume controls may be installed on any telephone.

A4.1.3(19)(a) Readily removable or folding seating units may be installed in lieu of providing an open space for wheelchair users. Folding seating units are usually two fixed seats that can be easily folded into a fixed center bar to allow for one or two open spaces for wheelchair users when necessary. These units are more easily adapted than removable seats which generally require the seat to be removed in advance by the facility management.

Either a sign or a marker placed on seating with removable or folding arm rests is required by this section. Consideration should be given for ensuring identification of such seats in a darkened theater. For example, a marker which contrasts (light on dark or dark on light) and which also reflects light could be placed on the side of such seating so as to be visible in a lighted auditorium and also to reflect light from a flashlight.

A4.1.6 Accessible Buildings: Alterations.

A4.1.6(1)(h) When an entrance is being altered, it is preferable that those entrances being altered be made accessible to the extent feasible.

A4.1.7 Accessible Buildings: Historic Preservation.

A4.1.7(1) The Department of Justice's regulations implementing titles II and III of the ADA require alternative methods of access where compliance with the special access provisions in 4.1.7(3) would threaten or destroy the historic significance of a qualified historic facility. The requirement for public facilities subject to title II is provided at [28 C.F.R. 35.154\(b\)](#) and the requirement for private facilities subject to title III is provided at [28 C.F.R. 36.405\(b\)](#).

A4.2 Space Allowances and Reach Ranges.

A4.2.1 Wheelchair Passage Width.

(1) Space Requirements for Wheelchairs. Many persons who use wheelchairs need a 30 in (760 mm) clear opening width for doorways, gates, and the like, when the latter are entered head-on. If the person is unfamiliar with a building, if competing traffic is heavy, if sudden or frequent movements are needed, or if the wheelchair must be turned at an opening, then greater clear widths are needed. For most situations, the addition of an inch of leeway on either side is sufficient. Thus, a minimum clear width of 32 in (815 mm) will provide adequate clearance. However, when an opening or a restriction in a passageway is more than 24 in (610 mm) long, it is essentially a passageway and must be at least 36 in (915 mm) wide.

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(2) Space Requirements for Use of Walking Aids. Although people who use walking aids can maneuver through clear width openings of 32 in (815 mm), they need 36 in (915 mm) wide passageways and walks for comfortable gaits. Crutch tips, often extending down at a wide angle, are a hazard in narrow passageways where they might not be seen by other pedestrians. Thus, the 36 in (915 mm) width provides a safety allowance both for the person with a disability and for others.

(3) Space Requirements for Passing. Able-bodied persons in winter clothing, walking straight ahead with arms swinging, need 32 in (815 mm) of width, which includes 2 in (50 mm) on either side for sway, and another 1 in (25 mm) tolerance on either side for clearing nearby objects or other pedestrians. Almost all wheelchair users and those who use walking aids can also manage within this 32 in (815 mm) width for short distances. Thus, two streams of traffic can pass in 64 in (1625 mm) in a comfortable flow. Sixty inches (1525 mm) provides a minimum width for a somewhat more restricted flow. If the clear width is less than 60 in (1525 mm), two wheelchair users will not be able to pass but will have to seek a wider place for passing. Forty-eight inches (1220 mm) is the minimum width needed for an ambulatory person to pass a nonambulatory or semi-ambulatory person. Within this 48 in (1220 mm) width, the ambulatory person will have to twist to pass a wheelchair user, a person with a service animal, or a semi-ambulatory person. There will be little leeway for swaying or missteps (see Fig. A1).

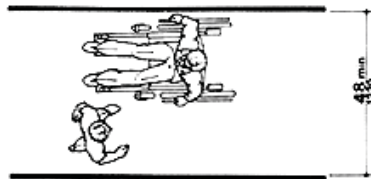


Fig. A1
Minimum Passage Width for One Wheelchair
and One Ambulatory Person

A4.2.3 Wheelchair Turning Space. These guidelines specify a minimum space of 60 in (1525 mm) diameter or a 60 in by 60 in (1525 mm by 1525 mm) T-shaped space for a pivoting 180-degree turn of a wheelchair. This space is usually satisfactory for turning around, but many people will not be able to turn without repeated tries and bumping into surrounding objects. The space shown in Fig. A2 will allow most wheelchair users to complete U-turns without difficulty.

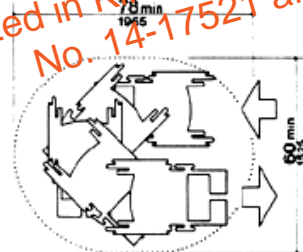
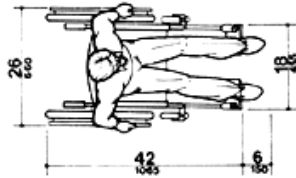
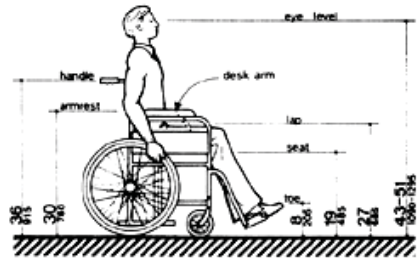


Fig. A2
Space Needed for Smooth U-Turn in a Wheelchair

A4.2.4 Clear Floor or Ground Space for Wheelchairs. The wheelchair and user shown in Fig. A3 represent typical dimensions for a large adult male. The space requirements in this guideline are based upon maneuvering clearances that will accommodate most wheelchairs. Fig. A3 provides a uniform reference for design not covered by this guideline.



NOTE: Footrests may extend further for tall people

Fig. A3
Dimensions of Adult-Sized Wheelchairs

A4.2.5 & A4.2.6 Reach. Reach ranges for persons seated in wheelchairs may be further clarified by Fig. A3(a). These drawings approximate in the plan view the information shown in Fig. 4, 5, and 6.

The following table provides guidance on reach ranges for children according to age where building elements such as coat hooks, lockers, or controls and operating mechanisms are designed for use primarily by children. These dimensions apply to either forward or side reaches. Accessible elements, controls, and operating mechanisms designed for adult use or children over age 12 can be located outside these ranges but must be within the adult reach ranges required by 4.2.5 and 4.2.6.

Children's Reach Ranges

Forward or Side Reach	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
High (maximum)	36 in (915 mm)	40 in (1015 mm)	44 in (1120 mm)
Low (minimum)	20 in (510 mm)	18 in (455 mm)	16 in (405 mm)

A4.3 Accessible Route.

A4.3.1 General.

(1) Travel Distances. Many people with mobility impairments can move at only very slow speeds; for many, traveling 200 ft (61 m) could take about 2 minutes. This assumes a rate of about 1.5 ft/s (455 mm/s) on level ground. It also assumes that the traveler would move continuously. However, on trips over 100 ft (30 m), disabled people are apt to rest frequently, which substantially increases their trip times. Resting periods of 2 minutes for every 100 ft (30 m) can be used to estimate travel times for people with severely limited stamina. In inclement weather, slow progress and resting can greatly increase a disabled person's exposure to the elements.

(2) Sites. Level, indirect routes or those with running slopes lower than 1:20 can sometimes provide more convenience than direct routes with maximum allowable slopes or with ramps.

A4.3.10 Egress. Because people with disabilities may visit, be employed or be a resident in any building, emergency management plans with specific provisions to ensure their safe evacuation also play an essential role in fire safety and life safety.

A4.3.11.3 Stairway Width. A 48 in (1220 mm) wide exit stairway is needed to allow assisted evacuation (e.g., carrying a person in a wheelchair) without encroaching on the exit path for ambulatory persons.

A4.3.11.4 Two-way Communication. It is essential that emergency communication not be dependent on voice communications alone because the safety of people with hearing or speech impairments could be jeopardized. The visible signal requirement could be satisfied with something as simple as a button in the area of rescue assistance that lights, indicating that help is on the way, when the message is answered at the point of entry.

A4.4 Protruding Objects.

A4.4.1 General. Service animals are trained to recognize and avoid hazards. However, most people with severe impairments of vision use the long cane as an aid to mobility. The two principal cane techniques are the touch technique, where the cane arcs from side to side and touches points outside both shoulders; and the diagonal technique, where the cane is held in a stationary position diagonally across the body with the cane tip touching or just above the ground at a point outside one shoulder and the handle or grip extending to a point outside the other shoulder. The touch technique is used primarily in uncontrolled areas, while the diagonal technique is used primarily in certain limited, controlled, and familiar environments. Cane users are often trained to use both techniques.

Potential hazardous objects are noticed only if they fall within the detection range of canes (see Fig. A4). Visually impaired people walking toward an object can detect an overhang if its lowest surface is not higher than 27 in (685 mm). When walking alongside protruding objects, they cannot detect overhangs. Since proper cane and service animal techniques keep people away from the edge of a path or from walls, a slight overhang of no more than 4 in (100 mm) is not hazardous.

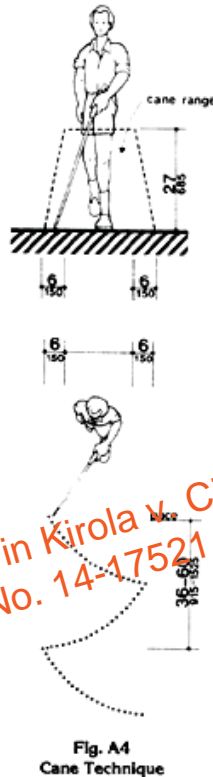


Fig. A4
Cane Technique

A4.5 Ground and Floor Surfaces.

A4.5.1 General. People who have difficulty walking or maintaining balance or who use crutches, canes, or walkers, and those with restricted gaits are particularly sensitive to slipping and tripping hazards. For such people, a stable and regular surface is necessary for safe walking, particularly on stairs. Wheelchairs can be propelled most easily on surfaces that are hard, stable, and regular. Soft loose surfaces such as shag carpet, loose sand or gravel, wet clay, and irregular surfaces such as cobblestones can significantly impede wheelchair movement.

Slip resistance is based on the frictional force necessary to keep a shoe heel or crutch tip from slipping on a walking surface under conditions likely to be found on the surface. While the *dynamic* coefficient of friction during walking varies in a complex and non-uniform way, the *static* coefficient of friction, which can be measured in several ways, provides a close approximation of the slip resistance of a surface. Contrary to popular belief, some slippage is *necessary* to walking, especially for persons with restricted gaits; a truly "non-slip" surface could not be negotiated.

The Occupational Safety and Health Administration recommends that walking surfaces have a static coefficient of friction of 0.5. A research project sponsored by the Architectural and Transportation Barriers Compliance Board (Access Board) conducted tests with persons with disabilities and concluded that a higher coefficient of friction was needed by such persons. A static coefficient of friction of 0.6 is recommended for accessible routes and 0.8 for ramps.

It is recognized that the coefficient of friction varies considerably due to the presence of contaminants, water, floor finishes, and other factors not under the control of the designer or builder and not subject to design and construction guidelines and that compliance would be difficult to measure on the building site. Nevertheless, many common building materials suitable for flooring are now labeled with information on the static coefficient of friction. While it may not be possible to compare one product directly with another, or to guarantee a constant measure, builders and designers are encouraged to specify materials with appropriate values. As more products include information on slip resistance, improved uniformity in measurement and specification is likely. The Access Board's advisory guidelines on Slip Resistant Surfaces provides additional information on this subject.

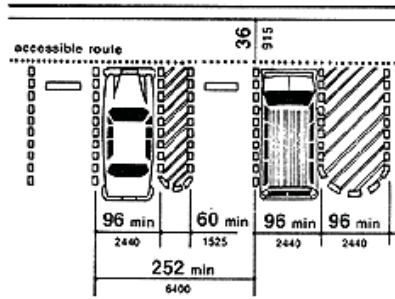
Cross slopes on walks and ground or floor surfaces can cause considerable difficulty in propelling a wheelchair in a straight line.

A4.5.3 Carpet. Much more needs to be done in developing both quantitative and qualitative criteria for carpeting (i.e., problems associated with texture and weave need to be studied). However, certain functional characteristics are well established. When both carpet and padding are used, it is desirable to have minimum movement (preferably none) between the floor and the pad and the pad and the carpet which would allow the carpet to hump or warp. In heavily trafficked areas, a thick, soft (plush) pad or cushion, particularly in combination with long carpet pile, makes it difficult for individuals in wheelchairs and those with other ambulatory disabilities to get about. Firm carpeting can be achieved through proper selection and combination of pad and carpet, sometimes with the elimination of the pad or cushion, and with proper installation. Carpeting designed with a weave that causes a zig-zag effect when wheeled across is strongly discouraged.

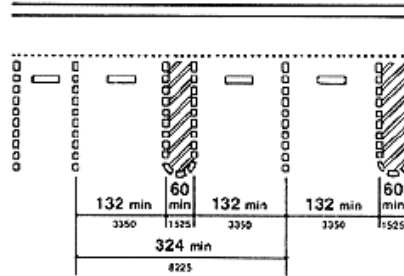
A4.6 Parking and Passenger Loading Zones.

A4.6.3 Parking Spaces. The increasing use of vans with side-mounted lifts or ramps by persons with disabilities has necessitated some revisions in specifications for parking spaces and adjacent access aisles. The typical accessible parking space is 96 in (2440 mm) wide with an adjacent 60 in (1525 mm) access aisle. However, this aisle does not permit lifts or ramps to be deployed and still leave room for a person using a wheelchair or other mobility aid to exit the lift platform or ramp. In tests conducted with actual lift/van/wheelchair combinations, (under a Board-sponsored Accessible Parking and Loading Zones Project) researchers found that a space and aisle totaling almost 204 in (5180 mm) wide was needed to deploy a lift and exit conveniently. The "van accessible" parking space required by these guidelines provides a 96 in (2440 mm) wide space with a 96 in (2440 mm) adjacent access aisle which is just wide enough to maneuver and exit from a side mounted lift. If a 96 in (2440 mm) access aisle is placed between two spaces, two "van accessible" spaces are created. Alternatively, if the wide access aisle is provided at the end of a row (an area often unused), it may be possible to provide the wide access aisle without additional space (see Fig. A5(a)).

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(a)
Van Accessible Space at End Row



(b)
Universal Parking Space Design

Fig. A5
Parking Space Alternatives

A sign is needed to alert van users to the presence of the wider aisle, but the space is not intended to be restricted only to vans.

"Universal" Parking Space Design. An alternative to the provision of a percentage of spaces with a wide aisle, and the associated need to include additional signage, is the use of what has been called the "universal" parking space design. Under this design, all accessible spaces are 132 in (3350 mm) wide with a 60 in (1525 mm) access aisle (see Fig. A5(b)). One advantage to this design is that no additional signage is needed because all spaces can accommodate a van with a side-mounted lift or ramp. Also, there is no competition between cars and vans for spaces since all spaces can accommodate either. Furthermore, the wider space permits vehicles to park to one side or the other within the 132 in (3350 mm) space to allow persons to exit and enter the vehicle on either the driver or passenger side, although, in some cases, this would require exiting or entering without a marked access aisle.

An essential consideration for any design is having the access aisle level with the parking space. Since a person with a disability, using a lift or ramp, must maneuver within the access aisle, the aisle cannot include a ramp or sloped area. The access aisle must be connected to an accessible route to the appropriate accessible entrance of a building or facility. The parking access aisle must either blend with the accessible route or have a curb ramp complying with 4.7. Such a curb ramp opening must be located within the access aisle boundaries, not within the parking space boundaries. Unfortunately, many facilities are designed with a ramp that is blocked when any vehicle parks in the accessible space. Also, the required dimensions of the access aisle cannot be restricted by planters, curbs or wheel stops.

A4.6.4 Signage. Signs designating parking places for disabled people can be seen from a driver's seat if the signs are mounted high enough above the ground and located at the front of a parking space.

A4.6.5 Vertical Clearance. High-top vans, which disabled people or transportation services often use, require higher clearances in parking garages than automobiles.

A4.8 Ramps.

A4.8.1 General. Ramps are essential for wheelchair users if elevators or lifts are not available to connect different levels. However, some people who use walking aids have difficulty with ramps and prefer stairs.

A4.8.2 Slope and Rise. Ramp slopes between 1:16 and 1:20 are preferred. The ability to manage an incline is related to both its slope and its length. Wheelchair users with disabilities affecting their arms or with low stamina have serious difficulty using inclines. Most ambulatory people and most people who use wheelchairs can manage a slope of 1:16. Many people cannot manage a slope of 1:12 for 30 ft (9 m).

A4.8.4 Landings. Level landings are essential toward maintaining an aggregate slope that complies with these guidelines. A ramp landing that is not level causes individuals using wheelchairs to tip backward or bottom out when the ramp is approached.

A4.8.5 Handrails. The requirements for stair and ramp handrails in this guideline are for adults. When children are principal users in a building or facility (e.g. elementary schools), a second set of handrails at an appropriate height can assist them and aid in preventing accidents. A maximum height of 28 inches measured to the top of the gripping surface from the ramp surface or stair nosing is recommended for handrails designed for children. Sufficient vertical clearance between upper and lower handrails (9 inches minimum) should be provided to help prevent entrapment.

A4.9 Stairs.

A4.9.1 Minimum Number. Only interior and exterior stairs connecting levels that are not connected by an elevator, ramp, or other accessible means of vertical access have to comply with 4.9.

A4.9.4 Handrails. See [A4.8.5](#).

A4.10 Elevators.

A4.10.6 Door Protective and Reopening Device. The required door reopening device would hold the door open for 20 seconds if the doorway remains obstructed. After 20 seconds, the door may begin to close. However, if designed in accordance with ASME A17.1-1990, the door closing movement could still be stopped if a person or object exerts sufficient force at any point on the door edge.

A4.10.7 Door and Signal Timing for Hall Calls. This paragraph allows variation in the location of call buttons, advance time for warning signals, and the door-holding period used to meet the time requirement.

A4.10.12 Car Controls. Industry-wide standardization of elevator control panel design would make all elevators significantly more convenient for use by people with severe visual impairments. In many cases, it will be possible to locate the highest control on elevator panels within 48 in (1220 mm) from the floor.

A4.10.13 Car Position Indicators. A special button may be provided that would activate the audible signal within the given elevator only for the desired trip, rather than maintaining the audible signal in constant operation.

A4.10.14 Emergency Communications. A device that requires no handset is easier to use by people who have difficulty reaching. Also, small handles on handset compartment doors are not usable by people who have difficulty grasping.

Ideally, emergency two-way communication systems should provide both voice and visual display intercommunication so that persons with hearing impairments and persons with vision impairments can receive information regarding the status of a rescue. A voice intercommunication system cannot be the only means of communication because it is not accessible to people with speech and hearing impairments. While a voice intercommunication system is not required, at a minimum, the system should provide both an audio and visual indication that a rescue is on the way.

A4.11 Platform Lifts (Wheelchair Lifts).

A4.11.2 Other Requirements. Inclined stairway chairlifts, and inclined and vertical platform lifts (wheelchair lifts) are available for short-distance, vertical transportation of people with disabilities. Care should be taken in selecting lifts as some lifts are not equally suitable for use by both wheelchair users and semi-ambulatory individuals.

A4.12 Windows.

A4.12.1 General. Windows intended to be operated by occupants in accessible spaces should comply with 4.12.

A4.12.2 Window Hardware. Windows requiring pushing, pulling, or lifting to open (for example, double-hung, sliding, or casement and awning units without cranks) should require no more than 5 lbf (22.2 N) to open or close. Locks, cranks, and other window hardware should comply with 4.27.

A4.13 Doors.

A4.13.8 Thresholds at Doorways. Thresholds and surface height changes in doorways are particularly inconvenient for wheelchair users who also have low stamina or restrictions in arm movement because complex maneuvering is required to get over the level change while operating the door.

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A4.13.9 Door Hardware. Some disabled persons must push against a door with their chair or walker to open it. Applied kickplates on doors with closers can reduce required maintenance by withstanding abuse from wheelchairs and canes. To be effective, they should cover the door width, less approximately 2 in (51 mm), up to a height of 16 in (405 mm) from its bottom edge and be centered across the width of the door.

A4.13.10 Door Closers. Closers with delayed action features give a person more time to maneuver through doorways. They are particularly useful on frequently used interior doors such as entrances to toilet rooms.

A4.13.11 Door Opening Force. Although most people with disabilities can exert at least 5 lbf (22.2N), both pushing and pulling from a stationary position, a few people with severe disabilities cannot exert 3 lbf (13.13N). Although some people cannot manage the allowable forces in this guideline and many others have difficulty, door closers must have certain minimum closing forces to close doors satisfactorily. Forces for pushing or pulling doors open are measured with a push-pull scale under the following conditions:

(1) Hinged doors: Force applied perpendicular to the door at the door opener or 30 in (760 mm) from the hinged side, whichever is farther from the hinge.

(2) Sliding or folding doors: Force applied parallel to the door at the door pull or latch.

(3) Application of force: Apply force gradually so that the applied force does not exceed the resistance of the door. In high-rise buildings, air-pressure differentials may require a modification of this specification in order to meet the functional intent.

A4.13.12 Automatic Doors and Power-Assisted Doors. Sliding automatic doors do not need guard rails and are more convenient for wheelchair users and visually impaired people to use. If slowly opening automatic doors can be reactivated before their closing cycle is completed, they will be more convenient in busy doorways.

A4.15 Drinking Fountains and Water Coolers.

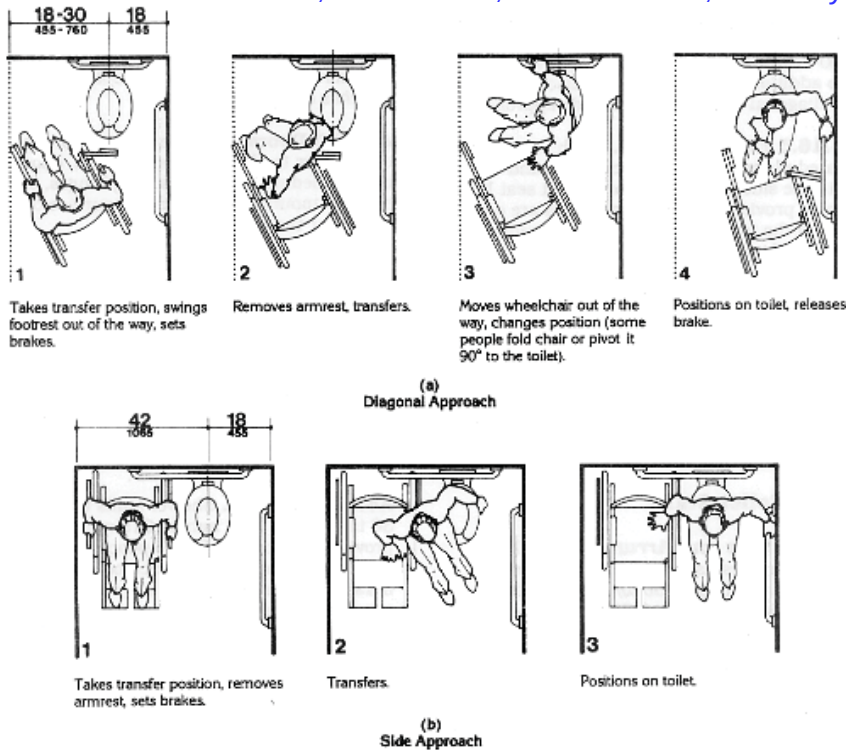
A4.15.2 Spout Height. Two drinking fountains, mounted side by side or on a single post, are usable by people with disabilities and people who find it difficult to bend over.

A4.16 Water Closets.

A4.16.3 Height. Height preferences for toilet seats vary considerably among disabled people. Higher seat heights may be an advantage to some ambulatory disabled people, but are often a disadvantage for wheelchair users and others. Toilet seats 18 in (455 mm) high seem to be a reasonable compromise. Thick seats and filler rings are available to adapt standard fixtures to these requirements.

A4.16.4 Grab Bars. Fig. A6(a) and (b) show the diagonal and side approaches most commonly used to transfer from a wheelchair to a water closet. Some wheelchair users can transfer from the front of the toilet while others use a 90-degree approach. Most people who use the two additional approaches can also use either the diagonal approach or the side approach.

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A4.16.5 Flush Controls. Flush valves and related plumbing can be located behind walls or to the side of the toilet, or a toilet seat lid can be provided if plumbing fittings are directly behind the toilet seat. Such designs reduce the chance of injury and imbalance caused by leaning back against the fittings. Flush controls for tank-type toilets have a standardized mounting location on the left side of the tank (facing the tank). Tanks can be obtained by special order with controls mounted on the right side. If administrative authorities require flush controls for flush valves to be located in a position that conflicts with the location of the rear grab bar, then that bar may be split or shifted toward the wide side of the toilet area.

A4.16.7 Water Closets for Children. The requirements in 4.16.7 are to be followed where the exception for children's water closets in 4.16.1 is utilized. Use of this exception is optional since these guidelines do not require water closets or other building elements to be designed according to children's dimensions. The following table provides additional guidance in applying the specifications for water closets for children according to the age group served and reflects the differences in the size, stature, and reach ranges of children 3 through 12. The specifications chosen should correspond to the age of the primary user group. The specifications of one age group should be applied consistently in the installation of a water closet and related elements.

Table A3
Specifications for Water Closets Serving Children Ages 3 through 12

	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
(1) Water Closet Centerline	12 in (305 mm)	12 to 15 in (305 to 380 mm)	15 to 18 in (380 to 455 mm)
(2) Toilet Seat Height	11 to 12 in (280 to 305 mm)	12 to 15 in (305 to 380 mm)	15 to 17 in (380 to 430 mm)
(3) Grab Bar Height	18 to 20 in (455 to 510 mm)	20 to 25 in (510 to 635 mm)	25 to 27 in (635 to 685 mm)
(4) Dispenser Height	14 in (355 mm)	14 to 17 in (355 to 430 mm)	17 to 19 in (430 to 485 mm)

A4.17 Toilet Stalls.

A4.17.3 Size and Arrangement. This section requires use of the 60 in (1525 mm) standard stall (Figure 30(a)) and permits the 36 in (915 mm) or 48 in (1220 mm) wide alternate stall (Figure 30(b)) only in alterations where provision of the standard stall is technically infeasible or where local plumbing codes prohibit reduction in the number of fixtures. A standard stall provides a clear space on one side of the water closet to enable persons who use wheelchairs to perform a side or diagonal transfer from the

wheelchair to the water closet. However, some persons with disabilities who use mobility aids such as walkers, canes or crutches are better able to use the two parallel grab bars in the 36 in (915 mm) wide alternate stall to achieve a standing position.

In large toilet rooms, where six or more toilet stalls are provided, it is therefore required that a 36 in (915 mm) wide stall with parallel grab bars be provided *in addition* to the standard stall required in new construction. The 36 in (915 mm) width is necessary to achieve proper use of the grab bars; wider stalls would position the grab bars too far apart to be easily used and narrower stalls would position the grab bars too close to the water closet. Since the stall is primarily intended for use by persons using canes, crutches and walkers, rather than wheelchairs, the length of the stall could be conventional. The door, however, must swing outward to ensure a usable space for people who use crutches or walkers.

A4.17.5 Doors. To make it easier for wheelchair users to close toilet stall doors, doors can be provided with closers, spring hinges, or a pull bar mounted on the inside surface of the door near the hinge side.

A4.17.7 Toilet Stalls for Children. See [A4.16.7](#).

A4.19 Lavatories and Mirrors.

A4.19.6 Mirrors. If mirrors are to be used by both ambulatory people and wheelchair users, then they must be at least 74 in (1880 mm) high at their topmost edge. A single full length mirror can accommodate all people, including children. Clear floor space for a forward approach 30 by 48 inches (760 mm by 1220 mm) should be provided in front of full length mirrors. Doors should not swing into this clear floor space. Mirrors provided above lavatories designed for children should be mounted with the bottom edge of the reflecting surface no higher than 34 inches (865 mm) above the finish floor or at the lowest mounting height permitted by fixtures and related elements.

A4.21 Shower Stalls.

A4.21.1 General. Shower stalls that are 36 in by 36 in (915 mm by 915 mm) wide provide additional safety to people who have difficulty maintaining balance because all grab bars and walls are within easy reach. Seated people use the walls of 36 in by 36 in (915 mm by 915 mm) showers for back support. Shower stalls that are 60 in (1525 mm) wide and have no curb may increase usability of a bathroom for wheelchair users because the shower area provides additional maneuvering space.

A4.22 Toilet Rooms.

A4.22.3 Clear Floor Space. In many small facilities, single-user restrooms may be the only facilities provided for all building users. In addition, the guidelines allow the use of "unisex" or "family" accessible toilet rooms in alterations when technical infeasibility can be demonstrated. Experience has shown that the provision of accessible "unisex" or single-user restrooms is a reasonable way to provide access for wheelchair users and any attendants, especially when attendants are of the opposite sex. Since these facilities have proven so useful, it is often considered advantageous to install a "unisex" toilet room in new facilities in addition to making the multi-stall restrooms accessible, especially in shopping malls, large auditoriums, and convention centers.

Figure 28 (section 4.16) provides minimum clear floor space dimensions for toilets in accessible "unisex" toilet rooms. The dotted lines designate the minimum clear floor space, depending on the direction of approach, required for wheelchair users to transfer onto the water closet. The dimensions of 48 in (1220 mm) and 60 in (1525 mm), respectively, correspond to the space required for the two common transfer approaches utilized by wheelchair users (see Fig. A6). It is important to keep in mind that the placement of the lavatory to the immediate side of the water closet will preclude the side approach transfer illustrated in Figure A6(b). To accommodate the side transfer, the space adjacent to the water closet must remain clear of obstruction for 42 in (1065 mm) from the centerline of the toilet ([Figure 28](#)) and the lavatory must not be located within this clear space. A turning circle or T-turn, the clear floor space at the lavatory, and maneuvering space at the door must be considered when determining the possible wall locations. A privacy latch or other accessible means of ensuring privacy during use should be provided at the door.

RECOMMENDATIONS:

1. In new construction, accessible single-user restrooms may be desirable in some situations because they can accommodate a wide variety of building users. However, they cannot be used in lieu of making the multi-stall toilet rooms accessible as required.
2. Where strict compliance to the guidelines for accessible toilet facilities is technically infeasible in the alteration of existing facilities, accessible "unisex" toilets are a reasonable alternative.
3. In designing accessible single-user restrooms, the provisions of adequate space to allow a side transfer

will provide accommodation to the largest number of wheelchair users.

A4.23 Bathrooms, Bathing Facilities, and Shower Rooms.

A4.23.3 Clear Floor Space. Figure A7 shows two possible configurations of a toilet room with a roll-in shower. The specific shower shown is designed to fit exactly within the dimensions of a standard bathtub. Since the shower does not have a lip, the floor space can be used for required maneuvering space. This would permit a toilet room to be smaller than would be permitted with a bathtub and still provide enough floor space to be considered accessible. This design can provide accessibility in facilities where space is at a premium (i.e., hotels and medical care facilities). The alternate roll-in shower (Fig. 57b) also provides sufficient room for the "T-turn" and does not require plumbing to be on more than one wall.

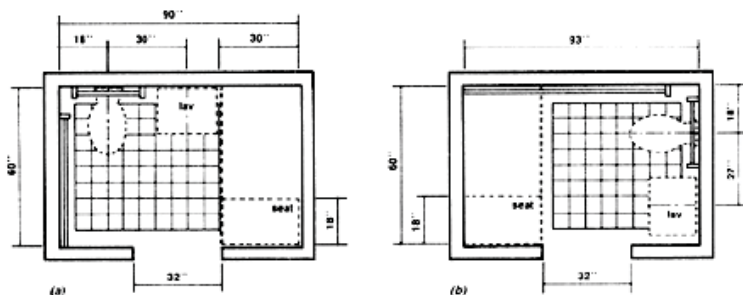


Fig. A7

A4.23.9 Medicine Cabinets. Other alternatives for storing medical and personal care items are very useful to disabled people. Shelves, drawers, and floor-mounted cabinets can be provided within the reach ranges of disabled people.

A4.25.3 Height. For guidance on children's reach ranges, see [A4.2.5 & 4.2.6](#).

A4.26 Handrails, Grab Bars, and Tub and Shower Seats.

A4.26.1 General. Many disabled people rely heavily upon grab bars and handrails to maintain balance and prevent serious falls. Many people brace their forearms between supports and walls to give them more leverage and stability in maintaining balance or for lifting. The grab bar clearance of 1-1/2 in (38 mm) required in this guideline is a safety clearance to prevent injuries resulting from arms slipping through the openings. It also provides adequate gripping room.

A4.26.2 Size and Spacing of Grab Bars and Handrails. This specification allows for alternate shapes of handrails as long as they allow an opposing grip similar to that provided by a circular section of 1-1/4 in to 1-1/2 in (32 mm to 38 mm).

A4.27 Controls and Operating Mechanisms.

A4.27.3 Height. Fig. A8 further illustrates mandatory and advisory control mounting height provisions for typical equipment.

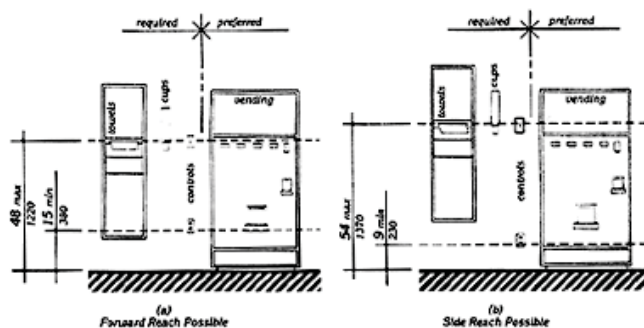


Fig. A8
Control Reach Limitations

Electrical receptacles installed to serve individual appliances and not intended for regular or frequent use by building occupants are not required to be mounted within the specified reach ranges. Examples would be receptacles installed specifically for wall-mounted clocks, refrigerators, and microwave ovens. For guidance on children's reach ranges, see [A4.2.5 & 4.2.6](#).

A4.28 Alarms.

A4.28.2 Audible Alarms. Audible emergency signals must have an intensity and frequency that can attract the attention of individuals who have partial hearing loss. People over 60 years of age generally have difficulty perceiving frequencies higher than 10,000 Hz. An alarm signal which has a periodic element to its signal, such as single stroke bells (clang-pause-clang- pause), hi-low (up-down-up-down) and fast whoop (on-off-on-off) are best. Avoid continuous or reverberating tones. Select a signal which has a sound characterized by three or four clear tones without a great deal of "noise" in between.

A4.28.3 Visual Alarms. The specifications in this section do not preclude the use of zoned or coded alarm systems.

A4.28.4 Auxiliary Alarms. Locating visual emergency alarms in rooms where persons who are deaf may work or reside alone can ensure that they will always be warned when an emergency alarm is activated. To be effective, such devices must be located and oriented so that they will spread signals and reflections throughout a space or raise the overall light level sharply. However, visual alarms alone are not necessarily the best means to alert sleepers. A study conducted by Underwriters Laboratory (UL) concluded that a flashing light more than seven times brighter was required (110 candela v. 15 candela, at the same distance) to awaken sleepers as was needed to alert awake subjects in a normal daytime illuminated room.

For hotel and other rooms where people are likely to be asleep, a signal-activated vibrator placed between mattress and box spring or under a pillow was found by UL to be much more effective in alerting sleepers. Many readily available devices are sound- activated so that they could respond to an alarm clock, clock radio, wake-up telephone call or room smoke detector. Activation by a building alarm system can either be accomplished by a separate circuit activating an auditory alarm which would, in turn, trigger the vibrator or by a signal transmitted through the ordinary 110-volt outlet. Transmission of signals through the power line is relatively simple and is the basis of common, inexpensive remote light control systems sold in many department and electronic stores for home use. So-called "wireless" intercoms operate on the same principal.

A4.29 Detectable Warnings.

A4.29.2 Detectable Warnings on Walking Surfaces. The material used to provide contrast should contrast by at least 70%. Contrast in percent is determined by:

$$\text{Contrast} = \left[\frac{B_1 - B_2}{B_1} \right] \times 100$$

where B_1 = light reflectance value (LRV) of the lighter area and B_2 = light reflectance value (LRV) of the darker area.

Note that in any application both white and black are never absolute; thus, B_1 never equals 100 and B_2 is always greater than 0.

A4.30 Signage.

A4.30.1 General. In building complexes where finding locations independently on a routine basis may be a necessity (for example, college campuses), tactile maps or prerecorded instructions can be very helpful to visually impaired people. Several maps and auditory instructions have been developed and tested for specific applications. The type of map or instructions used must be based on the information to be communicated, which depends highly on the type of buildings or users.

Landmarks that can easily be distinguished by visually impaired individuals are useful as orientation cues. Such cues include changes in illumination level, bright colors, unique patterns, wall murals, location of special equipment or other architectural features.

Many people with disabilities have limitations in movement of their heads and reduced peripheral vision. Thus, signage positioned perpendicular to the path of travel is easiest for them to notice. People can generally distinguish signage within an angle of 30 degrees to either side of the centerlines of their faces without moving their heads.

A4.30.2 Character Proportion. The legibility of printed characters is a function of the viewing distance, character height, the ratio of the stroke width to the height of the character, the contrast of color between character and background, and print font. The size of characters must be based upon the intended viewing distance. A severely nearsighted person may have to be much closer to recognize a character of a given size than a person with normal visual acuity.

A4.30.4 Raised and Brailled Characters and Pictorial Symbol Signs (Pictograms). The standard

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dimensions for literary Braille are as follows:

Dot diameter: .059 in.

Inter-dot spacing: .090 in.

Horizontal separation between cells: .241 in.

Vertical separation between cells: .395 in.

Raised borders around signs containing raised characters may make them confusing to read unless the border is set far away from the characters. Accessible signage with descriptive materials about public buildings, monuments, and objects of cultural interest may not provide sufficiently detailed and meaningful information. Interpretive guides, audio tape devices, or other methods may be more effective in presenting such information.

A4.30.5 Finish and Contrast. An eggshell finish (11 to 19 degree gloss on 60 degree glossimeter) is recommended. Research indicates that signs are more legible for persons with low vision when characters contrast with their background by at least 70 percent. Contrast in percent shall be determined by:

$$\text{Contrast} = [(B_1 - B_2)/B_1] \times 100$$

where B_1 = light reflectance value (LRV) of the lighter area and B_2 = light reflectance value (LRV) of the darker area.

Note that in any application both white and black are never absolute; thus, B_1 never equals 100 and B_2 is always greater than 0.

The greatest readability is usually achieved through the use of light-colored characters or symbols on a dark background.

A4.30.7 Symbols of Accessibility for Different Types of Listening Systems. Paragraph 4 of this section requires signage indicating the availability of an assistive listening system. An appropriate message should be displayed with the international symbol of access for hearing loss since this symbol conveys general accessibility for people with hearing loss. Some suggestions are:

INFRARED ASSISTIVE LISTENING SYSTEM AVAILABLE ----PLEASE ASK---- AUDIO LOOP IN USE TURN T-SWITCH FOR BETTER HEARING ----OR ASK FOR HELP---- FM ASSISTIVE LISTENING SYSTEM AVAILABLE -
---PLEASE ASK---

The symbol may be used to notify persons of the availability of other auxiliary aids and services such as: real time captioning, captioned note taking, sign language interpreters, and oral interpreters.

A4.30.8 Illumination Levels. Illumination levels on the sign surface shall be in the 100 to 300 lux range (10 to 30 footcandles) and shall be uniform over the sign surface. Signs shall be located such that the illumination level on the surface of the sign is not significantly exceeded by the ambient light or visible bright lighting source behind or in front of the sign.

A4.31 Telephones.

A4.31.3 Mounting Height. In localities where the dial-tone first system is in operation, calls can be placed at a coin telephone through the operator without inserting coins. The operator button is located at a height of 46 in (1170 mm) if the coin slot of the telephone is at 54 in (1370 mm). A generally available public telephone with a coin slot mounted lower on the equipment would allow universal installation of telephones at a height of 48 in (1220 mm) or less to all operable parts.

A4.31.9(1) A public text telephone (TTY) may be an integrated text telephone (TTY) pay telephone unit or a conventional portable text telephone (TTY) that is permanently affixed within, or adjacent to, the telephone enclosure. In order to be usable with a pay telephone, a text telephone (TTY) which is not a single integrated text telephone (TTY) pay telephone unit will require a shelf large enough (10 in (255 mm) wide by 10 in (255 mm) deep with a 6 in (150 mm) vertical clearance minimum) to accommodate the device, an electrical outlet, and a power cord.

A4.31.9(3) Movable or portable text telephones (TTYs) may be used to provide equivalent facilitation. A text telephone (TTY) should be readily available so that a person using it may access the text telephone (TTY) easily and conveniently. As currently designed, pocket-type text telephones (TTYs) for personal use do not accommodate a wide range of users. Such devices would not be considered substantially equivalent to conventional text telephones (TTYs). However, in the future as technology develops this could change.

A4.32 Fixed or Built-in Seating and Tables.

A4.32.4 Height of Tables or Counters. Different types of work require different table or counter heights

for comfort and optimal performance. Light detailed work such as writing requires a table or counter close to elbow height for a standing person. Heavy manual work such as rolling dough requires a counter or table height about 10 in (255 mm) below elbow height for a standing person. This principle of high/low table or counter heights also applies for seated persons; however, the limiting condition for seated manual work is clearance under the table or counter.

Table A1 shows convenient counter heights for seated persons. The great variety of heights for comfort and optimal performance indicates a need for alternatives or a compromise in height if people who stand and people who sit will be using the same counter area.

Table A1 Convenient Heights of Tables and Counters for Seated People¹

Conditions of Use	Short Women		Tall Men	
	in	mm	in	mm
Seated in a wheelchair:				
<i>Manual work:</i>				
Desk or removeable armrests	26	660	30	760
Fixed, full size armrests ²	32 ³	815	32 ³	815
<i>Light, detailed work:</i>				
Desk or removable armrests	29	735	34	865
Fixed, full size armrests ²	32 ³	815	34	865
Seated in a 16-in. (405 mm) high chair:				
<i>Manual work</i>	26	660	27	685
<i>Light, detailed work</i>	28	710	31	785

(1) All dimensions are based on a work-surface thickness of 1 1/2 in (38 mm) and a clearance of 1 1/2 in (38 mm) between legs and the underside of a work surface.

(2) This type of wheelchair arm does not interfere with the positioning of a wheelchair under a work surface.

(3) This dimension is limited by the height of the armrests: a lower height would be preferable. Some people in this group prefer lower work surfaces, which require positioning the wheelchair back from the edge of the counter.

A4.33 Assembly Areas.

A4.33.2 Size of Wheelchair Locations. Spaces large enough for two wheelchairs allow people who are coming to a performance together to sit together.

A4.33.3 Placement of Wheelchair Locations. The location of wheelchair areas can be planned so that a variety of positions within the seating area are provided. This will allow choice in viewing and price categories.

Building/life safety codes set minimum distances between rows of fixed seats with consideration of the number of seats in a row, the exit aisle width and arrangement, and the location of exit doors.

"Continental" seating, with a greater number of seats per row and a commensurate increase in row spacing and exit doors, facilitates emergency egress for all people and increases ease of access to mid-row seats especially for people who walk with difficulty. Consideration of this positive attribute of "continental" seating should be included along with all other factors in the design of fixed seating areas.

Removable armrests are recommended on fixed companion seats provided in assembly areas in amusement facilities. This provides the option for an individual using a wheelchair or other mobility device to transfer into a seat where motion and other effects may be provided as part of the amusement experience.

A4.33.6 Placement of Listening Systems. A distance of 50 ft (15 m) allows a person to distinguish performers' facial expressions.

A4.33.7 Types of Listening Systems. An assistive listening system appropriate for an assembly area for a group of persons or where the specific individuals are not known in advance, such as a playhouse, lecture hall or movie theater, may be different from the system appropriate for a particular individual provided as an auxiliary aid or as part of a reasonable accommodation. The appropriate device for an individual is the type that individual can use, whereas the appropriate system for an assembly area will necessarily be geared toward the "average" or aggregate needs of various individuals. A listening system that can be used from any seat in a seating area is the most flexible way to meet this specification. Earphone jacks with variable volume controls can benefit only people who have slight hearing loss and do not help people who use hearing aids. At the present time, magnetic induction loops are the most feasible

type of listening system for people who use hearing aids equipped with "T- coils," but people without hearing aids or those with hearing aids not equipped with inductive pick-ups cannot use them without special receivers. Radio frequency systems can be extremely effective and inexpensive. People without hearing aids can use them, but people with hearing aids need a special receiver to use them as they are presently designed. If hearing aids had a jack to allow a by-pass of microphones, then radio frequency systems would be suitable for people with and without hearing aids. The Department of Justice's regulations implementing titles II and III of the ADA require public accommodations to provide appropriate auxiliary aids and services to ensure effective communication. See [28 C.F.R. 35.160](#), [28 C.F.R. 35.164](#), and [28 C.F.R. 36.303](#). Where assistive listening systems are used to provide effective communication, the Department of Justice considers it essential that a portion of receivers be compatible with hearing aids.

Some listening systems may be subject to interference from other equipment and feedback from hearing aids of people who are using the systems. Such interference can be controlled by careful engineering design that anticipates feedback sources in the surrounding area.

Table A2, shows some of the advantages and disadvantages of different types of assistive listening systems. In addition, the Access Board has published a pamphlet on Assistive Listening Systems which lists demonstration centers across the country where technical assistance can be obtained in selecting and installing appropriate systems. The state of New York has also adopted a detailed technical specification which may be useful.

Table A2

Summary of Assistive Listening Devices and Systems

COMPARISON OF LARGE AREA ASSISTIVE LISTENING SYSTEMS			
System Description	Advantages	Disadvantages	Typical Applications
<p>FM BROADCAST (40 frequencies available on narrow band transmission systems. Ten frequencies available on wideband transmission systems.) Transmitters: FM base station or personal transmitter broadcasts signal to listening area. Receiver: Pocket size with:</p> <p>a)earphone(s), or b)headset, or c)induction neck-loop or silhouette coil coupling to personal hearing aid equipped with telecoil, or d)direct audio input (DAI) to personal hearing aid.</p>	<p>Highly portable when used with body-worn, personal transmitter. Easy to install. May be used separately or integrated with existing PA-systems. Multiple frequencies allow for use by different groups within same area (e.g., multi-language translation).</p>	<p>Signal spill-over to adjacent rooms/ listening areas (can prevent interference by using different transmission frequencies for each room/listening area). Choose infrared if privacy is essential. Receivers required for everyone. Requires administration and maintenance of receivers. Susceptible to electrical interference when used with induction neck-loop/silhouette (Provision of DAI audio shoes and cords is impractical for public applications). Some systems more susceptible to radio wave interference and signal drift than others.</p>	<p>Service counters Outdoor guided tours Tour busses Meeting rooms Conference rooms Auditoriums Classrooms Courtrooms Churches and Temples Theaters Museums Theme parks Arenas Sport stadiums Retirement/nursing homes Hospitals</p>
<p>INFRARED LIGHT Transmitter:</p>	<p>Unlike induction or FM transmission, IR transmission</p>	<p>Receivers required for everyone. Requires administration and</p>	<p>Indoor service counters</p>

Amplifier drives emitter panel(s) covering listening area.	does not travel through walls or other solid surfaces.	maintenance of receivers.	Meetings requiring confidentiality
Receivers: Under-chin or Pendant type receiver with:	Insures confidentiality.	Ineffective in direct sunlight.	Meeting rooms
a) headset, or	Infrared receivers compatible with most infrared emitters.	Careful installation required to insure entire listening area will receive IR signal.	Conference rooms
b) earphone(s), or	May be used separately or integrated with existing PA-systems.	Susceptible to electrical interference when used with induction neckloop/silhouette (Provision of DAI audio shoes and cords is impractical for public applications).	Auditoriums
c) induction neck-loop or silhouette coil coupling to personal hearing aid equipped with telecoil, or	Can be used for multi-language translation (must use special multi-frequency receivers).	Lifetime of emitters varies with company.	Classrooms
d) direct audio input (DAI) to personal hearing aid.		Historical buildings may pose installation problems.	Courtrooms
			Churches and Temples
			Theaters
			Museums
			Arenas (indoors only)
			Sport stadiums (indoors only)
			Retirement/nursing homes Hospitals
CONVENTIONAL INDUCTION LOOP Transmitter:	Requires little, or no administration of receivers, if most people have telecoil-equipped hearing aids.	Signal spill-over to adjacent rooms.	Service counters
Amplifier drives an induction loop that surrounds listening area.	Induction receivers must be used where hearing aids in use are not equipped with telecoils.	Susceptible to electrical interference.	Ports of transportation
Receivers:		Limited portability unless areas are pre-looped or small, portable system is used (see advantages).	Public transportation vehicles
a) Personal hearing aid with telecoil.	Induction receivers are compatible with all loop systems.		Tour busses
b) Pocket size induction receiver with earphone or headset.	Unobtrusive with telecoil hearing aid.	Requires installation of loop wire. Installation may be difficult in pre-existing buildings. Skilled installation essential in historical buildings (and may not be permitted at all).	Meeting rooms
c) Self-contained wand.			Conference rooms
d) Telecoil inside plastic chassis which looks like a BTE, ITE, or canal hearing aid.	May be used separately or integrated with existing PA-systems.		Auditoriums
	Portable systems are available for use with small groups of listeners. These portable systems can be stored in a carrying case and set up temporarily, as needed.	If listener does not have telecoil-equipped hearing aid then requires administration and maintenance of receivers.	Classrooms
			Courtrooms
			Churches and Temples
			Theaters
			Museums
			Theme parks
			Arenas
			Sport stadiums
			Retirement/nursing

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			homes
			Hospitals
3-D LOOP SYSTEM	Requires little, or no	Limited portability (areas may	Service counters
Transmitter:	administration of receivers,	be pre-3-D Loop matted to	Ports of
Amplifier drives a 3-D	provided most listeners have	facilitate portability).	Transportation
mat that is placed	telecoil-equipped hearing aids.		Meeting rooms
under the carpet of		Requires installation of 3-D Loop	Conference rooms
the listening area.	Induction receivers are	mats. Instal- lation may be	Auditoriums
Receivers:	compatible with all loops	difficult in pre-existing build-	Classrooms
a) Personal hearing aids	systems.	ings. Skilled installa- tion	Courtrooms
with telecoil.		essential in historical buildings	Museums
b) Pocket size	May be used separately or	(and may not be permitted at	Theme Parks
induction receiver with integrated	with existing PA-	all).	Retirement/nursing
earphone or head-set.	systems.		homes
c) Self-contained		If listener does not have	Meetings requiring
wand.	Three-dimensional reception of	telecoil-equipped hearing aid	confidentiality
d) Telecoil inside	loop signal regardless of	then requires administra- tion	
plastic chassis which	telecoil position.	and maintenance of receivers.	
looks like a BTE, ITE,			
or canal hearing aid.	Reduced signal spillover allows	Susceptible to electrical	
	adjacent rooms to be looped	interference.	
	without signal interference.		
	3-D loop mats must be		
	separated by 6 feet to avoid		
	signal spillover.		

Modified from a chart published by Centrum Sound, Cupertino, California

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A4.36.2 Saunas and Steam Rooms. A 60-inch turning diameter space or a T-shaped space is required within the sauna or steam room. Removable benches or seats are permitted to obstruct the 60-inch or T-shaped space.

A4.37.3 Benches. Back support may be achieved through locating benches adjacent to walls or by other designs that will meet the minimum dimensions specified.

A5.0 Restaurants and Cafeterias.

A5.1 General. Dining counters (where there is no service) are typically found in small carry-out restaurants, bakeries, or coffee shops and may only be a narrow eating surface attached to a wall. This section requires that where such a dining counter is provided, a portion of the counter shall be at the required accessible height.

A7.0 Business, Mercantile and Civic.

A7.2(3) (iii) Counter or Teller Windows with Partitions. Methods of facilitating voice communication may include grilles, slats, talk-through baffles, and other devices mounted directly into the partition which users can speak directly into for effective communication. These methods are required to be designed or placed so that they are accessible to a person who is standing or seated. However, if the counter is only used by persons in a seated position, then a method of facilitating communication which is accessible to standing persons would not be necessary.

A7.2(4) Assistive Listening Systems. At all sales and service counters, teller windows, box offices, and information kiosks where a physical barrier separates service personnel and customers, it is recommended that at least one permanently installed assistive listening device complying with 4.33 be provided at each location or series. Where assistive listening devices are installed, signage should be provided identifying those stations which are so equipped.

A7.3 Check-out Aisles. Section 7.2 refers to counters without aisles; section 7.3 concerns check-out aisles. A counter without an aisle (7.2) can be approached from more than one direction such as in a convenience store. In order to use a check-out aisle (7.3), customers must enter a defined area (an aisle)

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at a particular point, pay for goods, and exit at a particular point.

A10.0 Transportation Facilities.

A10.3 Fixed Facilities and Stations.

A10.3.1(7) Route Signs. One means of making control buttons on fare vending machines usable by persons with vision impairments is to raise them above the surrounding surface. Those activated by a mechanical motion are likely to be more detectable. If farecard vending, collection, and adjustment devices are designed to accommodate farecards having one tactually distinctive corner, then a person who has a vision impairment will insert the card with greater ease. Token collection devices that are designed to accommodate tokens which are perforated can allow a person to distinguish more readily between tokens and common coins. Thoughtful placement of accessible gates and fare vending machines in relation to inaccessible devices will make their use and detection easier for all persons with disabilities.

A10.4 Airports.

A10.4.1(8) Security Systems. This provision requires that, at a minimum, an accessible route or path of travel be provided but does not require security equipment or screening devices to be accessible. However, where barriers consist of movable equipment, it is recommended that they comply with the provisions of this section to provide persons with disabilities the ability to travel with the same ease and convenience as other members of the general public.

A11.0 Judicial, Legislative and Regulatory Facilities.

A11.1.3 Two-Way Communication Systems. Two-way communication entry systems must provide both voice and visual display so that persons with hearing or speech impairments can utilize the system. This requirement may be met with a device that would allow security personnel to respond to a caller with a light indicating that assistance is on the way. It is important that signage be provided to indicate the meaning of visual signals.

A11.2.1(2) Assistive Listening Systems. People who wear hearing aids often need them while using assistive listening systems. The Department of Justice's regulation implementing title II of the ADA requires public entities to provide appropriate auxiliary aids and services where necessary to ensure effective communication. See [28 C.F.R. 35.160](#) and [28 C.F.R. 35.164](#). Where assistive listening systems are used to provide effective communication, the Department of Justice considers it essential that a portion of receivers be compatible with hearing aids. Receivers that are not compatible include ear buds, which require removal of hearing aids, and headsets that must be worn over the ear, which can create disruptive interference in the transmission.

A11.2.3(2)(b) Toilet and Bathing Facilities. The requirements of 4.22 for toilet rooms and 4.23 for bathrooms, bathing facilities, and shower rooms do not preclude the placement of toilet or bathing fixtures within housing or holding cells or rooms as long as the requirements for toilet rooms and bathrooms, including maneuvering space, are met. In such instances, the maneuvering space required within housing or holding cells or rooms may also serve as the maneuvering space required in toilet rooms by 4.22 or in bathrooms or shower rooms by 4.23.

A11.2.3(2)(c) Beds. The height of beds should be 17 in to 19 in (430 mm to 485 mm) measured from the finish floor to the bed surface, including mattresses or bed rolls, to ensure appropriate transfer from wheelchairs and other mobility aids. Where upper bunks are provided, sufficient clearance should be provided between bunks so that the transfer from wheelchairs to lower bunks is not restricted. Figure A3 provides average human dimensions that should be considered in determining this clearance.

A11.2.3(3) Visiting Areas. Accessible cubicles or portions of counters may have fixed seats if the required clear floor space is provided within the area defined by the cubicle. Consideration should be given to the placement of grilles, talk-thru baffles, intercoms, telephone handsets or other communication devices so they are usable from both the fixed seat and from the accessible seating area. If an assistive listening system is provided, the needs of the intended user and characteristics of the setting should be considered as described in [A4.33.7](#) and [Table A2](#).

A11.3 Legislative and Regulatory Facilities. Legislative facilities include town halls, city council chambers, city or county commissioners' meeting rooms, and State capitols. Regulatory facilities are those which house State and local entities whose functions include regulating, governing, or licensing activities. Section 11.3 applies to rooms where public debate, or discussion of local issues, laws, ordinances, or regulations take place. Examples include, but are not limited to, legislative chambers and hearing rooms, facilities where town, county council or school Board meetings, and housing authority meetings are held, and rooms accommodating licensing or other regulatory board hearings, adjudicatory administrative hearings (e.g., drivers license suspension hearings) and zoning application and waiver proceedings.

A11.3.2 See [A11.2.1\(2\)](#).

A12.0 Detention and Correctional Facilities.

A12.1 General. All common use areas serving accessible cells or rooms are required to be accessible. In detention and correctional facilities, common use areas include those areas serving a group of inmates or detainees, including, but not limited to, exercise yards and recreation areas, workshops and areas of instruction or vocational training, counseling centers, cafeterias, commissaries, medical facilities, and any other rooms, spaces, or elements that are made available for the use of a group of inmates or detainees. Detention and correctional facilities also contain areas that may be regarded as common use areas which specifically serve a limited number of housing cells or rooms. Where this occurs, only those common use areas serving accessible cells or rooms would need to be accessible as required by 12.5. For example, several housing cells may be located at and served by a dayroom or recreation room. In this instance, only those dayrooms serving accessible housing cells or rooms would need to be accessible. However, common use areas that do not serve accessible cells but that are used by the public or by employees as work areas are still subject to the requirements for public use areas and employee work areas in section 4.

A12.2.1 Entrances. Persons other than inmates and facility staff, such as counselors and instructors, may have access to secured areas. It is important that evacuation planning address egress for all possible users since a person with a disability might not be able to independently operate doors permitted by this exception.

A12.3 Visiting Areas. Accessible cubicles or portions of counters may have fixed seats if the required clear floor space is provided within the area defined by the cubicle. Consideration should be given to the placement of grilles, talk-thru baffles, intercoms, telephone handsets or other communication devices so they are usable from both the fixed seat and from the accessible seating area. If an assistive listening system is provided, the needs of the intended user and characteristics of the setting should be considered as described in [A4.33.7](#) and [Table A2](#).

A12.4.1 Holding Cells and General Housing Cells or Rooms. Accessible cells or rooms should be dispersed among different levels of security, housing categories and holding classifications (e.g., male/female and adult/juvenile) to facilitate access. Many detention and correctional facilities are designed so that certain areas (e.g., "shift" areas) can be adapted to serve as different types of housing according to need. For example, a shift area serving as a medium security housing unit might be redesignated for a period of time as a high security housing unit to meet capacity needs. Placement of accessible cells or rooms in shift areas may allow additional flexibility in meeting requirements for dispersion of accessible cells or rooms.

A12.4.2 Special Holding and Housing Cells or Rooms. While one of each type of special purpose cell is required to be accessible at a facility, constructing more than one of each type to be accessible will facilitate access at large facilities where cells of each type serve different holding areas or housing units. The requirement for medical isolation cells applies only to those specifically designed for medical isolation. Cells or rooms primarily designed for other purposes, such as general housing or medical care, are subject to the requirements in 12.4.1 or 12.4.4, respectively. Medical isolation cells required to be accessible by 12.4.2 shall not be counted as part of the minimum number of patient bedrooms or cells required to be accessible in 12.4.4. Thus, if a medical care facility has both types of cells, at least one medical isolation cell must be accessible under 12.4.2 in addition to the number of patient bedrooms or cells required to be accessible by 12.4.4. While only one medical isolation cell per facility is required to be accessible, it is recommended that consideration be given to ensuring the accessibility of all medical isolation cells.

A12.4.3 Accessible Cells or Rooms for Persons with Hearing Impairments. Many correctional facilities do not provide permanently installed telephones or alarms within individual housing cells. Such facilities are not subject to the requirements of 12.4.3. However, some categories of housing, such as minimum security prisons, may be equipped with such devices. The minimum two percent is based on the number of cells or rooms equipped with these devices and not on the total number of cells or rooms in the facility. In addition, this requirement applies only where permanently installed telephones or alarms are provided within individual cells. Permanently installed telephones and alarms located in common use areas, such as dayrooms, are required to be accessible according to the requirements for common use areas. See 12.1.

A12.5.2 Minimum Requirements. The requirements of this section apply to elements provided within housing or holding cells or rooms. Elements located outside cells or rooms for common use, such as in a day room, are subject to 12.1 and its application of requirements in section 4. For example, if a drinking fountain is provided within an accessible housing or holding cell, at least one must be wheelchair accessible under section 12.5.2(4). Drinking fountains located outside the cells in common use areas

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serving accessible cells or in public use areas, are subject to the requirements of 4.1.3(10).

A12.5.2(2) Toilet and Bathing Facilities. The requirements of 4.22 for toilet rooms and 4.23 for bathrooms, bathing facilities, and shower rooms do not preclude the placement of toilet or bathing fixtures within housing or holding cells or rooms as long as the requirements for toilet rooms and bathrooms, including maneuvering space, are met. In such instances, the maneuvering space required within housing or holding cells or rooms may also serve as the maneuvering space required in toilet rooms by 4.22 or in bathrooms or shower rooms by 4.23.

A12.5.2(3) Beds. Since beds may not always be fixed, a minimum number of accessible beds has not been specified. In barracks-style rooms with many beds, it is recommended that the scoping requirement for housing or holding cells or rooms (2 percent) also be applied to the number of beds in accessible cells or rooms.

The height of beds should be 17 to 19 in (430 mm to 485 mm) measured from the finish floor to the bed surface, including mattresses or bed rolls, to ensure appropriate transfer from wheelchairs and other mobility aids. Where upper bunks are provided, sufficient clearance must be provided between bunks so that the transfer from wheelchairs to lower bunks is not restricted. Figure A3 provides standard human dimensions that should be considered in determining this clearance.

A15.0 Recreation Facilities.

Unless otherwise modified in Section 4 or specifically addressed in section 15, all other ADAAG provisions apply for the design and construction of recreation facilities and elements. The provisions in this section apply wherever these elements are provided. For example, office buildings may contain a room with exercise equipment and these sections therefore apply.

A15.1 Amusement Rides. These guidelines apply to newly designed or newly constructed amusement rides. A custom designed and constructed ride is new upon its "first use," which is the first time amusement park patrons take the ride. With respect to amusement rides purchased from other entities, "new" refers to the first permanent installation of the ride, whether it is used "off the shelf" or it is modified before it is installed. Where amusement rides are moved after several seasons to another area of the park or to another park, the ride would not be considered newly designed or newly constructed.

Amusement rides designed primarily for children, amusement rides that are controlled or operated by the rider, and amusement rides without seats, are not required to provide wheelchair spaces, transfer seats, or transfer systems, and need not meet the signage requirements in 15.1.6. The load and unload areas of these rides must, however, be on an accessible route and must provide maneuvering space under 15.1.4 and 15.1.5.

The scoping and technical provisions of the guidelines were developed to address common amusement rides. There will be other amusement attractions that have unique designs and features which are not adequately addressed by the guidelines. In those situations, the guidelines are to be applied to the extent possible.

An accessible route must be provided to these areas. Where an attraction or ride has unique features for which there are no applicable scoping provisions, then a reasonable number, but at least one, of the features must be located on an accessible route. Where there are appropriate technical provisions, they must be applied to the elements that are covered by the scoping provisions. Where an attraction has unique designs for which the technical provisions are not appropriate, the operators of those attractions are still subject to all the other requirements of the ADA, including program accessibility, barrier removal and the general obligation to provide individuals with disabilities an equal opportunity to enjoy the goods and services provided by their facilities. An example of an amusement ride not specifically addressed by the guidelines includes "virtual reality" rides where the device does not move through a fixed course within a defined area.

A15.1 Exception 1. Mobile or temporary rides are those set up for short periods of time such as traveling carnivals, State and county fairs, and festivals. The amusement rides that are covered by section 15.1 are ones that are not regularly assembled and disassembled.

A15.1 Exception 2. The exception does not apply to those rides where patrons may cause the ride to make incidental movements, but where the patron otherwise has no control over the ride.

A15.1 Exception 3. The exception is limited to those rides designed "primarily" for children, where children are assisted on and off the ride by an adult. This exception is limited to those rides designed for children and not for the occasional adult user. An accessible route to and maneuvering space in the load and unload area will provide access for adults and family members assisting children on and off these rides.

A15.1.2 Alterations to Amusement Rides. Routine maintenance, painting, and changing of theme boards are examples of activities that do not constitute an alteration subject to section 15.1.2. Where existing amusement rides are moved and not altered, section 15.1 does not apply unless the load and unload area of the amusement ride is newly designed and constructed. If a load or unload area is altered, the alteration provisions of ADAAG 4.1.6 must be applied to the altered area.

A15.1.4 Accessible Route. Steeper slopes are permitted (not to exceed 1:8) where the accessible route connects to the amusement ride in the load and unload position. This is permitted only where compliance with 4.8.2 (maximum slope 1:12) is "structurally or operationally infeasible". In most cases, this will be limited to areas where the accessible route leads directly to the amusement ride and where there are space limitations on the ride, not the queue line. Where possible, the least possible slope should be used on the accessible route that serves the amusement ride.

A15.1.7.1.2 Amusement Rides with Wheelchair Spaces. 36 C.F.R. 1192.83(c) ADA Accessibility Guidelines for Transportation Vehicles - Light Rail Vehicles and Systems - Mobility Aid Accessibility is available at www.access-board.gov/transit/html/vguide.htm#LRVM. It references provisions for bridge plates and ramps used for gaps between wheelchair spaces and floors of load and unload areas.

A15.1.7.2 Exception 3. This exception for protruding objects applies to the ride devices, not to circulation areas or accessible routes in the queue lines or the load and unload areas.

A15.1.7.2.2 Wheelchair Spaces - Side Entry. Under certain circumstances, a 32-inch clear opening will not provide sufficient width to accommodate a turn into an amusement ride. The amount of clear space needed within the ride, and the size and position of the opening are interrelated. Additional space for maneuvering and a wider door will be needed where a side opening is centered on the ride. For example, where a 42-inch opening is provided, a minimum clear space of 60 inches in length and 36 inches in depth is needed (see Fig. A9). This is necessary to ensure adequate space for maneuvering. For additional guidance refer to Figure 3 (Wheelchair Turning Space) and Figure 4 (Minimum Clear Floor Space for Wheelchairs) on minimum space requirements.

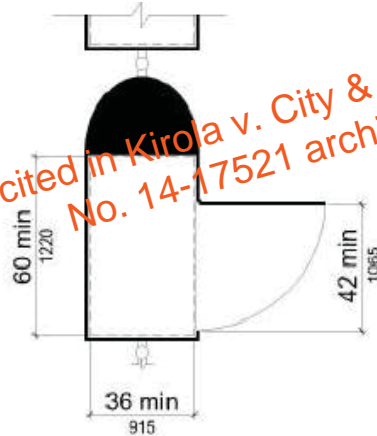


Fig. A9
Wheelchair Spaces - Side Entry

A15.1.8 Amusement Ride Seats Designed for Transfer. There are many different ways that individuals transfer to and from their wheelchairs or mobility devices. The proximity of the clear floor or ground space next to an element and the height of the element one is transferring to are both critical for a safe and independent transfer. Providing additional clear floor or ground space both in front of and diagonally to the element will provide flexibility and increased usability for a more diverse population of individuals with disabilities. Ride seats designed for transfer should involve only one transfer. Where possible, designers are encouraged to locate the ride seat no higher than 17 to 19 inches above the load and unload surface. Where greater distances are required for transfers, consideration should be given to providing gripping surfaces, seat padding, and avoiding sharp or protruding objects in the path of transfer to better facilitate the transfer process.

A15.1.9 Transfer Devices for Use with Amusement Rides. Transfer devices for use with amusement rides should permit individuals to make independent transfers to and from their wheelchairs or mobility devices. There are a variety of transfer devices available that could be adapted to provide access onto an amusement ride. Examples of devices that may provide for transfers include, but are not limited to, transfer systems (see 15.8.8), lifts, mechanized seats, and other custom designed systems. Operators and designers have flexibility in developing designs that will facilitate individuals to transfer onto amusement

rides. These systems or devices should be designed to be reliable and sturdy. A transfer board, for example, would not be sufficient because it will not provide enough support or stability and may cause injury.

Designs which limit the number of transfers required from one's wheelchair or mobility device to the ride seat are encouraged. When using a transfer device to access an amusement ride, the least amount of transfers for the least amount of distance is desired. Where possible, designers are encouraged to locate the transfer device seat no higher than 17 to 19 inches above the load and unload surface. Where greater distances are required for transfers, extra consideration should be given to providing gripping surfaces, seat padding, and avoiding sharp or protruding objects in the path of transfer to better facilitate the transfer process. Where a series of transfers are required to reach the amusement ride seat, each vertical transfer should not exceed 8 inches.

As discussed with amusement rides seats designed for transfer, there are many different ways that individuals transfer to and from their wheelchairs or mobility devices. The proximity of the clear floor or ground space next to an element and the height of the element one is transferring to are both critical for a safe and independent transfer. Providing additional clear floor or ground space both in front of and diagonally to the element will provide flexibility and increased usability for a more diverse population of individuals with disabilities.

A15.2 Boating Facilities.

A15.2.2 Accessible Route. The following two examples apply exceptions two and three.

Example 1. Boat slips which are required to be accessible are provided at a floating pier. The vertical distance an accessible route must travel to the pier when the water is at its lowest level is six feet, although the water level only fluctuates three feet. To comply with exceptions 2 and 3, at least one design solution would provide a gangway at least 72.25 feet long which ensures the slope does not exceed 1:12.

Example 2. A gangway is provided to a floating pier which is required to be on an accessible route. The vertical distance is 10 feet between the elevation where the gangway departs the landside connection and the elevation of the pier surface at the lowest water level. Exceptions 2 and 3, which modify 8.2, permit the gangway to be at least 80 feet long. Another design solution would be to have two 40-foot plus continuous gangways joined together at a float, where the float (as the water level falls) will stop dropping at an elevation five feet below the landside connection.

A15.2.3 Boat Slips: Minimum Number. Accessible boat slips are not "reserved" for persons with disabilities in the same manner as accessible vehicle parking spaces. Rather, accessible boat slip use is comparable to accessible hotel rooms. The Department of Justice is responsible for addressing operational issues relating to the use of accessible facilities and elements. The Department of Justice currently advises that hotels should hold accessible rooms for persons with disabilities until all other rooms are filled. At that point, accessible rooms can be open for general use on a first come, first serve basis.

The following two examples apply to a boating facility with a single non-demarcated pier.

Example 1. A site contains a new boating facility which consists of a single 60-foot pier. Boats are only moored parallel with the pier on both sides to allow occupants to embark or disembark. Since the number of slips cannot be identified, section 15.2.3 requires each 40 feet of boat slip edge to be counted as one slip for purposes of determining the number of slips available and determines the number required to be accessible. The 120 feet of boat slip edge at the pier would equate with 3 boat slips. Table 15.2.3 would require 1 slip to be accessible and comply with 15.2.5. Section 15.2.5 (excluding the exceptions within the section) requires a clear pier space 60 inches wide minimum extending the length of the slip. In this example, because the pier is at least 40 feet long, the accessible slip must contain a clear pier space at least 40 feet long which has a minimum width of 60 inches.

Example 2. A new boating facility consisting of a single pier 25 feet long and 3 feet wide is being planned for a site. The design intends to allow boats to moor and occupants to embark and disembark on both sides, and at one end. As the number of boat slips cannot be identified, applying section 15.2.3 would translate to 53 feet of boat slip edge at the pier. This equates with two slips. Table 15.2.3 would require 1 slip to be accessible. To comply with 15.2.5 (excluding the exceptions within the section), the width of the pier must be increased to 60 inches. Neither 15.2.3 or 15.2.5 requires the pier length to be increased to 40 feet.

A15.2.3.1 Dispersion. Types of boat slips are based on the size of the boat slips; whether single berths or double berths, shallow water or deep water, transient or longer-term lease, covered or uncovered; and whether slips are equipped with features such as telephone, water, electricity and cable connections. The term "boat slip" is intended to cover any pier area where recreational boats embark or disembark, unless

classified as a launch ramp boarding pier. For example, a fuel pier may contain boat slips, and this type of short term slip would be included in determining compliance with 15.2.3.1.

A15.2.4 Boarding Piers at Boat Launch Ramps. The following two examples apply to a boat launch ramp boarding pier.

Example 1. A chain of floats is provided on a launch ramp to be used as a boarding pier which is required to be accessible by 15.2.4. At high water, the entire chain is floating and a transition plate connects the first float to the surface of the launch ramp. As the water level decreases, segments of the chain end up resting on the launch ramp surface, matching the slope of the launch ramp. As water levels drop, segments function also as gangways because one end of a segment is resting on the launch ramp surface and the other end is connecting to another floating segment in the chain.

Under ADAAG 4.1.2(2), an accessible route must serve the last float because it would function as the boarding pier at the lowest water level. Under exception 3 in 15.2.4, each float is not required to comply with ADAAG 4.8, but must meet all other requirements in ADAAG 4.3, unless exempted by exception 1 in 15.2.4. In this example, because the entire chain also functions as a boarding pier, the entire chain must comply with the requirements of 15.2.5, including the 60-inch minimum clear pier width provision.

Example 2. A non-floating boarding pier supported by piles divides a launching area into two launch ramps and is required to be accessible. Under ADAAG 4.1.2(2), an accessible route must connect the boarding pier with other accessible buildings, facilities, elements, and spaces on the site. Although the boarding pier is located within a launch ramp, because the pier is not a floating pier or a skid pier, none of the exceptions in 15.2.4 apply. To comply with ADAAG 4.3, either the accessible route must run down the launch ramp or the fixed boarding pier could be relocated to the side of the two launch ramps. The second option leaves the slope of the launch ramps unchanged, because the accessible route runs outside the launch ramps.

A15.2.4.1 Boarding Pier Clearances. The guidelines do not establish a minimum length for accessible boarding piers at boat launch ramps. The accessible boarding pier would have a length which is at least equal to other boarding piers provided at the facility. If no other boarding pier is provided, the pier would have a length equal to what would have been provided if no access requirements applied. The entire length of accessible boarding piers would be required to comply with the same technical provisions that apply to accessible boat slips. For example, at a launch ramp, if a 20-foot long accessible boarding pier is provided, the entire 20 feet must comply with the pier clearance requirements in 15.2.5. Likewise, if a 60-foot long accessible boarding pier is provided, the pier clearance requirements in 15.2.5 would apply to the entire 60 feet.

A15.2.5 Accessible Boat Slips. Although the minimum width of the clear pier space is 60 inches, it is recommended that piers be wider than 60 inches to improve the safety for persons with disabilities, particularly on floating piers.

A15.2.5.1 Clearances, Exception 3. Where the conditions in exception 3 are satisfied, existing facilities are only required to have one accessible boat slip with a pier clearance which runs the length of the slip. All other accessible slips are allowed to have the required pier clearance at the head of the slip. Under this exception, at piers with perpendicular boat slips, the width of most "finger piers" will remain unchanged. However, where mooring systems for floating piers are replaced as part of pier alteration projects, an opportunity may exist for increasing accessibility. Piers may be reconfigured to allow an increase in the number of wider finger piers, and serve as accessible boat slips.

A.15.3 Fishing Piers and Platforms.

A15.3.2 Accessible Route, Exception 2. For example, to provide access to an accessible floating fishing pier, a gangway is used. The vertical distance is 60 inches between the elevation that the gangway departs the landside connection and the elevation of the pier surface at the lowest water level. Exception 2 permits the use of a gangway at least 30 feet long, or a series of connecting gangways with a total length of at least 30 feet. The length of transition plates would not be included in determining if the gangway(s) meet the requirements of the exception.

A15.3.3.1 Edge Protection. Edge protection is required only where railings, guards, or handrails are provided on a fishing pier or platform. Edge protection will prevent wheelchairs or other mobility devices from slipping off the fishing pier or platform. Extending the deck of the fishing pier or platform 12 inches where the 34-inch high railing is provided is an alternative design, permitting individuals using a wheelchair or other mobility device to pull into a clear space and move beyond the face of the railing. In such a design, edge protection is not required.

A15.3.3.3 Dispersion. Portions of the railings that are lowered to provide fishing opportunities for

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persons with disabilities must be located in a variety of locations on the fishing pier or platform to give people a variety of locations to fish. Different fishing locations may provide varying water depths, shade (at certain times of the day), vegetation, and proximity to the shoreline or bank.

A15.4 Golf.

A15.4.2 Accessible Routes. The accessible route or golf car passage must serve accessible elements and spaces located within the boundary of a golf course. The 48-inch minimum width for the accessible route is necessary to ensure passage of a golf car on either the accessible route or the golf car passage. This is important where the accessible route is used to connect the golf car rental area, bag drop areas, practice putting greens, accessible practice teeing grounds, course toilet rooms, and course weather shelters. These are areas outside the boundary of the golf course, but are areas where an individual using an adapted golf car may travel. A golf car passage may not be substituted for other accessible routes, required by ADAAG 4.1.2, located outside the boundary of the course. For example, an accessible route connecting an accessible parking space to the entrance of a golf course clubhouse is not covered by this provision.

A15.4.3 Accessible Route - Driving Ranges. Both a stand alone driving range or a driving range next to a golf course must provide an accessible route or golf car passage that connects accessible teeing stations with accessible parking spaces. The accessible route must be a minimum width of 48 inches; 60 inches if handrails are provided. The additional width permits the use of a golf car on the accessible route. Providing a golf car passage will permit a person that uses a golf car to practice driving a golf ball from the same position and stance used when playing the game. Additionally, the space required for a person using a golf car to enter and maneuver within the teeing stations required to be accessible should be considered.

A15.5 Miniature Golf. Where possible, providing access to all holes on a miniature golf course is recommended. If a course is designed with the minimum 50 percent accessible holes, designers or operators are encouraged to select holes which provide for an equivalent experience to the maximum extent possible. Accessible holes are required to be consecutive with one break permitted, if the last hole on the course is in the sequence.

A15.5.3 Accessible Route. Where only the minimum 50 percent of the holes are accessible, an accessible route from the last accessible hole to the course exit or entrance must not require travel back through other holes. In some cases, this may require an additional route. Other options include increasing the number of accessible holes in a way that limits the distance needed to connect the last accessible hole with the course exit or entrance. In any case, careful consideration of the layout of the course will be important to minimize space impacts.

The 1-inch curb for a 32-inch minimum opening can be located in an area where the ball is less likely to ricochet. Where the accessible route on the hole is provided, steeper slopes are permitted for a limited distance. A landing or level area must separate each of these steeper sloping segments. This will provide a resting area between the steeper segments.

A15.5.5 Golf Club Reach Range. Accessible holes on a miniature golf course may be provided with an accessible route leading through the hole or with the accessible route next to the hole. Where the accessible route is provided adjacent to the hole, the route must be located within the golf club reach range. This allows individuals sufficient space and reach to play the game outside of the hole. Where possible, the distance between the level areas and the accessible route should be as close as possible, affording more opportunities for play.

A15.6 Play Areas.

A15.6.1 General. This section is to be applied during the design, construction, and alteration of play areas for children ages 2 and over. Play areas are the portion of a site where play components are provided. This section does not apply to other portions of a site where elements such as sports fields, picnic areas, or other gathering areas are provided. Those areas are addressed by other sections of ADAAG. Play areas may be located on exterior sites or within a building. Where separate play areas are provided within a site for children in specified age groups (e.g., preschool (ages 2 to 5) and school age (ages 5 to 12)), each play area must comply with this section. Where play areas are provided for the same age group on a site but are geographically separated (e.g., one is located next to a picnic area and another is located next to a softball field), they are considered separate play areas and each play area must comply with this section.

A15.6.2 Ground Level Play Components. A ground level play component is a play component approached and exited at the ground level. Examples of ground level play components include spring rockers, swings, diggers, and stand alone slides. When distinguishing between the different types of ground level play components, consider the general experience provided by the play component. Examples

of different types of experiences include, but are not limited to, rocking, swinging, climbing, spinning, and sliding. A spiral slide may provide a slightly different experience from a straight slide, but sliding is the general experience and therefore a spiral slide is not considered a different type of play component than a straight slide.

The number of ground level play components is not dependent on the number of children who can play on the play component. A large seesaw designed to accommodate ten children at once is considered one ground level play component.

Where a large play area includes two or more composite play structures designed for the same age group, the total number of elevated play components on all the composite play structures must be added to determine the additional number and types of ground level play components that must be provided on an accessible route, and the type of accessible route (e.g., ramps or transfer systems) that must be provided to the elevated play components.

Ground level play components accessed by children with disabilities must be integrated in the play area. Designers should consider the optimal layout of ground level play components accessed by children with disabilities to foster interaction and socialization among all children. Grouping all ground level play components accessed by children with disabilities in one location is not considered integrated.

A15.6.3 Elevated Play Components. Elevated play components are approached above or below grade and are part of a composite play structure. A double or triple slide that is part of a composite play structure is one elevated play component. For purposes of this section, ramps, transfer systems, steps, decks, and roofs are not considered elevated play components. These elements are generally used to link other elements on a composite play structure. Although socialization and pretend play can occur on these elements, they are not primarily intended for play. Some play components that are attached to a composite play structure can be approached or exited at the ground level or above grade from a platform or deck. For example, a climber attached to a composite play structure can be approached or exited at the ground level or above grade from a platform or deck on a composite play structure. Play components that are attached to a composite play structure and can be approached from a platform or deck (e.g., climbers and overhead play components), are considered elevated play components. These play components are not considered ground level play components also, and do not count toward the requirements in 15.6.2 regarding the number of ground level play components that must be located on an accessible route.

A15.6.4 Accessible Routes. Accessible routes within the boundary of the play area must comply with 15.6.4. Accessible routes connecting the play area to parking, drinking fountains, and other elements on a site must comply with 4.3. Accessible routes provide children who use wheelchairs or other mobility devices the opportunity to access play components. Accessible routes should coincide with the general circulation path used within the play area. Careful placement and consideration of the layout of accessible routes will enhance the ability of children with disabilities to socialize and interact with other children.

Where possible, designers and operators are encouraged to provide wider ground level accessible routes within the play area or consider designing the entire ground surface to be accessible. Providing more accessible spaces will enhance the integration of all children within the play area and provide access to more play components. A maximum slope of 1:16 is required for ground level ramps; however, a lesser slope will enhance access for those children who have difficulty negotiating the 1:16 maximum slope. Handrails are not required on ramps located within ground level use zones.

Where a stand alone slide is provided, an accessible route must connect the base of the stairs at the entry point, and the exit point of the slide. A ramp or transfer system to the top of the slide is not required. Where a sand box is provided, an accessible route must connect to the border of the sand box. Accessibility to the sand box would be enhanced by providing a transfer system into the sand or by providing a raised sand table with knee clearance complying with 15.6.6.3.

Elevated accessible routes must connect the entry and exit points of at least 50 percent of elevated play components. Ramps are preferred over transfer systems since not all children who use wheelchairs or other mobility devices may be able to use or may choose not to use transfer systems. Where ramps connect elevated play components, the maximum rise of any ramp run is limited to 12 inches. Where possible, designers and operators are encouraged to provide ramps with a lesser slope than the 1:12 maximum. Berms or sculpted dirt may be used to provide elevation and may be part of an accessible route to composite play structures.

Platform lifts complying with 4.11 and applicable State and local codes are permitted as a part of an accessible route. Because lifts must be independently operable, operators should carefully consider the appropriateness of their use in unsupervised settings.

A15.6.5 Transfer Systems. Transfer systems are a means of accessing composite play structures.

Transfer systems generally include a transfer platform and a series of transfer steps. Children who use wheelchairs or other mobility devices transfer from their wheelchair or mobility devices onto the transfer platform and lift themselves up or down the transfer steps and scoot along the decks or platforms to access elevated play components. Some children may be unable or may choose not to use transfer systems. Where transfer systems are provided, consideration should be given to the distance between the transfer system and the elevated play components. Moving between a transfer platform and a series of transfer steps requires extensive exertion for some children. Designers should minimize the distance between the points where a child transfers from a wheelchair or mobility device and where the elevated play components are located. Where elevated play components are used to connect to another elevated play component in lieu of an accessible route, careful consideration should be used in the selection of the play components used for this purpose. Transfer supports are required on transfer platforms and transfer steps to assist children when transferring. Some examples of supports include a rope loop, a loop type handle, a slot in the edge of a flat horizontal or vertical member, poles or bars, or D rings on the corner posts.

A15.6.6 Play Components. Clear floor or ground spaces, maneuvering spaces, and accessible routes may overlap within play areas. A specific location has not been designated for the clear floor or ground spaces or maneuvering spaces, except swings, because each play component may require that the spaces be placed in a unique location. Where play components include a seat or entry point, designs that provide for an unobstructed transfer from a wheelchair or other mobility device are recommended. This will enhance the ability of children with disabilities to independently use the play component.

When designing play components with manipulative or interactive features, consider appropriate reach ranges for children seated in wheelchairs. The following table provides guidance on reach ranges for children seated in wheelchairs. These dimensions apply to either forward or side reaches. The reach ranges are appropriate for use with those play components that children seated in wheelchairs may access and reach. Where transfer systems provide access to elevated play components, the reach ranges are not appropriate.

Children's Reach Ranges

Forward or Side Reach	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
High (maximum)	36 in (915 mm)	40 in (1015 mm)	44 in (1118 mm)
Low (minimum)	20 in (510 mm)	18 in (455 mm)	16 in (405 mm)

Where a climber is located on a ground level accessible route, some of the climbing rings should be within the reach ranges. A careful balance of providing access to play components but not eliminating the challenge and nature of the activity is encouraged.

A15.6.7 Ground Surfaces. Ground surfaces along clear floor or ground spaces, maneuvering spaces, and accessible routes must comply with the ASTM F 1951 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment. The ASTM F 1951 standard is available from the American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, telephone (610) 832-9585. The ASTM F 1951 standard may be ordered online from ASTM (<http://www.astm.org>). The ASTM 1951 standard determines the accessibility of a surface by measuring the work required to propel a wheelchair across the surface. The standard includes tests of effort for both straight ahead and turning movement, using a force wheel on a rehabilitation wheelchair as the measuring device. To meet the standard, the force required must be less than that required to propel the wheelchair up a ramp with a 1:14 slope. When evaluating ground surfaces, operators should request information about compliance with the ASTM F 1951 standard.

Ground surfaces must be inspected and maintained regularly and frequently to ensure continued compliance with the ASTM F 1951 standard. The type of surface material selected and play area use levels will determine the frequency of inspection and maintenance activities.

When using a combination of surface materials, careful design is necessary to provide appropriate transitions between the surfaces. Where a rubber surface is installed on top of asphalt to provide impact attenuation, the edges of the rubber surface may create a change in level between the adjoining ground surfaces. Where the change in level is greater than ½ inch, a sloped surface with a maximum slope of 1:12 must be provided. Products are commercially available that provide a 1:12 slope at transitions. Transitions are also necessary where the combination of surface materials include loose fill products. Where edging is used to prevent the loose surface from moving onto the firmer surface, the edging may create a tripping hazard. Where possible, the transition should be designed to allow for a smooth and gradual transition between the two surfaces.

A15.7 Exercise Equipment and Machines, Bowling Lanes, and Shooting Facilities.

A15.7.2 Exercise Equipment and Machines. Fitness facilities often provide a range of choices of exercise equipment. At least one of each type of exercise equipment and machine must be served by an accessible route. Most strength training equipment and machines are considered different types. For example, a bench press machine is considered a different type than a biceps curl machine. The requirement for providing access to each type is intended to cover the variety of strength training machines. Where operators provide a biceps curl machine and free weights, both are required to meet the provisions in this section, even though an individual may be able to work on their biceps through both types of equipment. Where the exercise equipment and machines provided are only different in that different manufacturers provide them, only one of each type of machine is required to meet these guidelines. For example, where two bench press machines are provided and each is manufactured by a different company, only one is required to comply.

Similarly, there are many types of cardiovascular exercise machines, such as stationary bicycles, rowing machines, stair climbers, and treadmills. Each machine provides a cardiovascular exercise and is considered a different type for purposes of these guidelines.

One clear floor or ground space is permitted to be shared between two pieces of exercise equipment. Designers should carefully consider layout options to maximize space such as connecting ends of the row and center aisle spaces.

The position of the clear floor space may vary greatly depending on the use of the equipment or machine. For example, to make a shoulder press accessible, clear floor space next to the seat would be appropriate to allow for transfer. Clear floor space for a bench press machine designed for use by an individual seated in a wheelchair, however, will most likely be centered on the operating mechanisms.

Designers and operators are encouraged to select exercise equipment and machines that provide fitness opportunities for persons with lower body extremity disabilities. Upper body exercise equipment and machines that offer either cardiovascular or strength training will enhance fitness opportunities for persons with disabilities from a wheelchair or mobility device. Examples include: equipment or machines that provide arm ergometry, free weights, and weighted pulley systems that are usable from a wheelchair or mobility device.

A15.7.4 Shooting Facilities. Examples of different types of firing positions include, but are not limited to: positions having different admission prices, positions with or without weather covering or lighting, and positions supporting different shooting events such as argon, muzzle loading rifle, small bore rifle, high power rifle, bull's eye pistol, action pistol, silhouette, trap, skeet, and archery (bow and crossbow).

A15.8 Swimming Pools, Wading Pools, and Spas.

A15.8.2 Swimming Pools. Where more than one means of access is provided into the water, it is recommended that the means be different. Providing different means of access will better serve the varying needs of people with disabilities in getting into and out of a swimming pool. It is also recommended that where two or more means of access are provided, they not be provided in the same location in the pool. Different locations will provide increased options for entry and exit, especially in larger pools.

A15.8.2 Swimming Pools, Exception 1. Pool walls at diving areas and areas along pool walls where there is no pool entry because of landscaping or adjacent structures should be counted when determining the number of accessible means of entry required.

A15.8.5 Pool Lifts. There are a variety of seats available on pool lifts ranging from sling seats to those that are preformed or molded. Pool lift seats with backs will enable a larger population of persons with disabilities to use the lift. Pool lift seats that consist of materials that resist corrosion and provide a firm base to transfer will be usable by a wider range of people with disabilities. Additional options such as armrests, head rests, seat belts, and leg support will enhance accessibility and better accommodate people with a wide range of disabilities.

A15.8.5.6 Footrests and Armrests. Footrests are encouraged on lifts used in larger spas, where the foot well water depth is 34 inches or greater. Providing footrests, especially ones that support the entire foot, will facilitate safe and independent transfers by a larger population of persons with disabilities.

A15.8.5.7 Operation. Pool lifts must be capable of unassisted operation from both the deck and water levels. This will permit a person to call the pool lift when the pool lift is in the opposite position. It is extremely important for a person who is swimming alone to be able to call the pool lift when it is in the up position so he or she will not be stranded in the water for extended periods of time awaiting assistance. The requirement for a pool lift to be independently operable does not preclude assistance from being

provided.

A15.8.5.9 Lifting Capacity. Single person pool lifts must be capable of supporting a minimum weight of 300 pounds and sustaining a static load of at least one and a half times the rated load. Pool lifts should be provided that meet the needs of the population it is serving. Providing a pool lift with a weight capacity greater than 300 pounds may be advisable.

A15.8.6.1 Sloped Entries. Personal wheelchairs and mobility devices may not be appropriate for submerging in water. Some may have batteries, motors, and electrical systems that when submerged in water may cause damage to the personal mobility device or wheelchair or may contaminate the pool water. Providing an aquatic wheelchair made of non-corrosive materials and designed for access into the water will protect the water from contamination and avoid damage to personal wheelchairs or other mobility aids.

A15.8.6.3 Handrails. Handrails on both sides of a sloped entry provides stability to both persons with mobility impairments and persons using wheelchairs. For safety reasons, a single handrail is permitted on sloped entries provided at wave action pools, leisure rivers, sand bottom pools, and other pools where user access is limited to one area.

A15.8.8.4 Transfer Steps. Where possible, the height of the transfer step should be as minimal as possible. This will decrease the distance an individual is required to lift up or move down to reach the next step to gain access.

A15.8.8.7 Grab Bars. Pool operators have the choice of providing a grab bar on one side of each step and transfer platform or a continuous grab bar on one side serving each transfer step and the transfer platform. If provided on each step, the top of the gripping surface must be 4 to 6 inches above each step. Where a continuous grab bar is provided, the top of the gripping surface must be 4 to 6 inches above the step nosing. Each type has its advantages. A continuous handrail allows the person that is transferring to maintain a constant grip on the handrail while moving up or down the transfer steps. Grab bars provided on each step provide the gripping surface parallel to each step rather than on a diagonal.

A15.8.10 Water Play Components. Personal wheelchairs and mobility devices may not be appropriate for submerging in water when accessing play components located in water. Some may have batteries, motors, and electrical systems that when submerged in water may cause damage to the personal mobility device or wheelchair or may contaminate the water. Providing an aquatic wheelchair made of non-corrosive materials and designed for access into the water will protect the water from contamination and avoid damage to personal wheelchairs.

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Background



The current ADA standards are based on the updated ADA Accessibility Guidelines (2004), which the Board issued jointly with the ABA Accessibility Guidelines for federally funded facilities. The updated ADA and ABA guidelines, which were proposed for public comment in 1999, are based on recommendations from the Board's ADAAG Review Advisory Committee. This committee reviewed ADAAG in its entirety and recommended updates to the Board. It consisted of 22 members representing the design and construction industry, the building code community, state and local government entities, and people with disabilities.

The original ADAAG was published in 1991 and was later supplemented to address state and local government facilities (1998), children's environments (1998), play areas (2000), and recreation facilities (2002). These later supplements are incorporated into both the updated ADA-ABA guidelines and the current standards.

Updated ADA-ABA Accessibility Guidelines and Related Information

- [ADA and ABA Accessibility Guidelines](#) (July 23, 2004), the basis for the current ADA (and ABA) standards
- [ADA-ABA CAD Figures](#) (zipped DWG and DXF files)
- [IBC Comparison](#) (between the ADA-ABA guidelines, the 1991 ADA standards, and the 2003 IBC). Also available: comparisons to the [2006 and 2009 IBC](#) (by the ICC) and to the [NFPA 5000 Building Construction and Safety Code](#) (by the NFPA)
- [ADAAG Review Advisory Committee Members](#)
- [ADAAG Review Advisory Committee Report](#)

Original ADA Accessibility Guidelines (ADAAG)

- [ADAAG](#) (1991 edition and later supplements)
- ADAAG Supplements
 - [State and Local Government Facilities](#) (1998)
 - [Courthouse Access Advisory Committee Final Report](#) (2006)
 - [Building Elements Designed for Children's Use](#) (1998)
 - [Play Areas](#) (2000)
 - [Recreation Facilities](#) (2002)

Timeline

- July 26, 1991 - Board publishes the original ADAAG (DOJ adopts them as its ADA Standards on the same day)
- September 6, 1991 - Board publishes the original ADAAG for Transportation Facilities (DOT adopts them as its ADA Standards on the same day)
- September 14, 1994 - Board creates the ADAAG Review Advisory Committee
- July 10, 1996 - ADAAG Review Advisory Committee submits its report to the Board
- January 13, 1998 - Board publishes ADAAG supplements covering state and local government facilities and building elements designed for children's use
- November 16, 1999 - Board proposes updated ADA and ABA Accessibility Guidelines for public comment
- May 15, 2000 - Deadline for public comments on the proposed rule; over 2,500 comments received
- October 18, 2000 - Board publishes ADAAG supplement on play areas
- September 3, 2002 - Board publishes ADAAG supplement on recreation facilities
- July 23, 2004 - Board publishes the updated ADA and ABA Accessibility Guidelines as final rule
- October 30, 2006 - DOT adopts new ADA standards for transportation facilities based on the updated ADA guidelines (effective November 29, 2006)
- September 15, 2010 - DOJ adopts new ADA standards (effective March 15, 2012)
- May 7, 2014 - Board publishes final guidelines for emergency transportable housing as a supplement to the ADA and ABA Accessibility Guidelines (effective June 6, 2014)

ADA STANDARDS

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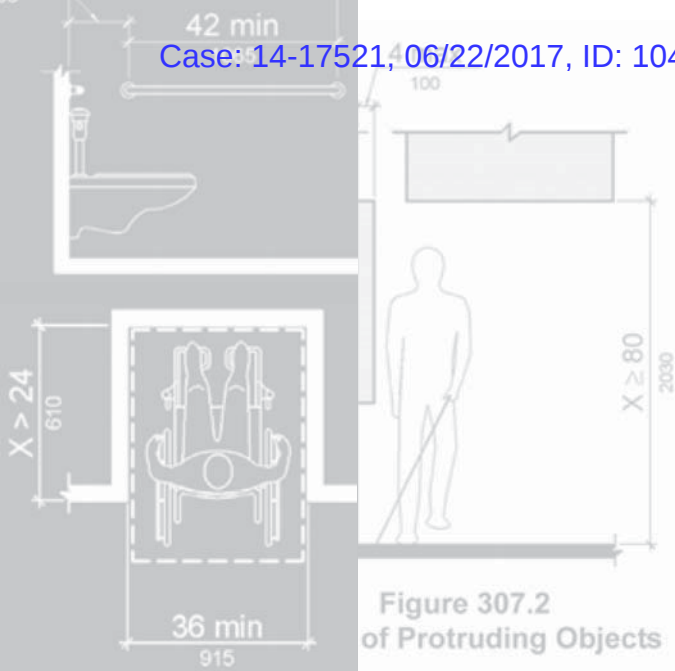


Figure 307.2 of Protruding Objects



2010 ADA Standards for Accessible Design

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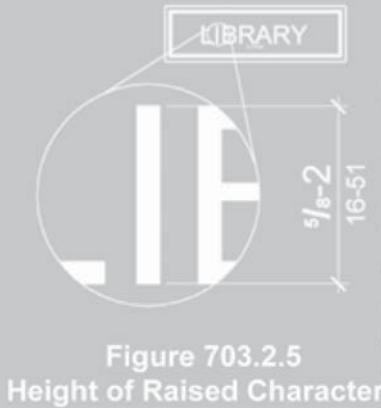
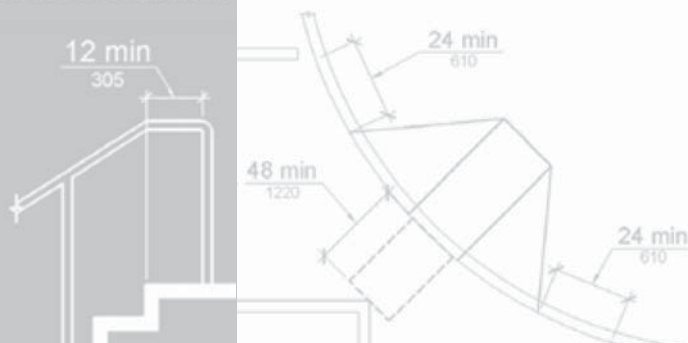


Figure 703.7.2.2 International Symbol of TTY



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September 15, 2010

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Overview

The Department of Justice published revised regulations for Titles II and III of the Americans with Disabilities Act of 1990 "ADA" in the *Federal Register* on September 15, 2010. These regulations adopted revised, enforceable accessibility standards called the 2010 ADA Standards for Accessible Design "2010 Standards" or "Standards". The 2010 Standards set minimum requirements – both scoping and technical – for newly designed and constructed or altered State and local government facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities.

Adoption of the 2010 Standards also establishes a revised reference point for Title II entities that choose to make structural changes to existing facilities to meet their program accessibility requirements; and it establishes a similar reference for Title III entities undertaking readily achievable barrier removal.

The Department is providing this document with the official 2010 Standards in one publication. The document includes:

- The 2010 Standards for State and local governments, which consist of the Title II regulations at 28 CFR 35.151 and the 2004 ADAAG at 36 CFR part 1191, appendices B and D;
- The 2010 Standards for public accommodations and commercial facilities, which consist of the Title III regulations at 28 CFR part 36, subpart D, and the 2004 ADAAG at 36 CFR part 1191, appendices B and D.

The Department has assembled into a separate publication the revised regulation guidance that applies to the Standards. The Department included guidance in its revised ADA regulations published on September 15, 2010. This guidance provides detailed information about the Department's adoption of the 2010 Standards including changes to the Standards, the reasoning behind those changes, and responses to public comments received on these topics. The document, *Guidance on the 2010 ADA Standards for Accessible Design*, can be downloaded from www.ADA.gov.

For More Information

For information about the ADA, including the revised 2010 ADA regulations, please visit the Department's website www.ADA.gov; or, for answers to specific questions, call the toll-free ADA Information Line at 800-514-0301 (Voice) or 800-514-0383 (TTY).

cited in *Kirola v. City & County of San Francisco*
No. 14-17521, archived on June 13, 2017



*cited in Kirola v. City & County of San Francisco
No. 14-17521 archived on June 19, 2017*

2010 Standards for State and Local Government Facilities: Title II

State and local government facilities must follow the requirements of the 2010 Standards, including both the Title II regulations at 28 CFR 35.151; and the 2004 ADAAG at 36 CFR part 1191, appendices B and D.



cited in Knada v. City & County of San Francisco No. 14-17521 archived on June 19, 2017

In the few places where requirements between the two differ, the requirements of 28 CFR 35.151 prevail.

Compliance Date for Title II

If the start date for construction is on or after March 15, 2012, all newly constructed or altered State and local government facilities must comply with the 2010 Standards. Before that date, the 1991 Standards (without the elevator exemption), the UFAS, or the 2010 Standards may be used for projects when the start of construction commences on or after September 15, 2010.

*cited in Kirola v. City & County of San Francisco
No. 14-17521 archived on June 19, 2017*

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Section 35.151 of 28 CFR Part 35

§ 35.151 New construction and alterations.

(a) Design and construction.

- (1) Each facility or part of a facility constructed by, on behalf of, or for the use of a public entity shall be designed and constructed in such manner that the facility or part of the facility is readily accessible to and usable by individuals with disabilities, if the construction was commenced after January 26, 1992.

(2) Exception for structural impracticability.

- (i) Full compliance with the requirements of this section is not required where a public entity can demonstrate that it is structurally impracticable to meet the requirements. Full compliance will be considered structurally impracticable only in those rare circumstances when the unique characteristics of terrain prevent the incorporation of accessibility features.
- (ii) If full compliance with this section would be structurally impracticable, compliance with this section is required to the extent that it is not structurally impracticable. In that case, any portion of the facility that can be made accessible shall be made accessible to the extent that it is not structurally impracticable.
- (iii) If providing accessibility in conformance with this section to individuals with certain disabilities (e.g., those who use wheelchairs) would be structurally impracticable, accessibility shall nonetheless be ensured to persons with other types of disabilities, (e.g., those who use crutches or who have sight, hearing, or mental impairments) in accordance with this section.

(b) Alterations.

- (1) Each facility or part of a facility altered by, on behalf of, or for the use of a public entity in a manner that affects or could affect the usability of the facility or part of the facility shall, to the maximum extent feasible, be altered in such manner that the altered portion of the facility is readily accessible to and usable by individuals with disabilities, if the alteration was commenced after January 26, 1992.
- (2) The path of travel requirements of § 35.151(b)(4) shall apply only to alterations undertaken solely for purposes other than to meet the program accessibility requirements of § 35.150.

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(3)

- (i) Alterations to historic properties shall comply, to the maximum extent feasible, with the provisions applicable to historic properties in the design standards specified in § 35.151(c).
- (ii) If it is not feasible to provide physical access to an historic property in a manner that will not threaten or destroy the historic significance of the building or facility, alternative methods of access shall be provided pursuant to the requirements of § 35.150.

(4) Path of travel. An alteration that affects or could affect the usability of or access to an area of a facility that contains a primary function shall be made so as to ensure that, to the maximum extent feasible, the path of travel to the altered area and the restrooms, telephones, and drinking fountains serving the altered area are readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, unless the cost and scope of such alterations is disproportionate to the cost of the overall alteration.

(i) Primary function. A “primary function” is a major activity for which the facility is intended. Areas that contain a primary function include, but are not limited to, the dining area of a cafeteria, the meeting rooms in a conference center, as well as offices and other work areas in which the activities of the public entity using the facility are carried out.

(A) Mechanical rooms, boiler rooms, supply storage rooms, employee lounges or locker rooms, janitorial closets, entrances, and corridors are not areas containing a primary function. Restrooms are not areas containing a primary function unless the provision of restrooms is a primary purpose of the area, e.g., in highway rest stops.

(B) For the purposes of this section, alterations to windows, hardware, controls, electrical outlets, and signage shall not be deemed to be alterations that affect the usability of or access to an area containing a primary function.

(ii) A “path of travel” includes a continuous, unobstructed way of pedestrian passage by means of which the altered area may be approached, entered, and exited, and which connects the altered area with an exterior approach (including sidewalks, streets, and parking areas), an entrance to the facility, and other parts of the facility.

(A) An accessible path of travel may consist of walks and sidewalks, curb ramps

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and other interior or exterior pedestrian ramps; clear floor paths through lobbies, corridors, rooms, and other improved areas; parking access aisles; elevators and lifts; or a combination of these elements.

(B) For the purposes of this section, the term “path of travel” also includes the restrooms, telephones, and drinking fountains serving the altered area.

(C) Safe harbor. If a public entity has constructed or altered required elements of a path of travel in accordance with the specifications in either the 1991 Standards or the Uniform Federal Accessibility Standards before March 15, 2012, the public entity is not required to retrofit such elements to reflect incremental changes in the 2010 Standards solely because of an alteration to a primary function area served by that path of travel.

(iii) Disproportionality.

(A) Alterations made to provide an accessible path of travel to the altered area will be deemed disproportionate to the overall alteration when the cost exceeds 20% of the cost of the alteration to the primary function area.

(B) Costs that may be counted as expenditures required to provide an accessible path of travel may include:

(1) Costs associated with providing an accessible entrance and an accessible route to the altered area, for example, the cost of widening doorways or installing ramps;

(2) Costs associated with making restrooms accessible, such as installing grab bars, enlarging toilet stalls, insulating pipes, or installing accessible faucet controls;

(3) Costs associated with providing accessible telephones, such as relocating the telephone to an accessible height, installing amplification devices, or installing a text telephone (TTY); and

(4) Costs associated with relocating an inaccessible drinking fountain.

(iv) Duty to provide accessible features in the event of disproportionality.

(A) When the cost of alterations necessary to make the path of travel to the altered area fully accessible is disproportionate to the cost of the overall alteration, the path of travel shall be made accessible to the extent that it can be made accessible without incurring disproportionate costs.

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(B) In choosing which accessible elements to provide, priority should be given to those elements that will provide the greatest access, in the following order—

- (1) An accessible entrance;
- (2) An accessible route to the altered area;
- (3) At least one accessible restroom for each sex or a single unisex restroom;
- (4) Accessible telephones;
- (5) Accessible drinking fountains; and
- (6) When possible, additional accessible elements such as parking, storage, and alarms.

(v) Series of smaller alterations.

(A) The obligation to provide an accessible path of travel may not be evaded by performing a series of small alterations to the area served by a single path of travel if those alterations could have been performed as a single undertaking.

(B)

(1) If an area containing a primary function has been altered without providing an accessible path of travel to that area, and subsequent alterations of that area, or a different area on the same path of travel, are undertaken within three years of the original alteration, the total cost of alterations to the primary function areas on that path of travel during the preceding three-year period shall be considered in determining whether the cost of making that path of travel accessible is disproportionate.

(2) Only alterations undertaken on or after March 15, 2011, shall be considered in determining if the cost of providing an accessible path of travel is disproportionate to the overall cost of the alterations.

(c) Accessibility standards and compliance date.

(1) If physical construction or alterations commence after July 26, 1992, but prior to the September 15, 2010, then new construction and alterations subject to this section must comply with either the UFAS or the 1991 Standards except that the elevator exemption contained at section 4.1.3(5) and section 4.1.6(1)(k) of the 1991 Standards shall not apply. Departures from particular requirements of either standard by the use of other methods shall be permitted when it is clearly evident that equivalent access to the facility or part of the facility is thereby provided.

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- (2) If physical construction or alterations commence on or after September 15, 2010, and before March 15, 2012, then new construction and alterations subject to this section may comply with one of the following: the 2010 Standards, UFAS, or the 1991 Standards except that the elevator exemption contained at section 4.1.3(5) and section 4.1.6(1)(k) of the 1991 Standards shall not apply. Departures from particular requirements of either standard by the use of other methods shall be permitted when it is clearly evident that equivalent access to the facility or part of the facility is thereby provided.
- (3) If physical construction or alterations commence on or after March 15, 2012, then new construction and alterations subject to this section shall comply with the 2010 Standards.
- (4) For the purposes of this section, ceremonial groundbreaking or razing of structures prior to site preparation do not commence physical construction or alterations.
- (5) Noncomplying new construction and alterations.**
- (i) Newly constructed or altered facilities or elements covered by §§ 35.151(a) or (b) that were constructed or altered before March 15, 2012, and that do not comply with the 1991 Standards or with UFAS shall, before March 15, 2012, be made accessible in accordance with either the 1991 Standards, UFAS, or the 2010 Standards.
- (ii) Newly constructed or altered facilities or elements covered by §§ 35.151(a) or (b) that were constructed or altered before March 15, 2012 and that do not comply with the 1991 Standards or with UFAS shall, on or after March 15, 2012, be made accessible in accordance with the 2010 Standards.

Appendix to § 35.151(c)

Compliance Date for New Construction or Alterations	Applicable Standards
Before September 15, 2010	1991 Standards or UFAS
On or after September 15, 2010, and before March 15, 2012	1991 Standards, UFAS, or 2010 Standards
On or after March 15, 2012	2010 Standards

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- (d) Scope of coverage.** The 1991 Standards and the 2010 Standards apply to fixed or built-in elements of buildings, structures, site improvements, and pedestrian routes or vehicular ways located on a site. Unless specifically stated otherwise, the advisory notes, appendix notes, and figures contained in the 1991 Standards and the 2010 Standards explain or illustrate the requirements of the rule; they do not establish enforceable requirements.
- (e) Social service center establishments.** Group homes, halfway houses, shelters, or similar social service center establishments that provide either temporary sleeping accommodations or residential dwelling units that are subject to this section shall comply with the provisions of the 2010 Standards applicable to residential facilities, including, but not limited to, the provisions in sections 233 and 809 (pp. 91 and 212).
- (1) In sleeping rooms with more than 25 beds covered by this section, a minimum of 5% of the beds shall have clear floor space complying with section 806.2.3 of the 2010 Standards (p. 209).
 - (2) Facilities with more than 50 beds covered by this section that provide common use bathing facilities shall provide at least one roll-in shower with a seat that complies with the relevant provisions of section 608 of the 2010 Standards (p. 174). Transfer-type showers are not permitted in lieu of a roll-in shower with a seat, and the exceptions in sections 608.3 and 608.4 (pp. 177 and 178) for residential dwelling units are not permitted. When separate shower facilities are provided for men and for women, at least one roll-in shower shall be provided for each group.
- (f) Housing at a place of education.** Housing at a place of education that is subject to this section shall comply with the provisions of the 2010 Standards applicable to transient lodging, including, but not limited to, the requirements for transient lodging guest rooms in sections 224 and 806 (pp. 82 and 210) subject to the following exceptions. For the purposes of the application of this section, the term “sleeping room” is intended to be used interchangeably with the term “guest room” as it is used in the transient lodging standards.
- (1) Kitchens within housing units containing accessible sleeping rooms with mobility features (including suites and clustered sleeping rooms) or on floors containing accessible sleeping rooms with mobility features shall provide turning spaces that comply with section 809.2.2 of the 2010 Standards (p. 213) and kitchen work surfaces that comply with section 804.3 of the 2010 Standards (p. 208).
 - (2) Multi-bedroom housing units containing accessible sleeping rooms with mobility features shall have an accessible route throughout the unit in accordance with section 809.2 of the 2010 Standards (p. 212).

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(3) Apartments or townhouse facilities that are provided by or on behalf of a place of education, which are leased on a year-round basis exclusively to graduate students or faculty, and do not contain any public use or common use areas available for educational programming, are not subject to the transient lodging standards and shall comply with the requirements for residential facilities in sections 233 and 809 of the 2010 Standards (pp. 91 and 212).

(g) Assembly areas. Assembly areas subject to this section shall comply with the provisions of the 2010 Standards applicable to assembly areas, including, but not limited to, sections 221 and 802 (pp. 78 and 202). In addition, assembly areas shall ensure that—

(1) In stadiums, arenas, and grandstands, wheelchair spaces and companion seats are dispersed to all levels that include seating served by an accessible route;

(2) Assembly areas that are required to horizontally disperse wheelchair spaces and companion seats by section 221.2.3.1 of the 2010 Standards (p. 79) and have seating encircling, in whole or in part, a field of play or performance area shall disperse wheelchair spaces and companion seats around that field of play or performance area;

(3) Wheelchair spaces and companion seats are not located on (or obstructed by) temporary platforms or other movable structures, except that when an entire seating section is placed on temporary platforms or other movable structures in an area where fixed seating is not provided, in order to increase seating for an event, wheelchair spaces and companion seats may be placed in that section. When wheelchair spaces and companion seats are not required to accommodate persons eligible for those spaces and seats, individual, removable seats may be placed in those spaces and seats;

(4) Stadium-style movie theaters shall locate wheelchair spaces and companion seats on a riser or cross-aisle in the stadium section that satisfies at least one of the following criteria—

(i) It is located within the rear 60% of the seats provided in an auditorium; or

(ii) It is located within the area of an auditorium in which the vertical viewing angles (as measured to the top of the screen) are from the 40th to the 100th percentile of vertical viewing angles for all seats as ranked from the seats in the first row (1st percentile) to seats in the back row (100th percentile).

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(h) Medical care facilities. Medical care facilities that are subject to this section shall comply with the provisions of the 2010 Standards applicable to medical care facilities, including, but not limited to, sections 223 and 805 (pp. 81 and 209). In addition, medical care facilities that do not specialize in the treatment of conditions that affect mobility shall disperse the accessible patient bedrooms required by section 223.2.1 of the 2010 Standards (p. 82) in a manner that is proportionate by type of medical specialty.

(i) Curb ramps.

- (1) Newly constructed or altered streets, roads, and highways must contain curb ramps or other sloped areas at any intersection having curbs or other barriers to entry from a street level pedestrian walkway.
- (2) Newly constructed or altered street level pedestrian walkways must contain curb ramps or other sloped areas at intersections to streets, roads, or highways.

(j) Facilities with residential dwelling units for sale to individual owners.

- (1) Residential dwelling units designed and constructed or altered by public entities that will be offered for sale to individuals shall comply with the requirements for residential facilities in the 2010 Standards, including sections 233 and 809 (pp. 91 and 212).
- (2) The requirements of paragraph (1) also apply to housing programs that are operated by public entities where design and construction of particular residential dwelling units take place only after a specific buyer has been identified. In such programs, the covered entity must provide the units that comply with the requirements for accessible features to those pre-identified buyers with disabilities who have requested such a unit.

(k) Detention and correctional facilities.

- (1) New construction of jails, prisons, and other detention and correctional facilities shall comply with the 2010 Standards except that public entities shall provide accessible mobility features complying with section 807.2 of the 2010 Standards for a minimum of 3%, but no fewer than one, of the total number of cells in a facility (p. 211) Cells with mobility features shall be provided in each classification level.
- (2) **Alterations to detention and correctional facilities.** Alterations to jails, prisons, and other detention and correctional facilities shall comply with the 2010 Standards except that public entities shall provide accessible mobility features complying with section 807.2 of the 2010 Standards for a minimum of 3%, but no fewer than one, of the total number of cells being altered until at least 3%, but no fewer than one, of

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the total number of cells in a facility shall provide mobility features complying with section 807.2 (p. 211). Altered cells with mobility features shall be provided in each classification level. However, when alterations are made to specific cells, detention and correctional facility operators may satisfy their obligation to provide the required number of cells with mobility features by providing the required mobility features in substitute cells (cells other than those where alterations are originally planned), provided that each substitute cell—

- (i) Is located within the same prison site;
 - (ii) Is integrated with other cells to the maximum extent feasible;
 - (iii) Has, at a minimum, equal physical access as the altered cells to areas used by inmates or detainees for visitation, dining, recreation, educational programs, medical services, work programs, religious services, and participation in other programs that the facility offers to inmates or detainees; and
 - (iv) If it is technically infeasible to locate a substitute cell within the same prison site, a substitute cell must be provided at another prison site within the corrections system.
- (3) With respect to medical and long-term care facilities in jails, prisons, and other detention and correctional facilities, public entities shall apply the 2010 Standards technical and scoping requirements for those facilities irrespective of whether those facilities are licensed.

The remaining text of the 2010 Standards for Title II starts on page 31, under the heading 2010 Standards for Titles II and III: 2004 ADAAG.

2010 Standards for Public Accommodations and Commercial Facilities: Title III

Public accommodations and commercial facilities must follow the requirements of the 2010 Standards, including both the Title III regulations at 28 CFR part 36, subpart D; and the 2004 ADAAG at 36 CFR part 1191, appendices B and D.



In the few places where the requirements between the two differ, the requirements of 28 CFR part 36, subpart D, prevail.

Compliance Date for Title III

The compliance date for the 2010 Standards for new construction and alterations is determined by:

- the date the last application for a building permit or permit extension is certified to be complete by a State, county, or local government;
- the date the last application for a building permit or permit extension is received by a State, county, or local government, where the government does not certify the completion applications; or
- the start of physical construction or alteration, if no permit is required.

If that date is on or after March 15, 2012, then new construction and alterations must comply with the 2010 Standards. If that date is on or after September 15, 2010, and before March 15, 2012, then new construction and alterations must comply with either the 1991 or the 2010 Standards.

cited in Kirola v. City & County of San Francisco No. 14-17521 archived on June 19, 2017

*cited in Kirola v. City & County of San Francisco
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Subpart D of 28 CFR Part 36

§ 36.401 New construction.

(a) General.

- (1) Except as provided in paragraphs (b) and (c) of this section, discrimination for purposes of this part includes a failure to design and construct facilities for first occupancy after January 26, 1993, that are readily accessible to and usable by individuals with disabilities.
- (2) For purposes of this section, a facility is designed and constructed for first occupancy after January 26, 1993, only—
 - (i) If the last application for a building permit or permit extension for the facility is certified to be complete, by a State, County, or local government after January 26, 1992 (or, in those jurisdictions where the government does not certify completion of applications, if the last application for a building permit or permit extension for the facility is received by the State, County, or local government after January 26, 1992); and
 - (ii) If the first certificate of occupancy for the facility is issued after January 26, 1993.

(b) Commercial facilities located in private residences.

- (1) When a commercial facility is located in a private residence, the portion of the residence used exclusively as a residence is not covered by this subpart, but that portion used exclusively in the operation of the commercial facility or that portion used both for the commercial facility and for residential purposes is covered by the new construction and alterations requirements of this subpart.
- (2) The portion of the residence covered under paragraph (b)(1) of this section extends to those elements used to enter the commercial facility, including the homeowner's front sidewalk, if any, the door or entryway, and hallways; and those portions of the residence, interior or exterior, available to or used by employees or visitors of the commercial facility, including restrooms.

(c) Exception for structural impracticability.

- (1) Full compliance with the requirements of this section is not required where an entity can demonstrate that it is structurally impracticable to meet the requirements. Full compliance will be considered structurally impracticable only in those rare circumstances when the unique characteristics of terrain prevent the incorporation of accessibility features.

Subpart D of 28 CFR Part 36

- (2) If full compliance with this section would be structurally impracticable, compliance with this section is required to the extent that it is not structurally impracticable. In that case, any portion of the facility that can be made accessible shall be made accessible to the extent that it is not structurally impracticable.
- (3) If providing accessibility in conformance with this section to individuals with certain disabilities (e.g., those who use wheelchairs) would be structurally impracticable, accessibility shall nonetheless be ensured to persons with other types of disabilities (e.g., those who use crutches or who have sight, hearing, or mental impairments) in accordance with this section.

(d) Elevator exemption.

- (1) For purposes of this paragraph (d)—

(i) **Professional office of a health care provider** means a location where a person or entity regulated by a State to provide professional services related to the physical or mental health of an individual makes such services available to the public. The facility housing the “professional office of a health care provider” only includes floor levels housing at least one health care provider, or any floor level designed or intended for use by at least one health care provider.

(ii) **Shopping center or shopping mall** means—

(A) A building housing five or more sales or rental establishments; or

(B) A series of buildings on a common site, either under common ownership or common control or developed either as one project or as a series of related projects, housing five or more sales or rental establishments. For purposes of this section, places of public accommodation of the types listed in paragraph (5) of the definition of “place of public accommodation” in section § 36.104 are considered sales or rental establishments. The facility housing a “shopping center or shopping mall” only includes floor levels housing at least one sales or rental establishment, or any floor level designed or intended for use by at least one sales or rental establishment.

- (2) This section does not require the installation of an elevator in a facility that is less than three stories or has less than 3000 square feet per story, except with respect to any facility that houses one or more of the following:
 - (i) A shopping center or shopping mall, or a professional office of a health care provider.

Subpart D of 28 CFR Part 36

- (ii) A terminal, depot, or other station used for specified public transportation, or an airport passenger terminal. In such a facility, any area housing passenger services, including boarding and debarking, loading and unloading, baggage claim, dining facilities, and other common areas open to the public, must be on an accessible route from an accessible entrance.
- (3) The elevator exemption set forth in this paragraph (d) does not obviate or limit, in any way the obligation to comply with the other accessibility requirements established in paragraph (a) of this section. For example, in a facility that houses a shopping center or shopping mall, or a professional office of a health care provider, the floors that are above or below an accessible ground floor and that do not house sales or rental establishments or a professional office of a health care provider, must meet the requirements of this section but for the elevator.

§ 36.402 Alterations.

(a) General.

- (1) Any alteration to a place of public accommodation or a commercial facility, after January 26, 1992, shall be made so as to ensure that, to the maximum extent feasible, the altered portions of the facility are readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.
- (2) An alteration is deemed to be undertaken after January 26, 1992, if the physical alteration of the property begins after that date.

(b) Alteration. For the purposes of this part, an alteration is a change to a place of public accommodation or a commercial facility that affects or could affect the usability of the building or facility or any part thereof.

- (1) Alterations include, but are not limited to, remodeling, renovation, rehabilitation, reconstruction, historic restoration, changes or rearrangement in structural parts or elements, and changes or rearrangement in the plan configuration of walls and full-height partitions. Normal maintenance, reroofing, painting or wallpapering, asbestos removal, or changes to mechanical and electrical systems are not alterations unless they affect the usability of the building or facility.
- (2) If existing elements, spaces, or common areas are altered, then each such altered element, space, or area shall comply with the applicable provisions of appendix A to this part.

Subpart D of 28 CFR Part 36

(c) **To the maximum extent feasible.** The phrase “to the maximum extent feasible,” as used in this section, applies to the occasional case where the nature of an existing facility makes it virtually impossible to comply fully with applicable accessibility standards through a planned alteration. In these circumstances, the alteration shall provide the maximum physical accessibility feasible. Any altered features of the facility that can be made accessible shall be made accessible. If providing accessibility in conformance with this section to individuals with certain disabilities (e.g., those who use wheelchairs) would not be feasible, the facility shall be made accessible to persons with other types of disabilities (e.g., those who use crutches, those who have impaired vision or hearing, or those who have other impairments).

§ 36.403 Alterations: Path of travel.

(a) General.

- (1) An alteration that affects or could affect the usability of or access to an area of a facility that contains a primary function shall be made so as to ensure that, to the maximum extent feasible, the path of travel to the altered area and the restrooms, telephones, and drinking fountains serving the altered area, are readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, unless the cost and scope of such alterations is disproportionate to the cost of the overall alteration.
- (2) If a private entity has constructed or altered required elements of a path of travel at a place of public accommodation or commercial facility in accordance with the specifications in the 1991 Standards, the private entity is not required to retrofit such elements to reflect the incremental changes in the 2010 Standards solely because of an alteration to a primary function area served by that path of travel.

(b) **Primary function.** A “primary function” is a major activity for which the facility is intended. Areas that contain a primary function include, but are not limited to, the customer services lobby of a bank, the dining area of a cafeteria, the meeting rooms in a conference center, as well as offices and other work areas in which the activities of the public accommodation or other private entity using the facility are carried out. Mechanical rooms, boiler rooms, supply storage rooms, employee lounges or locker rooms, janitorial closets, entrances, corridors, and restrooms are not areas containing a primary function.

(c) Alterations to an area containing a primary function.

- (1) Alterations that affect the usability of or access to an area containing a primary

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function include, but are not limited to—

- (i) Remodeling merchandise display areas or employee work areas in a department store;
- (ii) Replacing an inaccessible floor surface in the customer service or employee work areas of a bank;
- (iii) Redesigning the assembly line area of a factory; or
- (iv) Installing a computer center in an accounting firm.

(2) For the purposes of this section, alterations to windows, hardware, controls, electrical outlets, and signage shall not be deemed to be alterations that affect the usability of or access to an area containing a primary function.

(d) Landlord/tenant: If a tenant is making alterations as defined in § 36.402 that would trigger the requirements of this section, those alterations by the tenant in areas that only the tenant occupies do not trigger a path of travel obligation upon the landlord with respect to areas of the facility under the landlord's authority, if those areas are not otherwise being altered.

(e) Path of travel.

- (1) A "path of travel" includes a continuous, unobstructed way of pedestrian passage by means of which the altered area may be approached, entered, and exited, and which connects the altered area with an exterior approach (including sidewalks, streets, and parking areas), an entrance to the facility, and other parts of the facility.
- (2) An accessible path of travel may consist of walks and sidewalks, curb ramps and other interior or exterior pedestrian ramps; clear floor paths through lobbies, corridors, rooms, and other improved areas; parking access aisles; elevators and lifts; or a combination of these elements.
- (3) For the purposes of this part, the term "path of travel" also includes the restrooms, telephones, and drinking fountains serving the altered area.

(f) Disproportionality.

- (1) Alterations made to provide an accessible path of travel to the altered area will be deemed disproportionate to the overall alteration when the cost exceeds 20% of the cost of the alteration to the primary function area.

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- (2) Costs that may be counted as expenditures required to provide an accessible path of travel may include:
- (i) Costs associated with providing an accessible entrance and an accessible route to the altered area, for example, the cost of widening doorways or installing ramps;
 - (ii) Costs associated with making restrooms accessible, such as installing grab bars, enlarging toilet stalls, insulating pipes, or installing accessible faucet controls;
 - (iii) Costs associated with providing accessible telephones, such as relocating the telephone to an accessible height, installing amplification devices, or installing a text telephone (TTY).
 - (iv) Costs associated with relocating an inaccessible drinking fountain.

(g) Duty to provide accessible features in the event of disproportionality.

- (1) When the cost of alterations necessary to make the path of travel to the altered area fully accessible is disproportionate to the cost of the overall alteration, the path of travel shall be made accessible to the extent that it can be made accessible without incurring disproportionate costs.
- (2) In choosing which accessible elements to provide, priority should be given to those elements that will provide the greatest access, in the following order:
- (i) An accessible entrance;
 - (ii) An accessible route to the altered area;
 - (iii) At least one accessible restroom for each sex or a single unisex restroom;
 - (iv) Accessible telephones;
 - (v) Accessible drinking fountains; and
 - (vi) When possible, additional accessible elements such as parking, storage, and alarms.

(h) Series of smaller alterations.

- (1) The obligation to provide an accessible path of travel may not be evaded by

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performing a series of small alterations to the area served by a single path of travel if those alterations could have been performed as a single undertaking.

(2)

(i) If an area containing a primary function has been altered without providing an accessible path of travel to that area, and subsequent alterations of that area, or a different area on the same path of travel, are undertaken within three years of the original alteration, the total cost of alterations to the primary function areas on that path of travel during the preceding three year period shall be considered in determining whether the cost of making that path of travel accessible is disproportionate.

(ii) Only alterations undertaken after January 26, 1992, shall be considered in determining if the cost of providing an accessible path of travel is disproportionate to the overall cost of the alterations.

§ 36.404 Alterations: Elevator exemption.

(a) This section does not require the installation of an elevator in an altered facility that is less than three stories or has less than 3,000 square feet per story, except with respect to any facility that houses a shopping center, a shopping mall, the professional office of a health care provider, a terminal, depot, or other station used for specified public transportation, or an airport passenger terminal.

(1) For the purposes of this section, professional office of a health care provider means a location where a person or entity regulated by a State to provide professional services related to the physical or mental health of an individual makes such services available to the public. The facility that houses a professional office of a health care provider only includes floor levels housing by at least one health care provider, or any floor level designed or intended for use by at least one health care provider.

(2) For the purposes of this section, shopping center or shopping mall means—

(i) A building housing five or more sales or rental establishments; or

(ii) A series of buildings on a common site, connected by a common pedestrian access route above or below the ground floor, that is either under common ownership or common control or developed either as one project or as a series of related projects, housing five or more sales or rental establishments. For purposes of this section, places of public accommodation of the types listed in paragraph (5) of the definition of place of public accommodation in § 36.104 are

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considered sales or rental establishments. The facility housing a shopping center or shopping mall only includes floor levels housing at least one sales or rental establishment, or any floor level designed or intended for use by at least one sales or rental establishment.

- (b) The exemption provided in paragraph (a) of this section does not obviate or limit in any way the obligation to comply with the other accessibility requirements established in this subpart. For example, alterations to floors above or below the accessible ground floor must be accessible regardless of whether the altered facility has an elevator.

§ 36.405 Alterations: Historic preservation.

- (a) Alterations to buildings or facilities that are eligible for listing in the National Register of Historic Places under the National Historic Preservation Act (16 U.S.C. 470 *et seq.*), or are designated as historic under State or local law, shall comply to the maximum extent feasible with this part.
- (b) If it is determined that it is not feasible to provide physical access to an historic property that is a place of public accommodation in a manner that will not threaten or destroy the historic significance of the building or the facility, alternative methods of access shall be provided pursuant to the requirements of subpart C of this part.

§ 36.406 Standards for new construction and alterations.

(a) Accessibility standards and compliance date.

- (1) New construction and alterations subject to §§ 36.401 or 36.402 shall comply with the 1991 Standards if the date when the last application for a building permit or permit extension is certified to be complete by a State, county, or local government (or, in those jurisdictions where the government does not certify completion of applications, if the date when the last application for a building permit or permit extension is received by the State, county, or local government) is before September 15, 2010, or if no permit is required, if the start of physical construction or alterations occurs before September 15, 2010.
- (2) New construction and alterations subject to §§ 36.401 or 36.402 shall comply either with the 1991 Standards or with the 2010 Standards if the date when the last application for a building permit or permit extension is certified to be complete by a State, county, or local government (or, in those jurisdictions where the government does not certify completion of applications, if the date when the last application for a building permit or permit extension is received by the State, county, or local government) is on or after September 15, 2010, and before March 15, 2012,

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or if no permit is required, if the start of physical construction or alterations occurs on or after September 15, 2010, and before March 15, 2012.

- (3) New construction and alterations subject to §§ 36.401 or 36.402 shall comply with the 2010 Standards if the date when the last application for a building permit or permit extension is certified to be complete by a State, county, or local government (or, in those jurisdictions where the government does not certify completion of applications, if the date when the last application for a building permit or permit extension is received by the State, county, or local government) is on or after March 15, 2012, or if no permit is required, if the start of physical construction or alterations occurs on or after March 15, 2012.
- (4) For the purposes of this section, “start of physical construction or alterations” does not mean ceremonial groundbreaking or razing of structures prior to site preparation.

(5) Noncomplying new construction and alterations.

- (i) Newly constructed or altered facilities or elements covered by §§ 36.401 or 36.402 that were constructed or altered before March 15, 2012 and that do not comply with the 1991 Standards shall, before March 15, 2012, be made accessible in accordance with either the 1991 Standards or the 2010 Standards.
- (ii) Newly constructed or altered facilities or elements covered by §§ 36.401 or 36.402 that were constructed or altered before March 15, 2012 and that do not comply with the 1991 Standards shall, on or after March 15, 2012, be made accessible in accordance with the 2010 Standards.

Appendix to § 36.406(a)

Compliance Dates for New Construction and Alterations	Applicable Standards
On or after January 26, 1993, and before September 15, 2010	1991 Standards
On or after September 15, 2010, and before March 15, 2012	1991 Standards or 2010 Standards
On or after March 15, 2012	2010 Standards

- (b) Scope of coverage.** The 1991 Standards and the 2010 Standards apply to fixed or built-in elements of buildings, structures, site improvements, and pedestrian routes or vehicular ways located on a site. Unless specifically stated otherwise, advisory notes,

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appendix notes, and figures contained in the 1991 Standards and 2010 Standards explain or illustrate the requirements of the rule; they do not establish enforceable requirements.

(c) Places of lodging. Places of lodging subject to this part shall comply with the provisions of the 2010 Standards applicable to transient lodging, including, but not limited to, the requirements for transient lodging guest rooms in sections 224 and 806 of the 2010 Standards (pp. 82 and 210).

(1) Guest rooms. Guest rooms with mobility features in places of lodging subject to the transient lodging requirements of 2010 Standards shall be provided as follows—

(i) Facilities that are subject to the same permit application on a common site that each have 50 or fewer guest rooms may be combined for the purposes of determining the required number of accessible rooms and type of accessible bathing facility in accordance with table 224.2 to section 224.2 of the 2010 Standards (pp 83).

(ii) Facilities with more than 50 guest rooms shall be treated separately for the purposes of determining the required number of accessible rooms and type of accessible bathing facility in accordance with table 224.2 to section 224.2 of the 2010 Standards (p. 83).

(2) Exception. Alterations to guest rooms in places of lodging where the guest rooms are not owned or substantially controlled by the entity that owns, leases, or operates the overall facility and the physical features of the guest room interiors are controlled by their individual owners are not required to comply with § 36.402 or the alterations requirements in section 224.1.1 of the 2010 Standards (p. 83).

(3) Facilities with residential units and transient lodging units. Residential dwelling units that are designed and constructed for residential use exclusively are not subject to the transient lodging standards.

(d) Social service center establishments. Group homes, halfway houses, shelters, or similar social service center establishments that provide either temporary sleeping accommodations or residential dwelling units that are subject to this part shall comply with the provisions of the 2010 Standards applicable to residential facilities, including, but not limited to, the provisions in sections 233 and 809 (pp. 91 and 212) .

(1) In sleeping rooms with more than 25 beds covered by this part, a minimum of 5% of the beds shall have clear floor space complying with section 806.2.3 of the 2010 Standards (p. 210).

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- (2) Facilities with more than 50 beds covered by this part that provide common use bathing facilities shall provide at least one roll-in shower with a seat that complies with the relevant provisions of section 608 of the 2010 Standards (p. 174). Transfer-type showers are not permitted in lieu of a roll-in shower with a seat, and the exceptions in sections 608.3 and 608.4 for residential dwelling units are not permitted. When separate shower facilities are provided for men and for women, at least one roll-in shower shall be provided for each group.

(e) Housing at a place of education. Housing at a place of education that is subject to this part shall comply with the provisions of the 2010 Standards applicable to transient lodging, including, but not limited to, the requirements for transient lodging guest rooms in sections 224 and 806 (pp. 82 and 210), subject to the following exceptions. For the purposes of the application of this section, the term “sleeping room” is intended to be used interchangeably with the term “guest room” as it is used in the transient lodging standards.

- (1) Kitchens within housing units containing accessible sleeping rooms with mobility features (including suites and clustered sleeping rooms) or on floors containing accessible sleeping rooms with mobility features shall provide turning spaces that comply with section 809.2.2 of the 2010 Standards (p. 213) and kitchen work surfaces that comply with section 804.3 of the 2010 Standards (p. 208).
- (2) Multi-bedroom housing units containing accessible sleeping rooms with mobility features shall have an accessible route throughout the unit in accordance with section 809.2 of the 2010 Standards (p. 212).
- (3) Apartments or townhouse facilities that are provided by or on behalf of a place of education, which are leased on a year-round basis exclusively to graduate students or faculty and do not contain any public use or common use areas available for educational programming, are not subject to the transient lodging standards and shall comply with the requirements for residential facilities in sections 233 and 809 of the 2010 Standards (pp. 91 and 212).

(f) Assembly areas. Assembly areas that are subject to this part shall comply with the provisions of the 2010 Standards applicable to assembly areas, including, but not limited to, sections 221 and 802 (p. 78 and 202). In addition, assembly areas shall ensure that—

- (1) In stadiums, arenas, and grandstands, wheelchair spaces and companion seats are dispersed to all levels that include seating served by an accessible route;
- (2) Assembly areas that are required to horizontally disperse wheelchair spaces and

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- companion seats by section 221.2.3.1 of the 2010 Standards (p. 79) and that have seating encircling, in whole or in part, a field of play or performance, wheelchair spaces and companion seats are dispersed around that field of play or performance area;
- (3) Wheelchair spaces and companion seats are not located on (or obstructed by) temporary platforms or other movable structures, except that when an entire seating section is placed on temporary platforms or other movable structures in an area where fixed seating is not provided, in order to increase seating for an event, wheelchair spaces and companion seats may be placed in that section. When wheelchair spaces and companion seats are not required to accommodate persons eligible for those spaces and seats, individual, removable seats may be placed in those spaces and seats;
- (4) In stadium-style movie theaters, wheelchair spaces and companion seats are located on a riser or cross-aisle in the stadium section that satisfies at least one of the following criteria—
- (i) It is located within the rear 60% of the seats provided in an auditorium; or
- (ii) It is located within the area of an auditorium in which the vertical viewing angles (as measured to the top of the screen) are from the 40th to the 100th percentile of vertical viewing angles for all seats as ranked from the seats in the first row (1st percentile) to seats in the back row (100th percentile).
- (g) Medical care facilities.** Medical care facilities that are subject to this part shall comply with the provisions of the 2010 Standards applicable to medical care facilities, including, but not limited to, sections 223 and 805 (pp. 81 and 209). In addition, medical care facilities that do not specialize in the treatment of conditions that affect mobility shall disperse the accessible patient bedrooms required by section 223.2.1 of the 2010 Standards (p. 82) in a manner that is proportionate by type of medical specialty.

§§ 36.407—36.499 [Reserved]

The remaining text of the 2010 Standards for Title III start on page 31, under the heading 2010 Standards for Titles II and III: 2004 ADAAG.

2010 Standards for Titles II and III Facilities: 2004 ADAAG

The following section applies to **both** State and local government facilities (Title II) and public accommodations and commercial facilities (Title III). The section consists of (ADA) Chapters 1 and 2 and Chapters 3 through 10, of the 2004 ADAAG (36 CFR part 1191, appendices B and D, adopted as part of both the Title II and Title III 2010 Standards).

State and local government facilities must follow the requirements of the 2010 Standards, including both the Title II regulations at 28 CFR 35.151; and the 2004 ADAAG at 36 CFR part 1191, appendices B and D.

Public accommodations and commercial facilities must follow the requirements of the 2010 Standards, including both the Title III regulations at 28 CFR part 36, subpart D; and the 2004 ADAAG at 36 CFR part 1191, appendices B and D.

In the few places where requirements between the regulation and the 2004 ADAAG differ, the requirements of 28 CFR 35.151 or 28 CFR part 36, subpart D, prevail.

*cited in [Guzala v. City & County of San Francisco](#)
No. 14-17521, archived on June 19, 2017*

*cited in Kirola v. City & County of San Francisco
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ADA CHAPTER 1: APPLICATION AND ADMINISTRATION

101 Purpose

101.1 General. This document contains scoping and technical requirements for *accessibility* to *sites, facilities, buildings, and elements* by individuals with disabilities. The requirements are to be applied during the design, construction, *additions* to, and *alteration* of *sites, facilities, buildings, and elements* to the extent required by regulations issued by Federal agencies under the Americans with Disabilities Act of 1990 (ADA).

Advisory 101.1 General. In addition to these requirements, covered entities must comply with the regulations issued by the Department of Justice and the Department of Transportation under the Americans with Disabilities Act. There are issues affecting individuals with disabilities which are not addressed by these requirements, but which are covered by the Department of Justice and the Department of Transportation regulations.

101.2 Effect on Removal of Barriers in Existing Facilities. This document does not address existing *facilities* unless *altered* at the discretion of a covered entity. The Department of Justice has authority over existing *facilities* that are subject to the requirement for removal of barriers under title III of the ADA. Any determination that this document applies to existing *facilities* subject to the barrier removal requirement is solely within the discretion of the Department of Justice and is effective only to the extent required by regulations issued by the Department of Justice.

102 Dimensions for Adults and Children

The technical requirements are based on adult dimensions and anthropometrics. In addition, this document includes technical requirements based on children's dimensions and anthropometrics for drinking fountains, water closets, toilet compartments, lavatories and sinks, dining surfaces, and work surfaces.

103 Equivalent Facilitation

Nothing in these requirements prevents the use of designs, products, or technologies as alternatives to those prescribed, provided they result in substantially equivalent or greater *accessibility* and usability.

Advisory 103 Equivalent Facilitation. The responsibility for demonstrating equivalent facilitation in the event of a challenge rests with the covered entity. With the exception of transit facilities, which are covered by regulations issued by the Department of Transportation, there is no process for certifying that an alternative design provides equivalent facilitation.

104 Conventions

104.1 Dimensions. Dimensions that are not stated as "maximum" or "minimum" are absolute.

104.1.1 Construction and Manufacturing Tolerances. All dimensions are subject to conventional industry tolerances except where the requirement is stated as a range with specific minimum and maximum end points.

Advisory 104.1.1 Construction and Manufacturing Tolerances. Conventional industry tolerances recognized by this provision include those for field conditions and those that may be a necessary consequence of a particular manufacturing process. Recognized tolerances are not intended to apply to design work.

It is good practice when specifying dimensions to avoid specifying a tolerance where dimensions are absolute. For example, if this document requires "1½ inches," avoid specifying "1½ inches plus or minus X inches."

Where the requirement states a specified range, such as in Section 609.4 where grab bars must be installed between 33 inches and 36 inches above the floor, the range provides an adequate tolerance and therefore no tolerance outside of the range at either end point is permitted.

Where a requirement is a minimum or a maximum dimension that does not have two specific minimum and maximum end points, tolerances may apply. Where an element is to be installed at the minimum or maximum permitted dimension, such as "15 inches minimum" or "5 pounds maximum", it would not be good practice to specify "5 pounds (plus X pounds) or 15 inches (minus X inches)." Rather, it would be good practice to specify a dimension less than the required maximum (or more than the required minimum) by the amount of the expected field or manufacturing tolerance and not to state any tolerance in conjunction with the specified dimension.

Specifying dimensions in design in the manner described above will better ensure that facilities and elements accomplish the level of accessibility intended by these requirements. It will also more often produce an end result of strict and literal compliance with the stated requirements and eliminate enforcement difficulties and issues that might otherwise arise. Information on specific tolerances may be available from industry or trade organizations, code groups and building officials, and published references.

104.2 Calculation of Percentages. Where the required number of *elements* or *facilities* to be provided is determined by calculations of ratios or percentages and remainders or fractions result, the next greater whole number of such *elements* or *facilities* shall be provided. Where the determination of the required size or dimension of an *element* or *facility* involves ratios or percentages, rounding down for values less than one half shall be permitted.

104.3 Figures. Unless specifically stated otherwise, figures are provided for informational purposes only.

Convention	Description
	dimension showing English units (in inches unless otherwise specified) above the line and SI units (in millimeters unless otherwise specified) below the line
	dimension for small measurements
	dimension showing a range with minimum - maximum
min	minimum
max	maximum
>	greater than
≥	greater than or equal to
<	less than
≤	less than or equal to
	boundary of clear floor space or maneuvering clearance
	centerline
	a permitted element or its extension
	direction of travel or approach
	a wall, floor, ceiling or other element cut in section or plan
	a highlighted element in elevation or plan
	location zone of element, control or feature

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Figure 104
Graphic Convention for Figures

105 Referenced Standards

105.1 General. The standards listed in 105.2 are incorporated by reference in this document and are part of the requirements to the prescribed extent of each such reference. The Director of the Federal Register has approved these standards for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the referenced standards may be inspected at the Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004; at the Department of Justice, Civil Rights Division, Disability Rights Section, 1425 New York Avenue, NW, Washington, DC; at the Department of Transportation, 400 Seventh Street, SW, Room 10424, Washington DC; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

105.2 Referenced Standards. The specific edition of the standards listed below are referenced in this document. Where differences occur between this document and the referenced standards, this document applies.

105.2.1 ANSI/BHMA. Copies of the referenced standards may be obtained from the Builders Hardware Manufacturers Association, 355 Lexington Avenue, 17th floor, New York, NY 10017 (<http://www.buildershardware.com>).

ANSI/BHMA A156.10-1999 American National Standard for Power Operated Pedestrian Doors (see 404.3).

ANSI/BHMA A156.19-1997 American National Standard for Power Assist and Low Energy Power Operated Doors (see 404.3, 408.3.2.1, and 409.3.1).

ANSI/BHMA A156.19-2002 American National Standard for Power Assist and Low Energy Power Operated Doors (see 404.3, 408.3.2.1, and 409.3.1).

Advisory 105.2.1 ANSI/BHMA. ANSI/BHMA A156.10-1999 applies to power operated doors for pedestrian use which open automatically when approached by pedestrians. Included are provisions intended to reduce the chance of user injury or entrapment.

ANSI/BHMA A156.19-1997 and A156.19-2002 applies to power assist doors, low energy power operated doors or low energy power open doors for pedestrian use not provided for in ANSI/BHMA A156.10 for Power Operated Pedestrian Doors. Included are provisions intended to reduce the chance of user injury or entrapment.

105.2.2 ASME. Copies of the referenced standards may be obtained from the American Society of Mechanical Engineers, Three Park Avenue, New York, New York 10016 (<http://www.asme.org>).

ASME A17.1- 2000 Safety Code for Elevators and Escalators, including ASME A17.1a-2002 Addenda and ASME A17.1b-2003 Addenda (see 407.1, 408.1, 409.1, and 810.9).

ASME A18.1-1999 Safety Standard for Platform Lifts and Stairway Chairlifts, including ASME A18.1a-2001 Addenda and ASME A18.1b-2001 Addenda (see 410.1).

ASME A18.1-2003 Safety Standard for Platform Lifts and Stairway Chairlifts, (see 410.1).

Advisory 105.2.2 ASME. ASME A17.1-2000 is used by local jurisdictions throughout the United States for the design, construction, installation, operation, inspection, testing, maintenance, alteration, and repair of elevators and escalators. The majority of the requirements apply to the operational machinery not seen or used by elevator passengers. ASME A17.1 requires a two-way means of emergency communications in passenger elevators. This means of communication must connect with emergency or authorized personnel and not an automated answering system. The communication system must be push button activated. The activation button must be permanently identified with the word "HELP." A visual indication acknowledging the establishment of a communications link to authorized personnel must be provided. The visual indication must remain on until the call is terminated by authorized personnel. The building location, the elevator car number, and the need for assistance must be provided to authorized personnel answering the emergency call. The use of a handset by the communications system is prohibited. Only the authorized personnel answering the call can terminate the call. Operating instructions for the communications system must be provided in the elevator car.

The provisions for escalators require that at least two flat steps be provided at the entrance and exit of every escalator and that steps on escalators be demarcated by yellow lines 2 inches wide maximum along the back and sides of steps.

ASME A18.1-1999 and ASME A18.1-2003 address the design, construction, installation, operation, inspection, testing, maintenance, and repair of lifts that are intended for transportation of persons with disabilities. Lifts are classified as: vertical platform lifts, inclined platform lifts, inclined stairway chairlifts, private residence vertical platform lifts, private residence inclined platform lifts, and private residence inclined stairway chairlifts.

This document does not permit the use of inclined stairway chairlifts which do not provide platforms because such lifts require the user to transfer to a seat.

ASME A18.1 contains requirements for runways, which are the spaces in which platforms or seats move. The standard includes additional provisions for runway enclosures, electrical equipment and wiring, structural support, headroom clearance (which is 80 inches minimum), lower level access ramps and pits. The enclosure walls not used for entry or exit are required to have a grab bar the full length of the wall on platform lifts. Access ramps are required to meet requirements similar to those for ramps in Chapter 4 of this document.

Each of the lift types addressed in ASME A18.1 must meet requirements for capacity, load, speed, travel, operating devices, and control equipment. The maximum permitted height for operable parts is consistent with Section 308 of this document. The standard also addresses attendant operation. However, Section 410.1 of this document does not permit attendant operation.

105.2.3 ASTM. Copies of the referenced standards may be obtained from the American Society for Testing and Materials, 100 Bar Harbor Drive, West Conshohocken, Pennsylvania 19428 (<http://www.astm.org>).

ASTM F 1292-99 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment (see 1008.2.6.2).

ASTM F 1292-04 Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment (see 1008.2.6.2).

ASTM F 1487-01 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use (see 106.5).

ASTM F 1951-99 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment (see 1008.2.6.1).

Advisory 105.2.3 ASTM. ASTM F 1292-99 and ASTM F 1292-04 establish a uniform means to measure and compare characteristics of surfacing materials to determine whether materials provide a safe surface under and around playground equipment. These standards are referenced in the play areas requirements of this document when an accessible surface is required inside a play area use zone where a fall attenuating surface is also required. The standards cover the minimum impact attenuation requirements, when tested in accordance with Test Method F 355, for surface systems to be used under and around any piece of playground equipment from which a person may fall.

ASTM F 1487-01 establishes a nationally recognized safety standard for public playground equipment to address injuries identified by the U.S. Consumer Product Safety Commission. It defines the use zone, which is the ground area beneath and immediately adjacent to a play structure or play equipment designed for unrestricted circulation around the equipment and on whose surface it is predicted that a user would land when falling from or exiting a play structure or equipment. The play areas requirements in this document reference the ASTM F 1487 standard when defining accessible routes that overlap use zones requiring fall attenuating surfaces. If the use zone of a playground is not entirely surfaced with an accessible material, at least one accessible route within the use zone must be provided from the perimeter to all accessible play structures or components within the playground.

ASTM F 1951-99 establishes a uniform means to measure the characteristics of surface systems in order to provide performance specifications to select materials for use as an accessible surface under and around playground equipment. Surface materials that comply with this standard and are located in the use zone must also comply with ASTM F 1292. The test methods in this standard address access for children and adults who may traverse the surfacing to aid children who are playing. When a surface is tested it must have an average work per foot value for straight propulsion and for turning less than the average work per foot values for straight propulsion and for turning, respectively, on a hard, smooth surface with a grade of 7% (1:14).

105.2.4 ICC/IBC. Copies of the referenced standard may be obtained from the International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, Virginia 22041 (www.iccsafe.org).

International Building Code, 2000 Edition (see 207.1, 207.2, 216.4.2, 216.4.3, and 1005.2.1).

International Building Code, 2001 Supplement (see 207.1 and 207.2).

International Building Code, 2003 Edition (see 207.1, 207.2, 216.4.2, 216.4.3, and 1005.2.1).

Advisory 105.2.4 ICC/IBC. International Building Code (IBC)-2000 (including 2001 Supplement to the International Codes) and IBC-2003 are referenced for means of egress, areas of refuge, and railings provided on fishing piers and platforms. At least one accessible means of egress is required for every accessible space and at least two accessible means of egress are required where more than one means of egress is required. The technical criteria for accessible means of egress allow the use of exit stairways and evacuation elevators when provided in conjunction with horizontal exits or areas of refuge. While typical elevators are not designed to be used during an emergency evacuation, evacuation elevators are designed with standby power and other features according to the elevator safety standard and can be used for the evacuation of individuals with disabilities. The IBC also provides requirements for areas of refuge, which are fire-rated spaces on levels above or below the exit discharge levels where people unable to use stairs can go to register a call for assistance and wait for evacuation.

The recreation facilities requirements of this document references two sections in the IBC for fishing piers and platforms. An exception addresses the height of the railings, guards, or handrails where a fishing pier or platform is required to include a guard railing, or handrail higher than 34 inches (865 mm) above the ground or deck surface.

105.2.5 NFPA. Copies of the referenced standards may be obtained from the National Fire Protection Association, 1 Batterymarch Park, Quincy, Massachusetts 02169-7471, (<http://www.nfpa.org>).

NFPA 72 National Fire Alarm Code, 1999 Edition (see 702.1 and 809.5.2).

NFPA 72 National Fire Alarm Code, 2002 Edition (see 702.1 and 809.5.2).

Advisory 105.2.5 NFPA. NFPA 72-1999 and NFPA 72-2002 address the application, installation, performance, and maintenance of protective signaling systems and their components. The NFPA 72 incorporates Underwriters Laboratory (UL) 1971 by reference. The standard specifies the characteristics of audible alarms, such as placement and sound levels. However, Section 702 of these requirements limits the volume of an audible alarm to 110 dBA, rather than the maximum 120 dBA permitted by NFPA 72-1999.

NFPA 72 specifies characteristics for visible alarms, such as flash frequency, color, intensity, placement, and synchronization. However, Section 702 of this document requires that visual alarm appliances be permanently installed. UL 1971 specifies intensity dispersion requirements for visible alarms. In particular, NFPA 72 requires visible alarms to have a light source that is clear or white and has polar dispersion complying with UL 1971.

106 Definitions

106.1 General. For the purpose of this document, the terms defined in 106.5 have the indicated meaning.

Advisory 106.1 General. Terms defined in Section 106.5 are italicized in the text of this document.

106.2 Terms Defined in Referenced Standards. Terms not defined in 106.5 or in regulations issued by the Department of Justice and the Department of Transportation to implement the Americans with Disabilities Act, but specifically defined in a referenced standard, shall have the specified meaning from the referenced standard unless otherwise stated.

106.3 Undefined Terms. The meaning of terms not specifically defined in 106.5 or in regulations issued by the Department of Justice and the Department of Transportation to implement the Americans with Disabilities Act or in referenced standards shall be as defined by collegiate dictionaries in the sense that the context implies.

106.4 Interchangeability. Words, terms and phrases used in the singular include the plural and those used in the plural include the singular.

106.5 Defined Terms.

Accessible. A *site, building, facility*, or portion thereof that complies with this part.

Accessible Means of Egress. A continuous and unobstructed way of egress travel from any point in a *building* or *facility* that provides an *accessible* route to an area of refuge, a horizontal exit, or a *public way*.

Addition. An expansion, extension, or increase in the gross floor area or height of a *building* or *facility*.

Administrative Authority. A governmental agency that adopts or enforces regulations and guidelines for the design, construction, or *alteration* of *buildings* and *facilities*.

Alteration. A change to a *building* or *facility* that affects or could affect the usability of the *building* or *facility* or portion thereof. *Alterations* include, but are not limited to, remodeling, renovation, rehabilitation, reconstruction, historic restoration, resurfacing of *circulation paths* or *vehicular ways*, changes or rearrangement of the structural parts or *elements*, and changes or rearrangement in the plan configuration of walls and full-height partitions. Normal maintenance, reroofing, painting or wallpapering, or changes to mechanical and electrical systems are not *alterations* unless they affect the usability of the *building* or *facility*.

Amusement Attraction. Any *facility*, or portion of a *facility*, located within an amusement park or theme park which provides amusement without the use of an amusement device. *Amusement attractions* include, but are not limited to, fun houses, barrels, and other attractions without seats.

Amusement Ride. A system that moves persons through a fixed course within a defined area for the purpose of amusement.

Amusement Ride Seat. A seat that is built-in or mechanically fastened to an *amusement ride* intended to be occupied by one or more passengers.

Area of Sport Activity. That portion of a room or *space* where the play or practice of a sport occurs.

Assembly Area. A *building* or *facility*, or portion thereof, used for the purpose of entertainment, educational or civic gatherings, or similar purposes. For the purposes of these requirements, *assembly areas* include, but are not limited to, classrooms, lecture halls, courtrooms, public meeting rooms, public hearing rooms, legislative chambers, motion picture houses, auditoria, theaters, playhouses, dinner theaters, concert halls, centers for the performing arts, amphitheatres, arenas, stadiums, grandstands, or convention centers.

Assistive Listening System (ALS). An amplification system utilizing transmitters, receivers, and coupling devices to bypass the acoustical *space* between a sound source and a listener by means of induction loop, radio frequency, infrared, or direct-wired equipment.

Boarding Pier. A portion of a pier where a boat is temporarily secured for the purpose of embarking or disembarking.

Boat Launch Ramp. A sloped surface designed for launching and retrieving trailered boats and other water craft to and from a body of water.

Boat Slip. That portion of a pier, main pier, finger pier, or float where a boat is moored for the purpose of berthing, embarking, or disembarking.

Building. Any structure used or intended for supporting or sheltering any use or occupancy.

Catch Pool. A pool or designated section of a pool used as a terminus for water slide flumes.

Characters. Letters, numbers, punctuation marks and typographic symbols.

Children's Use. Describes *spaces* and *elements* specifically designed for use primarily by people 12 years old and younger.

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.

Closed-Circuit Telephone. A telephone with a dedicated line such as a house phone, courtesy phone or phone that must be used to gain entry to a *facility*.

Common Use. Interior or exterior *circulation paths*, rooms, *spaces*, or *elements* that are not for *public use* and are made available for the shared use of two or more people.

Cross Slope. The slope that is perpendicular to the direction of travel (see *running slope*).

Curb Ramp. A short *ramp* cutting through a curb or built up to it.

Detectable Warning. A standardized surface feature built in or applied to walking surfaces or other *elements* to warn of hazards on a *circulation path*.

Element. An architectural or mechanical component of a *building, facility, space, or site*.

Elevated Play Component. A *play component* that is approached above or below grade and that is part of a composite play structure consisting of two or more *play components* attached or functionally linked to create an integrated unit providing more than one play activity.

Employee Work Area. All or any portion of a *space* used only by employees and used only for work. Corridors, toilet rooms, kitchenettes and break rooms are not *employee work areas*.

Entrance. Any access point to a *building* or portion of a *building* or *facility* used for the purpose of entering. An *entrance* includes the approach *walk*, the vertical access leading to the *entrance* platform, the *entrance* platform itself, vestibule if provided, the entry door or gate, and the hardware of the entry door or gate.

Facility. All or any portion of *buildings, structures, site improvements, elements, and pedestrian routes or vehicular ways* located on a *site*.

Gangway. A variable-sloped pedestrian walkway that links a fixed structure on land with a floating structure. *Gangways* that connect to vessels are not addressed by this document.

Golf Car Passage. A continuous passage on which a motorized golf car can operate.

Ground Level Play Component. A *play component* that is approached and exited at the ground level.

Key Station. Rapid and light rail stations, and commuter rail stations, as defined under criteria established by the Department of Transportation in 49 CFR 37.47 and 49 CFR 37.51, respectively.

Mail Boxes. Receptacles for the receipt of documents, packages, or other deliverable matter. *Mail boxes* include, but are not limited to, post office boxes and receptacles provided by commercial mail-receiving agencies, apartment *facilities*, or schools.

Marked Crossing. A crosswalk or other identified path intended for pedestrian use in crossing a *vehicular way*.

Mezzanine. An intermediate level or levels between the floor and ceiling of any *story* with an aggregate floor area of not more than one-third of the area of the room or *space* in which the level or levels are located. *Mezzanines* have sufficient elevation that *space* for human occupancy can be provided on the floor below.

Occupant Load. The number of persons for which the means of egress of a *building* or portion of a *building* is designed.

Operable Part. A component of an *element* used to insert or withdraw objects, or to activate, deactivate, or adjust the *element*.

Pictogram. A pictorial symbol that represents activities, *facilities*, or concepts.

Play Area. A portion of a *site* containing *play components* designed and constructed for children.

Play Component. An *element* intended to generate specific opportunities for play, socialization, or learning. *Play components* are manufactured or natural; and are stand-alone or part of a composite play structure.

Private Building or Facility. A place of public accommodation or a commercial *building* or *facility* subject to title III of the ADA and 28 CFR part 36 or a transportation *building* or *facility* subject to title III of the ADA and 49 CFR 37.45.

Public Building or Facility. A *building* or *facility* or portion of a *building* or *facility* designed, constructed, or *altered* by, on behalf of, or for the use of a public entity subject to title II of the ADA and 28 CFR part 35 or to title II of the ADA and 49 CFR 37.41 or 37.43.

Public Entrance. An *entrance* that is not a *service entrance* or a *restricted entrance*.

Public Use. Interior or exterior rooms, *spaces*, or *elements* that are made available to the public. *Public use* may be provided at a *building* or *facility* that is privately or publicly owned.

Public Way. Any street, alley or other parcel of land open to the outside air leading to a public street, which has been deeded, dedicated or otherwise permanently appropriated to the public for *public use* and which has a clear width and height of not less than 10 feet (3050 mm).

Qualified Historic Building or Facility. A *building* or *facility* that is listed in or eligible for listing in the National Register of Historic Places, or designated as historic under an appropriate State or local law.

Ramp. A walking surface that has a *running slope* steeper than 1:20.

Residential Dwelling Unit. A unit intended to be used as a residence, that is primarily long-term in nature. *Residential dwelling units* do not include *transient lodging*, inpatient medical care, licensed long-term care, and detention or correctional *facilities*.

Restricted Entrance. An *entrance* that is made available for *common use* on a controlled basis but not *public use* and that is not a *service entrance*.

Running Slope. The slope that is parallel to the direction of travel (see *cross slope*).

Self-Service Storage. *Building* or *facility* designed and used for the purpose of renting or leasing individual storage *spaces* to customers for the purpose of storing and removing personal property on a self-service basis.

Service Entrance. An *entrance* intended primarily for delivery of goods or services.

Site. A parcel of land bounded by a property line or a designated portion of a public right-of-way.

Soft Contained Play Structure. A play structure made up of one or more *play components* where the user enters a fully enclosed play environment that utilizes pliable materials, such as plastic, netting, or fabric.

Space. A definable area, such as a room, toilet room, hall, *assembly area*, *entrance*, storage room, alcove, courtyard, or lobby.

Story. That portion of a *building* or *facility* designed for human occupancy included between the upper surface of a floor and upper surface of the floor or roof next above. A *story* containing one or more *mezzanines* has more than one floor level.

Structural Frame. The columns and the girders, beams, and trusses having direct connections to the columns and all other members that are essential to the stability of the *building* or *facility* as a whole.

Tactile. An object that can be perceived using the sense of touch.

Technically Infeasible. With respect to an *alteration* of a *building* or a *facility*, something that has little likelihood of being accomplished because existing structural conditions would require removing or *altering* a load-bearing member that is an essential part of the *structural frame*; or because other existing physical or *site* constraints prohibit modification or *addition* of *elements*, *spaces*, or features that are in full and strict compliance with the minimum requirements.

Teeing Ground. In golf, the starting place for the hole to be played.

Transfer Device. Equipment designed to facilitate the transfer of a person from a wheelchair or other mobility aid to and from an *amusement ride* seat.

Transient Lodging. A *building* or *facility* containing one or more guest room(s) for sleeping that provides accommodations that are primarily short-term in nature. *Transient lodging* does not include *residential dwelling units* intended to be used as a residence, inpatient medical care *facilities*, licensed long-term care *facilities*, detention or correctional *facilities*, or *private buildings or facilities* that contain not more than five rooms for rent or hire and that are actually occupied by the proprietor as the residence of such proprietor.

Transition Plate. A sloping pedestrian walking surface located at the end(s) of a *gangway*.

TTY. An abbreviation for teletypewriter. Machinery that employs interactive text-based communication through the transmission of coded signals across the telephone network. *TTYs* may include, for example, devices known as TDDs (telecommunication display devices or telecommunication devices for deaf persons) or computers with special modems. *TTYs* are also called text telephones.

Use Zone. The ground level area beneath and immediately adjacent to a play structure or play equipment that is designated by ASTM F 1487 (incorporated by reference, see "Referenced Standards" in Chapter 1) for unrestricted circulation around the play equipment and where it is predicted that a user would land when falling from or exiting the play equipment.

Vehicular Way. A route provided for vehicular traffic, such as in a street, driveway, or parking *facility*.

Walk. An exterior prepared surface for pedestrian use, including pedestrian areas such as plazas and courts.

Wheelchair Space. *Space* for a single wheelchair and its occupant.

Work Area Equipment. Any machine, instrument, engine, motor, pump, conveyor, or other apparatus used to perform work. As used in this document, this term shall apply only to equipment that is permanently installed or built-in in *employee work areas*. *Work area equipment* does not include passenger elevators and other accessible means of vertical transportation.

cited in *Kirola v. City & County of San Francisco*
No. 14-17521 archived on June 19, 2017

ADA CHAPTER 2: SCOPING REQUIREMENTS

201 Application

201.1 Scope. All areas of newly designed and newly constructed *buildings* and *facilities* and *altered* portions of existing *buildings* and *facilities* shall comply with these requirements.

Advisory 201.1 Scope. These requirements are to be applied to all areas of a facility unless exempted, or where scoping limits the number of multiple elements required to be accessible. For example, not all medical care patient rooms are required to be accessible; those that are not required to be accessible are not required to comply with these requirements. However, common use and public use spaces such as recovery rooms, examination rooms, and cafeterias are not exempt from these requirements and must be accessible.

201.2 Application Based on Building or Facility Use. Where a *site*, *building*, *facility*, room, or *space* contains more than one use, each portion shall comply with the applicable requirements for that use.

201.3 Temporary and Permanent Structures. These requirements shall apply to temporary and permanent *buildings* and *facilities*.

Advisory 201.3 Temporary and Permanent Structures. Temporary buildings or facilities covered by these requirements include, but are not limited to, reviewing stands, temporary classrooms, bleacher areas, stages, platforms and daises, fixed furniture systems, wall systems, and exhibit areas, temporary banking facilities, and temporary health screening facilities. Structures and equipment directly associated with the actual processes of construction are not required to be accessible as permitted in 203.2.

202 Existing Buildings and Facilities

202.1 General. *Additions* and *alterations* to existing *buildings* or *facilities* shall comply with 202.

202.2 Additions. Each *addition* to an existing *building* or *facility* shall comply with the requirements for new construction. Each *addition* that affects or could affect the usability of or access to an area containing a primary function shall comply with 202.4.

202.3 Alterations. Where existing *elements* or *spaces* are *altered*, each *altered element* or *space* shall comply with the applicable requirements of Chapter 2.

EXCEPTIONS: 1. Unless required by 202.4, where *elements* or *spaces* are *altered* and the *circulation path* to the *altered element* or *space* is not *altered*, an *accessible* route shall not be required.

2. In *alterations*, where compliance with applicable requirements is *technically infeasible*, the *alteration* shall comply with the requirements to the maximum extent feasible.

3. *Residential dwelling units* not required to be *accessible* in compliance with a standard issued pursuant to the Americans with Disabilities Act or Section 504 of the Rehabilitation Act of 1973, as amended, shall not be required to comply with 202.3.

Advisory 202.3 Alterations. Although covered entities are permitted to limit the scope of an alteration to individual elements, the alteration of multiple elements within a room or space may provide a cost-effective opportunity to make the entire room or space accessible. Any elements or spaces of the building or facility that are required to comply with these requirements must be made accessible within the scope of the alteration, to the maximum extent feasible. If providing accessibility in compliance with these requirements for people with one type of disability (e.g., people who use wheelchairs) is not feasible, accessibility must still be provided in compliance with the requirements for people with other types of disabilities (e.g., people who have hearing impairments or who have vision impairments) to the extent that such accessibility is feasible.

202.3.1 Prohibited Reduction in Access. An *alteration* that decreases or has the effect of decreasing the *accessibility* of a *building* or *facility* below the requirements for new construction at the time of the *alteration* is prohibited.

202.3.2 Extent of Application. An *alteration* of an existing *element*, *space* or area of a *building* or *facility* shall not impose a requirement for *accessibility* greater than required for new construction.

202.4 Alterations Affecting Primary Function Areas. In addition to the requirements of 202.3, an *alteration* that affects or could affect the usability of or access to an area containing a primary function shall be made so as to ensure that to the maximum extent feasible, the path of travel to the *altered* area, including the rest room, telephones, and drinking fountains serving the *altered* area, are readily *accessible* to and usable by individuals with disabilities, unless such *alterations* are disproportionate to the overall *alterations* in terms of cost and scope as determined under criteria established by the Attorney General. In existing transportation *facilities*, an area of primary function shall be as defined under regulations published by the Secretary of the Department of Transportation or the Attorney General.

EXCEPTION: *Residential dwelling units* shall not be required to comply with 202.4.

Advisory 202.4 Alterations Affecting Primary Function Areas. An area of a building or facility containing a major activity for which the building or facility is intended is a primary function area. Department of Justice ADA regulations state, "Alterations made to provide an accessible path of travel to the altered area will be deemed disproportionate to the overall alteration when the cost exceeds 20% of the cost of the alteration to the primary function area." (28 CFR 36.403 (f)(1)). See also Department of Transportation ADA regulations, which use similar concepts in the context of public sector transportation facilities (49 CFR 37.43 (e)(1)).

There can be multiple areas containing a primary function in a single building. Primary function areas are not limited to public use areas. For example, both a bank lobby and the bank's employee areas such as the teller areas and walk-in safe are primary function areas.

Advisory 202.4 Alterations Affecting Primary Function Areas (Continued). Also, mixed use facilities may include numerous primary function areas for each use. Areas containing a primary function do not include: mechanical rooms, boiler rooms, supply storage rooms, employee lounges or locker rooms, janitorial closets, entrances, corridors, or restrooms.

202.5 Alterations to Qualified Historic Buildings and Facilities. *Alterations to a qualified historic building or facility* shall comply with 202.3 and 202.4.

EXCEPTION: Where the State Historic Preservation Officer or Advisory Council on Historic Preservation determines that compliance with the requirements for *accessible* routes, *entrances*, or toilet *facilities* would threaten or destroy the historic significance of the *building* or *facility*, the exceptions for *alterations to qualified historic buildings or facilities* for that *element* shall be permitted to apply.

Advisory 202.5 Alterations to Qualified Historic Buildings and Facilities Exception.

State Historic Preservation Officers are State appointed officials who carry out certain responsibilities under the National Historic Preservation Act. State Historic Preservation Officers consult with Federal and State agencies, local governments, and private entities on providing access and protecting significant elements of qualified historic buildings and facilities. There are exceptions for alterations to qualified historic buildings and facilities for accessible routes (206.2.1 Exception 1 and 206.2.3 Exception 7); entrances (206.4 Exception 2); and toilet facilities (213.2 Exception 2). When an entity believes that compliance with the requirements for any of these elements would threaten or destroy the historic significance of the building or facility, the entity should consult with the State Historic Preservation Officer. If the State Historic Preservation Officer agrees that compliance with the requirements for a specific element would threaten or destroy the historic significance of the building or facility, use of the exception is permitted. Public entities have an additional obligation to achieve program accessibility under the Department of Justice ADA regulations. See 28 CFR 35.150. These regulations require public entities that operate historic preservation programs to give priority to methods that provide physical access to individuals with disabilities. If alterations to a qualified historic building or facility to achieve program accessibility would threaten or destroy the historic significance of the building or facility, fundamentally alter the program, or result in undue financial or administrative burdens, the Department of Justice ADA regulations allow alternative methods to be used to achieve program accessibility. In the case of historic preservation programs, such as an historic house museum, alternative methods include using audio-visual materials to depict portions of the house that cannot otherwise be made accessible. In the case of other qualified historic properties, such as an historic government office building, alternative methods include relocating programs and services to accessible locations. The Department of Justice ADA regulations also allow public entities to use alternative methods when altering qualified historic buildings or facilities in the rare situations where the State Historic Preservation Officer determines that it is not feasible to provide physical access using the exceptions permitted in Section 202.5 without threatening or destroying the historic significance of the building or facility. See 28 CFR 35.151(d).

Advisory 202.5 Alterations to Qualified Historic Buildings and Facilities Exception (Continued). The AccessAbility Office at the National Endowment for the Arts (NEA) provides a variety of resources for museum operators and historic properties including: the Design for Accessibility Guide and the Disability Symbols. Contact NEA about these and other resources at (202) 682-5532 or www.arts.gov.

203 General Exceptions

203.1 General. *Sites, buildings, facilities, and elements* are exempt from these requirements to the extent specified by 203.

203.2 Construction Sites. Structures and *sites* directly associated with the actual processes of construction, including but not limited to, scaffolding, bridging, materials hoists, materials storage, and construction trailers shall not be required to comply with these requirements or to be on an *accessible* route. Portable toilet units provided for use exclusively by construction personnel on a construction *site* shall not be required to comply with 213 or to be on an *accessible* route.

203.3 Raised Areas. Areas raised primarily for purposes of security, life safety, or fire safety, including but not limited to, observation or lookout galleries, prison guard towers, fire towers, or life guard stands shall not be required to comply with these requirements or to be on an *accessible* route.

203.4 Limited Access Spaces. *Spaces* accessed only by ladders, catwalks, crawl *spaces*, or very narrow passageways shall not be required to comply with these requirements or to be on an *accessible* route.

203.5 Machinery Spaces. *Spaces* frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment shall not be required to comply with these requirements or to be on an *accessible* route. Machinery *spaces* include, but are not limited to, elevator pits or elevator penthouses; mechanical, electrical or communications equipment rooms; piping or equipment catwalks; water or sewage treatment pump rooms and stations; electric substations and transformer vaults; and highway and tunnel utility *facilities*.

203.6 Single Occupant Structures. Single occupant structures accessed only by passageways below grade or elevated above standard curb height, including but not limited to, toll booths that are accessed only by underground tunnels, shall not be required to comply with these requirements or to be on an *accessible* route.

203.7 Detention and Correctional Facilities. In detention and correctional *facilities, common use* areas that are used only by inmates or detainees and security personnel and that do not serve holding cells or housing cells required to comply with 232, shall not be required to comply with these requirements or to be on an *accessible* route.

203.8 Residential Facilities. In residential *facilities, common use* areas that do not serve *residential dwelling units* required to provide mobility features complying with 809.2 through 809.4 shall not be required to comply with these requirements or to be on an *accessible* route.

203.9 Employee Work Areas. *Spaces and elements within employee work areas shall only be required to comply with 206.2.8, 207.1, and 215.3 and shall be designed and constructed so that individuals with disabilities can approach, enter, and exit the employee work area. Employee work areas, or portions of employee work areas, other than raised courtroom stations, that are less than 300 square feet (28 m²) and elevated 7 inches (180 mm) or more above the finish floor or ground where the elevation is essential to the function of the space shall not be required to comply with these requirements or to be on an accessible route.*

Advisory 203.9 Employee Work Areas. Although areas used exclusively by employees for work are not required to be fully accessible, consider designing such areas to include non-required turning spaces, and provide accessible elements whenever possible. Under the ADA, employees with disabilities are entitled to reasonable accommodations in the workplace; accommodations can include alterations to spaces within the facility. Designing employee work areas to be more accessible at the outset will avoid more costly retrofits when current employees become temporarily or permanently disabled, or when new employees with disabilities are hired. Contact the Equal Employment Opportunity Commission (EEOC) at www.eeoc.gov for information about title I of the ADA prohibiting discrimination against people with disabilities in the workplace.

203.10 Raised Refereeing, Judging, and Scoring Areas. Raised structures used solely for refereeing, judging, or scoring a sport shall not be required to comply with these requirements or to be on an accessible route.

203.11 Water Slides. Water slides shall not be required to comply with these requirements or to be on an accessible route.

203.12 Animal Containment Areas. Animal containment areas that are not for *public use* shall not be required to comply with these requirements or to be on an accessible route.

Advisory 203.12 Animal Containment Areas. Public circulation routes where animals may travel, such as in petting zoos and passageways alongside animal pens in State fairs, are not eligible for the exception.

203.13 Raised Boxing or Wrestling Rings. Raised boxing or wrestling rings shall not be required to comply with these requirements or to be on an accessible route.

203.14 Raised Diving Boards and Diving Platforms. Raised diving boards and diving platforms shall not be required to comply with these requirements or to be on an accessible route.

204 Protruding Objects

204.1 General. Protruding objects on *circulation paths* shall comply with 307.

EXCEPTIONS: 1. Within *areas of sport activity*, protruding objects on *circulation paths* shall not be required to comply with 307.

2. Within *play areas*, protruding objects on *circulation paths* shall not be required to comply with 307 provided that ground level accessible routes provide vertical clearance in compliance with 1008.2.

205 Operable Parts

205.1 General. *Operable parts* on *accessible elements*, *accessible routes*, and in *accessible rooms and spaces* shall comply with 309.

- EXCEPTIONS:**
1. *Operable parts* that are intended for use only by service or maintenance personnel shall not be required to comply with 309.
 2. Electrical or communication receptacles serving a dedicated use shall not be required to comply with 309.
 3. Where two or more outlets are provided in a kitchen above a length of counter top that is uninterrupted by a sink or appliance, one outlet shall not be required to comply with 309.
 4. Floor electrical receptacles shall not be required to comply with 309.
 5. HVAC diffusers shall not be required to comply with 309.
 6. Except for light switches, where redundant controls are provided for a single *element*, one control in each *space* shall not be required to comply with 309.
 7. Cleats and other boat securement devices shall not be required to comply with 309.3.
 8. Exercise machines and exercise equipment shall not be required to comply with 309.

Advisory 205.1 General. Controls covered by 205.1 include, but are not limited to, light switches, circuit breakers, duplexes and other convenience receptacles, environmental and appliance controls, plumbing fixture controls, and security and intercom systems.

206 Accessible Routes

206.1 General. *Accessible routes* shall be provided in accordance with 206 and shall comply with Chapter 4.

206.2 Where Required. *Accessible routes* shall be provided where required by 206.2.

206.2.1 Site Arrival Points. At least one *accessible route* shall be provided within the *site* from *accessible parking spaces* and *accessible passenger loading zones*; public streets and sidewalks; and public transportation stops to the *accessible building* or *facility entrance* they serve.

- EXCEPTIONS:**
1. Where exceptions for *alterations to qualified historic buildings or facilities* are permitted by 202.5, no more than one *accessible route* from a *site arrival point* to an *accessible entrance* shall be required.
 2. An *accessible route* shall not be required between *site arrival points* and the *building or facility entrance* if the only means of access between them is a *vehicular way* not providing pedestrian access.

Advisory 206.2.1 Site Arrival Points. Each site arrival point must be connected by an accessible route to the accessible building entrance or entrances served. Where two or more similar site arrival points, such as bus stops, serve the same accessible entrance or entrances, both bus stops must be on accessible routes. In addition, the accessible routes must serve all of the accessible entrances on the site.

Advisory 206.2.1 Site Arrival Points Exception 2. Access from site arrival points may include vehicular ways. Where a vehicular way, or a portion of a vehicular way, is provided for pedestrian travel, such as within a shopping center or shopping mall parking lot, this exception does not apply.

206.2.2 Within a Site. At least one *accessible* route shall connect *accessible buildings*, *accessible facilities*, *accessible elements*, and *accessible spaces* that are on the same *site*.

EXCEPTION: An *accessible* route shall not be required between *accessible buildings*, *accessible facilities*, *accessible elements*, and *accessible spaces* if the only means of access between them is a *vehicular way* not providing pedestrian access.

Advisory 206.2.2 Within a Site. An accessible route is required to connect to the boundary of each area of sport activity. Examples of areas of sport activity include: soccer fields, basketball courts, baseball fields, running tracks, skating rinks, and the area surrounding a piece of gymnastic equipment. While the size of an area of sport activity may vary from sport to sport, each includes only the space needed to play. Where multiple sports fields or courts are provided, an accessible route is required to each field or area of sport activity.

206.2.3 Multi-Story Buildings and Facilities. At least one *accessible* route shall connect each *story* and *mezzanine* in multi-story buildings and facilities.

- EXCEPTIONS:**
1. In *private buildings or facilities* that are less than three *stories* or that have less than 3000 square feet (279 m²) per *story*, an *accessible* route shall not be required to connect *stories* provided that the *building or facility* is not a shopping center, a shopping mall, the professional office of a health care provider, a terminal, depot or other station used for specified public transportation, an airport passenger terminal, or another type of *facility* as determined by the Attorney General.
 2. Where a two *story public building or facility* has one *story* with an *occupant load* of five or fewer persons that does not contain *public use space*, that *story* shall not be required to be connected to the *story* above or below.
 3. In detention and correctional *facilities*, an *accessible* route shall not be required to connect *stories* where cells with mobility features required to comply with 807.2, all *common use* areas serving cells with mobility features required to comply with 807.2, and all *public use* areas are on an *accessible* route.
 4. In residential *facilities*, an *accessible* route shall not be required to connect *stories* where *residential dwelling units* with mobility features required to comply with 809.2 through 809.4, all *common use* areas serving *residential dwelling units* with mobility features required to comply with 809.2 through 809.4, and *public use* areas serving *residential dwelling units* are on an *accessible* route.
 5. Within multi-story *transient lodging* guest rooms with mobility features required to comply with 806.2, an *accessible* route shall not be required to connect *stories* provided that *spaces* complying with 806.2 are on an *accessible* route and sleeping accommodations for two persons minimum are provided on a *story* served by an accessible route.
 6. In air traffic control towers, an *accessible* route shall not be required to serve the cab and the floor immediately below the cab.

7. Where exceptions for *alterations to qualified historic buildings or facilities* are permitted by 202.5, an *accessible* route shall not be required to *stories* located above or below the *accessible story*.

Advisory 206.2.3 Multi-Story Buildings and Facilities. Spaces and elements located on a level not required to be served by an accessible route must fully comply with this document. While a mezzanine may be a change in level, it is not a story. If an accessible route is required to connect stories within a building or facility, the accessible route must serve all mezzanines.

Advisory 206.2.3 Multi-Story Buildings and Facilities Exception 4. Where common use areas are provided for the use of residents, it is presumed that all such common use areas "serve" accessible dwelling units unless use is restricted to residents occupying certain dwelling units. For example, if all residents are permitted to use all laundry rooms, then all laundry rooms "serve" accessible dwelling units. However, if the laundry room on the first floor is restricted to use by residents on the first floor, and the second floor laundry room is for use by occupants of the second floor, then first floor accessible units are "served" only by laundry rooms on the first floor. In this example, an accessible route is not required to the second floor provided that all accessible units and all common use areas serving them are on the first floor.

206.2.3.1 Stairs and Escalators in Existing Buildings. In *alterations* and *additions*, where an escalator or stair is provided where none existed previously and major structural modifications are necessary for the installation, an *accessible* route shall be provided between the levels served by the escalator or stair unless exempted by 206.2.3 Exceptions 1 through 7.

206.2.4 Spaces and Elements. At least one *accessible* route shall connect *accessible building or facility entrances* with all *accessible spaces* and *elements* within the *building or facility* which are otherwise connected by a *circulation path* unless exempted by 206.2.3 Exceptions 1 through 7.

EXCEPTIONS: 1. Raised courtroom stations, including judges' benches, clerks' stations, bailiffs' stations, deputy clerks' stations, and court reporters' stations shall not be required to provide vertical access provided that the required clear floor *space*, maneuvering *space*, and, if appropriate, electrical service are installed at the time of initial construction to allow future installation of a means of vertical access complying with 405, 407, 408, or 410 without requiring substantial reconstruction of the *space*.

2. In *assembly areas* with fixed seating required to comply with 221, an *accessible* route shall not be required to serve fixed seating where *wheelchair spaces* required to be on an *accessible* route are not provided.

3. *Accessible* routes shall not be required to connect *mezzanines* where *buildings or facilities* have no more than one story. In addition, *accessible* routes shall not be required to connect stories or *mezzanines* where multi-story *buildings or facilities* are exempted by 206.2.3 Exceptions 1 through 7.

Advisory 206.2.4 Spaces and Elements. Accessible routes must connect all spaces and elements required to be accessible including, but not limited to, raised areas and speaker platforms.

Advisory 206.2.4 Spaces and Elements Exception 1. The exception does not apply to areas that are likely to be used by members of the public who are not employees of the court such as jury areas, attorney areas, or witness stands.

206.2.5 Restaurants and Cafeterias. In restaurants and cafeterias, an *accessible* route shall be provided to all dining areas, including raised or sunken dining areas, and outdoor dining areas.

EXCEPTIONS: 1. In *buildings or facilities* not required to provide an *accessible* route between *stories*, an *accessible* route shall not be required to a *mezzanine* dining area where the *mezzanine* contains less than 25 percent of the total combined area for seating and dining and where the same decor and services are provided in the *accessible* area.

2. In *alterations*, an *accessible* route shall not be required to existing raised or sunken dining areas, or to all parts of existing outdoor dining areas where the same services and decor are provided in an *accessible space* usable by the public and not restricted to use by people with disabilities.

3. In sports *facilities*, tiered dining areas providing seating required to comply with 221 shall be required to have *accessible* routes serving at least 25 percent of the dining area provided that *accessible* routes serve seating complying with 221 and each tier is provided with the same services.

Advisory 206.2.5 Restaurants and Cafeterias Exception 2. Examples of "same services" include, but are not limited to, bar service, rooms having smoking and non-smoking sections, lotto and other table games, carry-out, and buffet service. Examples of "same decor" include, but are not limited to, seating at or near windows and railings with views, areas designed with a certain theme, party and banquet rooms, and rooms where entertainment is provided.

206.2.6 Performance Areas. Where a *circulation path* directly connects a performance area to an assembly seating area, an *accessible* route shall directly connect the assembly seating area with the performance area. An *accessible* route shall be provided from performance areas to ancillary areas or *facilities* used by performers unless exempted by 206.2.3 Exceptions 1 through 7.

206.2.7 Press Boxes. Press boxes in *assembly areas* shall be on an *accessible* route.

EXCEPTIONS: 1. An *accessible* route shall not be required to press boxes in bleachers that have points of entry at only one level provided that the aggregate area of all press boxes is 500 square feet (46 m²) maximum.

2. An *accessible* route shall not be required to free-standing press boxes that are elevated above grade 12 feet (3660 mm) minimum provided that the aggregate area of all press boxes is 500 square feet (46 m²) maximum.

Advisory 206.2.7 Press Boxes Exception 2. Where a facility contains multiple assembly areas, the aggregate area of the press boxes in each assembly area is to be calculated separately. For example, if a university has a soccer stadium with three press boxes elevated 12 feet (3660 mm) or more above grade and each press box is 150 square feet (14 m²), then the aggregate area of the soccer stadium press boxes is less than 500 square feet (46 m²) and Exception 2 applies to the soccer stadium. If that same university also has a football stadium with two press boxes elevated 12 feet (3660 mm) or more above grade and one press box is 250 square feet (23 m²), and the second is 275 square feet (26 m²), then the aggregate area of the football stadium press boxes is more than 500 square feet (46 m²) and Exception 2 does not apply to the football stadium.

206.2.8 Employee Work Areas. *Common use circulation paths* within *employee work areas* shall comply with 402.

EXCEPTIONS: 1. *Common use circulation paths* located within *employee work areas* that are less than 1000 square feet (93 m²) and defined by permanently installed partitions, counters, casework, or furnishings shall not be required to comply with 402.

2. *Common use circulation paths* located within *employee work areas* that are an integral component of *work area equipment* shall not be required to comply with 402.

3. *Common use circulation paths* located within exterior *employee work areas* that are fully exposed to the weather shall not be required to comply with 402.

Advisory 206.2.8 Employee Work Areas Exception 1. Modular furniture that is not permanently installed is not directly subject to these requirements. The Department of Justice ADA regulations provide additional guidance regarding the relationship between these requirements and elements that are not part of the built environment. Additionally, the Equal Employment Opportunity Commission (EEOC) implements title I of the ADA which requires non-discrimination in the workplace. EEOC can provide guidance regarding employers' obligations to provide reasonable accommodations for employees with disabilities.

Advisory 206.2.8 Employee Work Areas Exception 2. Large pieces of equipment, such as electric turbines or water pumping apparatus, may have stairs and elevated walkways used for overseeing or monitoring purposes which are physically part of the turbine or pump. However, passenger elevators used for vertical transportation between stories are not considered "work area equipment" as defined in Section 106.5.

206.2.9 Amusement Rides. *Amusement rides* required to comply with 234 shall provide *accessible* routes in accordance with 206.2.9. *Accessible* routes serving *amusement rides* shall comply with Chapter 4 except as modified by 1002.2.

206.2.9.1 Load and Unload Areas. Load and unload areas shall be on an *accessible* route. Where load and unload areas have more than one loading or unloading position, at least one loading and unloading position shall be on an *accessible* route.

206.2.9.2 Wheelchair Spaces, Ride Seats Designed for Transfer, and Transfer Devices.

When *amusement rides* are in the load and unload position, *wheelchair spaces* complying with 1002.4, *amusement ride seats* designed for transfer complying with 1002.5, and *transfer devices* complying with 1002.6 shall be on an *accessible* route.

206.2.10 Recreational Boating Facilities. *Boat slips* required to comply with 235.2 and *boarding piers* at *boat launch ramps* required to comply with 235.3 shall be on an *accessible* route.

Accessible routes serving recreational boating *facilities* shall comply with Chapter 4, except as modified by 1003.2.

206.2.11 Bowling Lanes. Where bowling lanes are provided, at least 5 percent, but no fewer than one of each type of bowling lane, shall be on an *accessible* route.

206.2.12 Court Sports. In court sports, at least one *accessible* route shall directly connect both sides of the court.

206.2.13 Exercise Machines and Equipment. Exercise machines and equipment required to comply with 236 shall be on an *accessible* route.

206.2.14 Fishing Piers and Platforms. Fishing piers and platforms shall be on an *accessible* route. *Accessible* routes serving fishing piers and platforms shall comply with Chapter 4 except as modified by 1005.1.

206.2.15 Golf Facilities. At least one *accessible* route shall connect *accessible elements* and *spaces* within the boundary of the golf course. In addition, *accessible* routes serving golf car rental areas; bag drop areas; course weather shelters complying with 238.2.3; course toilet rooms; and practice putting greens, practice *teeing grounds*, and *teeing stations* at driving ranges complying with 238.3 shall comply with Chapter 4 except as modified by 1006.2.

EXCEPTION: *Golf car passages* complying with 1006.3 shall be permitted to be used for all or part of *accessible* routes required by 206.2.15.

206.2.16 Miniature Golf Facilities. Holes required to comply with 239.2, including the start of play, shall be on an *accessible* route. *Accessible* routes serving miniature golf *facilities* shall comply with Chapter 4 except as modified by 1007.2.

206.2.17 Play Areas. *Play areas* shall provide *accessible* routes in accordance with 206.2.17. *Accessible* routes serving *play areas* shall comply with Chapter 4 except as modified by 1008.2.

206.2.17.1 Ground Level and Elevated Play Components. At least one *accessible* route shall be provided within the *play area*. The *accessible* route shall connect *ground level play components* required to comply with 240.2.1 and *elevated play components* required to comply with 240.2.2, including entry and exit points of the *play components*.

206.2.17.2 Soft Contained Play Structures. Where three or fewer entry points are provided for *soft contained play structures*, at least one entry point shall be on an *accessible* route. Where

four or more entry points are provided for *soft contained play structures*, at least two entry points shall be on an *accessible* route.

206.3 Location. *Accessible* routes shall coincide with or be located in the same area as general *circulation paths*. Where *circulation paths* are interior, required *accessible* routes shall also be interior.

Advisory 206.3 Location. The accessible route must be in the same area as the general circulation path. This means that circulation paths, such as vehicular ways designed for pedestrian traffic, walks, and unpaved paths that are designed to be routinely used by pedestrians must be accessible or have an accessible route nearby. Additionally, accessible vertical interior circulation must be in the same area as stairs and escalators, not isolated in the back of the facility.

206.4 Entrances. *Entrances* shall be provided in accordance with 206.4. *Entrance* doors, doorways, and gates shall comply with 404 and shall be on an *accessible* route complying with 402.

EXCEPTIONS: 1. Where an *alteration* includes *alterations* to an *entrance*, and the *building* or *facility* has another *entrance* complying with 404 that is on an *accessible* route, the *altered entrance* shall not be required to comply with 206.4 unless required by 202.4.

2. Where exceptions for *alterations* to *qualified historic buildings or facilities* are permitted by 202.5, no more than one *public entrance* shall be required to comply with 206.4. Where no *public entrance* can comply with 206.4 under criteria established in 202.5 Exception, then either an unlocked *entrance* not used by the public shall comply with 206.4; or a locked *entrance* complying with 206.4 with a notification system or remote monitoring shall be provided.

206.4.1 Public Entrances. In addition to *entrances* required by 206.4.2 through 206.4.9, at least 60 percent of all *public entrances* shall comply with 404.

206.4.2 Parking Structure Entrances. Where direct access is provided for pedestrians from a parking structure to a *building* or *facility entrance*, each direct access to the *building* or *facility entrance* shall comply with 404.

206.4.3 Entrances from Tunnels or Elevated Walkways. Where direct access is provided for pedestrians from a pedestrian tunnel or elevated walkway to a *building* or *facility*, at least one direct *entrance* to the *building* or *facility* from each tunnel or walkway shall comply with 404.

206.4.4 Transportation Facilities. In addition to the requirements of 206.4.2, 206.4.3, and 206.4.5 through 206.4.9, transportation *facilities* shall provide *entrances* in accordance with 206.4.4.

206.4.4.1 Location. In transportation *facilities*, where different *entrances* serve different transportation fixed routes or groups of fixed routes, at least one *public entrance* serving each fixed route or group of fixed routes shall comply with 404.

EXCEPTION: *Entrances* to *key stations* and existing intercity rail stations retrofitted in accordance with 49 CFR 37.49 or 49 CFR 37.51 shall not be required to comply with 206.4.4.1.

206.4.4.2 Direct Connections. Direct connections to other *facilities* shall provide an *accessible* route complying with 404 from the point of connection to boarding platforms and all transportation system *elements* required to be *accessible*. Any *elements* provided to facilitate future direct connections shall be on an *accessible* route connecting boarding platforms and all transportation system *elements* required to be *accessible*.

EXCEPTION: In *key stations* and existing intercity rail stations, existing direct connections shall not be required to comply with 404.

206.4.4.3 Key Stations and Intercity Rail Stations. *Key stations* and existing intercity rail stations required by Subpart C of 49 CFR part 37 to be *altered*, shall have at least one *entrance* complying with 404.

206.4.5 Tenant Spaces. At least one *accessible entrance* to each tenancy in a *facility* shall comply with 404.

EXCEPTION: *Self-service storage facilities* not required to comply with 225.3 shall not be required to be on an accessible route.

206.4.6 Residential Dwelling Unit Primary Entrance. In *residential dwelling units*, at least one primary *entrance* shall comply with 404. The primary *entrance* to a *residential dwelling unit* shall not be to a bedroom.

206.4.7 Restricted Entrances. Where *restricted entrances* are provided to a *building* or *facility*, at least one *restricted entrance* to the *building* or *facility* shall comply with 404.

206.4.8 Service Entrances. If a *service entrance* is the only *entrance* to a *building* or to a tenancy in a *facility*, that *entrance* shall comply with 404.

206.4.9 Entrances for Inmates or Detainees. Where *entrances* used only by inmates or detainees and security personnel are provided at judicial *facilities*, detention *facilities*, or correctional *facilities*, at least one such *entrance* shall comply with 404.

206.5 Doors, Doorways, and Gates. Doors, doorways, and gates providing user passage shall be provided in accordance with 206.5.

206.5.1 Entrances. Each *entrance* to a *building* or *facility* required to comply with 206.4 shall have at least one door, doorway, or gate complying with 404.

206.5.2 Rooms and Spaces. Within a *building* or *facility*, at least one door, doorway, or gate serving each room or *space* complying with these requirements shall comply with 404.

206.5.3 Transient Lodging Facilities. In *transient lodging facilities*, *entrances*, doors, and doorways providing user passage into and within guest rooms that are not required to provide mobility features complying with 806.2 shall comply with 404.2.3.

EXCEPTION: Shower and sauna doors in guest rooms that are not required to provide mobility features complying with 806.2 shall not be required to comply with 404.2.3.

206.5.4 Residential Dwelling Units. In *residential dwelling units* required to provide mobility features complying with 809.2 through 809.4, all doors and doorways providing user passage shall comply with 404.

206.6 Elevators. Elevators provided for passengers shall comply with 407. Where multiple elevators are provided, each elevator shall comply with 407.

EXCEPTIONS: 1. In a *building* or *facility* permitted to use the exceptions to 206.2.3 or permitted by 206.7 to use a platform lift, elevators complying with 408 shall be permitted.

2. Elevators complying with 408 or 409 shall be permitted in multi-story *residential dwelling units*.

206.6.1 Existing Elevators. Where *elements* of existing elevators are *altered*, the same *element* shall also be *altered* in all elevators that are programmed to respond to the same hall call control as the *altered* elevator and shall comply with the requirements of 407 for the *altered element*.

206.7 Platform Lifts. Platform lifts shall comply with 410. Platform lifts shall be permitted as a component of an *accessible* route in new construction in accordance with 206.7. Platform lifts shall be permitted as a component of an *accessible* route in an existing *building* or *facility*.

206.7.1 Performance Areas and Speakers' Platforms. Platform lifts shall be permitted to provide *accessible* routes to performance areas and speakers' platforms.

206.7.2 Wheelchair Spaces. Platform lifts shall be permitted to provide an *accessible* route to comply with the *wheelchair space* dispersion and line-of-sight requirements of 221 and 802.

206.7.3 Incidental Spaces. Platform lifts shall be permitted to provide an *accessible* route to incidental spaces which are not *public use spaces* and which are occupied by five persons maximum.

206.7.4 Judicial Spaces. Platform lifts shall be permitted to provide an *accessible* route to: jury boxes and witness stands; raised courtroom stations including, judges' benches, clerks' stations, bailiffs' stations, deputy clerks' stations, and court reporters' stations; and to depressed areas such as the well of a court.

206.7.5 Existing Site Constraints. Platform lifts shall be permitted where existing exterior *site* constraints make use of a *ramp* or elevator infeasible.

Advisory 206.7.5 Existing Site Constraints. This exception applies where topography or other similar existing site constraints necessitate the use of a platform lift as the only feasible alternative. While the site constraint must reflect exterior conditions, the lift can be installed in the interior of a building. For example, a new building constructed between and connected to two existing buildings may have insufficient space to coordinate floor levels and also to provide ramped entry from the public way. In this example, an exterior or interior platform lift could be used to provide an accessible entrance or to coordinate one or more interior floor levels.

206.7.6 Guest Rooms and Residential Dwelling Units. Platform lifts shall be permitted to connect levels within *transient lodging* guest rooms required to provide mobility features complying with 806.2 or *residential dwelling units* required to provide mobility features complying with 809.2 through 809.4.

206.7.7 Amusement Rides. Platform lifts shall be permitted to provide *accessible* routes to load and unload areas serving *amusement rides*.

206.7.8 Play Areas. Platform lifts shall be permitted to provide *accessible* routes to *play components* or *soft contained play structures*.

206.7.9 Team or Player Seating. Platform lifts shall be permitted to provide *accessible* routes to team or player seating areas serving *areas of sport activity*.

Advisory 206.7.9 Team or Player Seating. While the use of platform lifts is allowed, ramps are recommended to provide access to player seating areas serving an area of sport activity.

206.7.10 Recreational Boating Facilities and Fishing Piers and Platforms. Platform lifts shall be permitted to be used instead of *gangways* that are part of *accessible* routes serving recreational boating *facilities* and fishing piers and platforms.

206.8 Security Barriers. Security barriers, including but not limited to, security bollards and security check points, shall not obstruct a required *accessible route* or *accessible means of egress*.

EXCEPTION: Where security barriers incorporate elements that cannot comply with these requirements such as certain metal detectors, microscopes, or other similar devices, the *accessible* route shall be permitted to be located adjacent to security screening devices. The *accessible* route shall permit persons with disabilities passing around security barriers to maintain visual contact with their personal items to the same extent provided others passing through the security barrier.

207 Accessible Means of Egress

207.1 General. Means of egress shall comply with section 1003.2.13 of the International Building Code (2000 edition and 2001 Supplement) or section 1007 of the International Building Code (2003 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1).

EXCEPTIONS: 1. Where means of egress are permitted by local *building* or life safety codes to share a common path of egress travel, *accessible means of egress* shall be permitted to share a common path of egress travel.

2. Areas of refuge shall not be required in detention and correctional *facilities*.

207.2 Platform Lifts. Standby power shall be provided for platform lifts permitted by section 1003.2.13.4 of the International Building Code (2000 edition and 2001 Supplement) or section 1007.5 of the International Building Code (2003 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1) to serve as a part of an *accessible means of egress*.

208 Parking Spaces

208.1 General. Where parking *spaces* are provided, parking *spaces* shall be provided in accordance with 208.

EXCEPTION: Parking *spaces* used exclusively for buses, trucks, other delivery vehicles, law enforcement vehicles, or vehicular impound shall not be required to comply with 208 provided that lots accessed by the public are provided with a passenger loading zone complying with 503.

208.2 Minimum Number. Parking *spaces* complying with 502 shall be provided in accordance with Table 208.2 except as required by 208.2.1, 208.2.2, and 208.2.3. Where more than one parking *facility* is provided on a *site*, the number of *accessible spaces* provided on the *site* shall be calculated according to the number of *spaces* required for each parking *facility*.

Table 208.2 Parking Spaces

Total Number of Parking Spaces Provided in Parking Facility	Minimum Number of Required Accessible Parking Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000

Advisory 208.2 Minimum Number. The term "parking facility" is used Section 208.2 instead of the term "parking lot" so that it is clear that both parking lots and parking structures are required to comply with this section. The number of parking spaces required to be accessible is to be calculated separately for each parking facility; the required number is not to be based on the total number of parking spaces provided in all of the parking facilities provided on the site.

208.2.1 Hospital Outpatient Facilities. Ten percent of patient and visitor parking *spaces* provided to serve hospital outpatient *facilities* shall comply with 502.

Advisory 208.2.1 Hospital Outpatient Facilities. The term “outpatient facility” is not defined in this document but is intended to cover facilities or units that are located in hospitals and that provide regular and continuing medical treatment without an overnight stay. Doctors' offices, independent clinics, or other facilities not located in hospitals are not considered hospital outpatient facilities for purposes of this document.

208.2.2 Rehabilitation Facilities and Outpatient Physical Therapy Facilities. Twenty percent of patient and visitor parking *spaces* provided to serve rehabilitation *facilities* specializing in treating conditions that affect mobility and outpatient physical therapy *facilities* shall comply with 502.

Advisory 208.2.2 Rehabilitation Facilities and Outpatient Physical Therapy Facilities. Conditions that affect mobility include conditions requiring the use or assistance of a brace, cane, crutch, prosthetic device, wheelchair, or powered mobility aid; arthritic, neurological, or orthopedic conditions that severely limit one's ability to walk; respiratory diseases and other conditions which may require the use of portable oxygen; and cardiac conditions that impose significant functional limitations.

208.2.3 Residential Facilities. Parking *spaces* provided to serve residential *facilities* shall comply with 208.2.3.

208.2.3.1 Parking for Residents. Where at least one parking *space* is provided for each *residential dwelling unit*, at least one parking *space* complying with 502 shall be provided for each *residential dwelling unit* required to provide mobility features complying with 809.2 through 809.4.

208.2.3.2 Additional Parking Spaces for Residents. Where the total number of parking *spaces* provided for each *residential dwelling unit* exceeds one parking *space* per *residential dwelling unit*, 2 percent, but no fewer than one *space*, of all the parking *spaces* not covered by 208.2.3.1 shall comply with 502.

208.2.3.3 Parking for Guests, Employees, and Other Non-Residents. Where parking *spaces* are provided for persons other than residents, parking shall be provided in accordance with Table 208.2.

208.2.4 Van Parking Spaces. For every six or fraction of six parking *spaces* required by 208.2 to comply with 502, at least one shall be a van parking *space* complying with 502.

208.3 Location. Parking *facilities* shall comply with 208.3

208.3.1 General. Parking *spaces* complying with 502 that serve a particular *building* or *facility* shall be located on the shortest *accessible* route from parking to an *entrance* complying with 206.4. Where parking serves more than one *accessible entrance*, parking *spaces* complying with 502 shall be dispersed and located on the shortest *accessible* route to the *accessible entrances*. In parking

facilities that do not serve a particular *building* or *facility*, parking *spaces* complying with 502 shall be located on the shortest *accessible* route to an *accessible* pedestrian *entrance* of the parking *facility*.

EXCEPTIONS: 1. All van parking *spaces* shall be permitted to be grouped on one level within a multi-story parking *facility*.

2. Parking *spaces* shall be permitted to be located in different parking *facilities* if substantially equivalent or greater *accessibility* is provided in terms of distance from an *accessible entrance* or *entrances*, parking fee, and user convenience.

Advisory 208.3.1 General Exception 2. Factors that could affect “user convenience” include, but are not limited to, protection from the weather, security, lighting, and comparative maintenance of the alternative parking site.

208.3.2 Residential Facilities. In residential *facilities* containing *residential dwelling units* required to provide mobility features complying with 809.2 through 809.4, parking *spaces* provided in accordance with 208.2.3.1 shall be located on the shortest *accessible* route to the *residential dwelling unit entrance* they serve. *Spaces* provided in accordance with 208.2.3.2 shall be dispersed throughout all types of parking provided for the *residential dwelling units*.

EXCEPTION: Parking *spaces* provided in accordance with 208.2.3.2 shall not be required to be dispersed throughout all types of parking if substantially equivalent or greater *accessibility* is provided in terms of distance from an *accessible entrance*, parking fee, and user convenience.

Advisory 208.3.2 Residential Facilities Exception. Factors that could affect “user convenience” include, but are not limited to, protection from the weather, security, lighting, and comparative maintenance of the alternative parking site.

209 Passenger Loading Zones and Bus Stops

209.1 General. Passenger loading zones shall be provided in accordance with 209.

209.2 Type. Where provided, passenger loading zones shall comply with 209.2.

209.2.1 Passenger Loading Zones. Passenger loading zones, except those required to comply with 209.2.2 and 209.2.3, shall provide at least one passenger loading zone complying with 503 in every continuous 100 linear feet (30 m) of loading zone *space*, or fraction thereof.

209.2.2 Bus Loading Zones. In bus loading zones restricted to use by designated or specified public transportation vehicles, each bus bay, bus stop, or other area designated for lift or *ramp* deployment shall comply with 810.2.

Advisory 209.2.2 Bus Loading Zones. The terms “designated public transportation” and “specified public transportation” are defined by the Department of Transportation at 49 CFR 37.3 in regulations implementing the Americans with Disabilities Act. These terms refer to public transportation services provided by public or private entities, respectively. For example, designated public transportation vehicles include buses and vans operated by public transit agencies, while specified public transportation vehicles include tour and charter buses, taxis and limousines, and hotel shuttles operated by private entities.

209.2.3 On-Street Bus Stops. On-street bus stops shall comply with 810.2 to the maximum extent practicable.

209.3 Medical Care and Long-Term Care Facilities. At least one passenger loading zone complying with 503 shall be provided at an *accessible entrance* to licensed medical care and licensed long-term care *facilities* where the period of stay exceeds twenty-four hours.

209.4 Valet Parking. Parking *facilities* that provide valet parking services shall provide at least one passenger loading zone complying with 503.

209.5 Mechanical Access Parking Garages. Mechanical access parking garages shall provide at least one passenger loading zone complying with 503 at vehicle drop-off and vehicle pick-up areas.

210 Stairways

210.1 General. Interior and exterior stairs that are part of a means of egress shall comply with 504.

EXCEPTIONS: 1. In detention and correctional *facilities*, stairs that are not located in *public use* areas shall not be required to comply with 504.

2. In *alterations*, stairs between levels that are connected by an *accessible* route shall not be required to comply with 504, except that handrails complying with 505 shall be provided when the stairs are *altered*.

3. In *assembly areas*, aisle stairs shall not be required to comply with 504.

4. Stairs that connect *play components* shall not be required to comply with 504.

Advisory 210.1 General. Although these requirements do not mandate handrails on stairs that are not part of a means of egress, State or local building codes may require handrails or guards.

211 Drinking Fountains

211.1 General. Where drinking fountains are provided on an exterior *site*, on a floor, or within a secured area they shall be provided in accordance with 211.

EXCEPTION: In detention or correctional *facilities*, drinking fountains only serving holding or housing cells not required to comply with 232 shall not be required to comply with 211.

211.2 Minimum Number. No fewer than two drinking fountains shall be provided. One drinking fountain shall comply with 602.1 through 602.6 and one drinking fountain shall comply with 602.7.

EXCEPTION: Where a single drinking fountain complies with 602.1 through 602.6 and 602.7, it shall be permitted to be substituted for two separate drinking fountains.

211.3 More Than Minimum Number. Where more than the minimum number of drinking fountains specified in 211.2 are provided, 50 percent of the total number of drinking fountains provided shall comply with 602.1 through 602.6, and 50 percent of the total number of drinking fountains provided shall comply with 602.7.

EXCEPTION: Where 50 percent of the drinking fountains yields a fraction, 50 percent shall be permitted to be rounded up or down provided that the total number of drinking fountains complying with 211 equals 100 percent of drinking fountains.

212 Kitchens, Kitchenettes, and Sinks

212.1 General. Where provided, kitchens, kitchenettes, and sinks shall comply with 212.

212.2 Kitchens and Kitchenettes. Kitchens and kitchenettes shall comply with 804.

212.3 Sinks. Where sinks are provided, at least 5 percent, but no fewer than one, of each type provided in each *accessible* room or *space* shall comply with 606.

EXCEPTION: Mop or service sinks shall not be required to comply with 212.3.

213 Toilet Facilities and Bathing Facilities

213.1 General. Where toilet *facilities* and bathing *facilities* are provided, they shall comply with 213. Where toilet *facilities* and bathing *facilities* are provided in *facilities* permitted by 206.2.3 Exceptions 1 and 2 not to connect *stories* by an *accessible* route, toilet *facilities* and bathing *facilities* shall be provided on a *story* connected by an *accessible* route to an *accessible entrance*.

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.

EXCEPTIONS: 1. In *alterations* where it is *technically infeasible* to comply with 603, *altering* existing toilet or bathing rooms shall not be required where a single unisex toilet room or bathing room complying with 213.2.1 is provided and located in the same area and on the same floor as existing inaccessible toilet or bathing rooms.

2. Where exceptions for *alterations* to *qualified historic buildings or facilities* are permitted by 202.5, no fewer than one toilet room for each sex complying with 603 or one unisex toilet room complying with 213.2.1 shall be provided.

3. Where multiple single user portable toilet or bathing units are clustered at a single location, no more than 5 percent of the toilet units and bathing units at each cluster shall be required to comply with 603. Portable toilet units and bathing units complying with 603 shall be identified by the International Symbol of *Accessibility* complying with 703.7.2.1.

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. These requirements allow the use of unisex (or single-user) toilet rooms in alterations when technical infeasibility can be demonstrated. Unisex toilet rooms benefit people who use opposite sex personal care assistants. For this reason, it is advantageous to install unisex toilet rooms in addition to accessible single-sex toilet rooms in new facilities.

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.

213.2.1 Unisex (Single-Use or Family) Toilet and Unisex Bathing Rooms. Unisex toilet rooms shall contain not more than one lavatory, and two water closets without urinals or one water closet and one urinal. Unisex bathing rooms shall contain one shower or one shower and one bathtub, one lavatory, and one water closet. Doors to unisex toilet rooms and unisex bathing rooms shall have privacy latches.

213.3 Plumbing Fixtures and Accessories. Plumbing fixtures and accessories provided in a toilet room or bathing room required to comply with 213.2 shall comply with 213.3.

213.3.1 Toilet Compartments. Where toilet compartments are provided, at least one toilet compartment shall comply with 604.8.1. In addition to the compartment required to comply with 604.8.1, at least one compartment shall comply with 604.8.2 where six or more toilet compartments are provided, or where the combination of urinals and water closets totals six or more fixtures.

Advisory 213.3.1 Toilet Compartments. A toilet compartment is a partitioned space that is located within a toilet room, and that normally contains no more than one water closet. A toilet compartment may also contain a lavatory. A lavatory is a sink provided for hand washing. Full-height partitions and door assemblies can comprise toilet compartments where the minimum required spaces are provided within the compartment.

213.3.2 Water Closets. Where water closets are provided, at least one shall comply with 604.

213.3.3 Urinals. Where more than one urinal is provided, at least one shall comply with 605.

213.3.4 Lavatories. Where lavatories are provided, at least one shall comply with 606 and shall not be located in a toilet compartment.

213.3.5 Mirrors. Where mirrors are provided, at least one shall comply with 603.3.

213.3.6 Bathing Facilities. Where bathtubs or showers are provided, at least one bathtub complying with 607 or at least one shower complying with 608 shall be provided.

213.3.7 Coat Hooks and Shelves. Where coat hooks or shelves are provided in toilet rooms without toilet compartments, at least one of each type shall comply with 603.4. Where coat hooks or shelves are provided in toilet compartments, at least one of each type complying with 604.8.3 shall be provided in toilet compartments required to comply with 213.3.1. Where coat hooks or shelves are provided in bathing *facilities*, at least one of each type complying with 603.4 shall serve fixtures required to comply with 213.3.6.

214 Washing Machines and Clothes Dryers

214.1 General. Where provided, washing machines and clothes dryers shall comply with 214.

214.2 Washing Machines. Where three or fewer washing machines are provided, at least one shall comply with 611. Where more than three washing machines are provided, at least two shall comply with 611.

214.3 Clothes Dryers. Where three or fewer clothes dryers are provided, at least one shall comply with 611. Where more than three clothes dryers are provided, at least two shall comply with 611.

215 Fire Alarm Systems

215.1 General. Where fire alarm systems provide audible alarm coverage, alarms shall comply with 215.

EXCEPTION: In existing *facilities*, visible alarms shall not be required except where an existing fire alarm system is upgraded or replaced, or a new fire alarm system is installed.

Advisory 215.1 General. Unlike audible alarms, visible alarms must be located within the space they serve so that the signal is visible. Facility alarm systems (other than fire alarm systems) such as those used for tornado warnings and other emergencies are not required to comply with the technical criteria for alarms in Section 702. Every effort should be made to ensure that such alarms can be differentiated in their signal from fire alarms systems and that people who need to be notified of emergencies are adequately safeguarded. Consult local fire departments and prepare evacuation plans taking into consideration the needs of every building occupant, including people with disabilities.

215.2 Public and Common Use Areas. Alarms in *public use* areas and *common use* areas shall comply with 702.

215.3 Employee Work Areas. Where *employee work areas* have audible alarm coverage, the wiring system shall be designed so that visible alarms complying with 702 can be integrated into the alarm system.

215.4 Transient Lodging. Guest rooms required to comply with 224.4 shall provide alarms complying with 702.

215.5 Residential Facilities. Where provided in *residential dwelling units* required to comply with 809.5, alarms shall comply with 702.

216 Signs

216.1 General. Signs shall be provided in accordance with 216 and shall comply with 703.

EXCEPTIONS: 1. *Building* directories, menus, seat and row designations in *assembly areas*, occupant names, *building* addresses, and company names and logos shall not be required to comply with 216.

2. In parking *facilities*, signs shall not be required to comply with 216.2, 216.3, and 216.6 through 216.12.

3. Temporary, 7 days or less, signs shall not be required to comply with 216.

4. In detention and correctional *facilities*, signs not located in *public use* areas shall not be required to comply with 216.

216.2 Designations. Interior and exterior signs identifying permanent rooms and *spaces* shall comply with 703.1, 703.2, and 703.5. Where *pictograms* are provided as designations of permanent interior

rooms and *spaces*, the *pictograms* shall comply with 703.6 and shall have text descriptors complying with 703.2 and 703.5.

EXCEPTION: Exterior signs that are not located at the door to the *space* they serve shall not be required to comply with 703.2.

Advisory 216.2 Designations. Section 216.2 applies to signs that provide designations, labels, or names for interior rooms or spaces where the sign is not likely to change over time. Examples include interior signs labeling restrooms, room and floor numbers or letters, and room names. Tactile text descriptors are required for pictograms that are provided to label or identify a permanent room or space. Pictograms that provide information about a room or space, such as “no smoking,” occupant logos, and the International Symbol of Accessibility, are not required to have text descriptors.

216.3 Directional and Informational Signs. Signs that provide direction to or information about interior *spaces* and *facilities* of the *site* shall comply with 703.5.

Advisory 216.3 Directional and Informational Signs. Information about interior spaces and facilities includes rules of conduct, occupant load, and similar signs. Signs providing direction to rooms or spaces include those that identify egress routes.

216.4 Means of Egress. Signs for means of egress shall comply with 216.4.

216.4.1 Exit Doors. Doors at exit passageways, exit discharge, and exit stairways shall be identified by *tactile* signs complying with 703.1, 703.2, and 703.3.

Advisory 216.4.1 Exit Doors. An exit passageway is a horizontal exit component that is separated from the interior spaces of the building by fire-resistance-rated construction and that leads to the exit discharge or public way. The exit discharge is that portion of an egress system between the termination of an exit and a public way.

216.4.2 Areas of Refuge. Signs required by section 1003.2.13.5.4 of the International Building Code (2000 edition) or section 1007.6.4 of the International Building Code (2003 edition) (incorporated by reference, see “Referenced Standards” in Chapter 1) to provide instructions in areas of refuge shall comply with 703.5.

216.4.3 Directional Signs. Signs required by section 1003.2.13.6 of the International Building Code (2000 edition) or section 1007.7 of the International Building Code (2003 edition) (incorporated by reference, see “Referenced Standards” in Chapter 1) to provide directions to *accessible means of egress* shall comply with 703.5.

216.5 Parking. Parking *spaces* complying with 502 shall be identified by signs complying with 502.6.

EXCEPTIONS: 1. Where a total of four or fewer parking *spaces*, including *accessible* parking *spaces*, are provided on a *site*, identification of *accessible* parking *spaces* shall not be required.

2. In residential *facilities*, where parking *spaces* are assigned to specific *residential dwelling units*, identification of *accessible* parking *spaces* shall not be required.

216.6 Entrances. Where not all *entrances* comply with 404, *entrances* complying with 404 shall be identified by the International Symbol of *Accessibility* complying with 703.7.2.1. Directional signs complying with 703.5 that indicate the location of the nearest *entrance* complying with 404 shall be provided at *entrances* that do not comply with 404.

Advisory 216.6 Entrances. Where a directional sign is required, it should be located to minimize backtracking. In some cases, this could mean locating a sign at the beginning of a route, not just at the inaccessible entrances to a building.

216.7 Elevators. Where existing elevators do not comply with 407, elevators complying with 407 shall be clearly identified with the International Symbol of *Accessibility* complying with 703.7.2.1.

216.8 Toilet Rooms and Bathing Rooms. Where existing toilet rooms or bathing rooms do not comply with 603, directional signs indicating the location of the nearest toilet room or bathing room complying with 603 within the *facility* shall be provided. Signs shall comply with 703.5 and shall include the International Symbol of *Accessibility* complying with 703.7.2.1. Where existing toilet rooms or bathing rooms do not comply with 603, the toilet rooms or bathing rooms complying with 603 shall be identified by the International Symbol of *Accessibility* complying with 703.7.2.1. Where clustered single user toilet rooms or bathing *facilities* are permitted to use exceptions to 213.2, toilet rooms or bathing *facilities* complying with 603 shall be identified by the International Symbol of *Accessibility* complying with 703.7.2.1 unless all toilet rooms and bathing *facilities* comply with 603.

216.9 TTYs. Identification and directional signs for public TTYs shall be provided in accordance with 216.9.

216.9.1 Identification Signs. Public TTYs shall be identified by the International Symbol of TTY complying with 703.7.2.2.

216.9.2 Directional Signs. Directional signs indicating the location of the nearest public TTY shall be provided at all banks of public pay telephones not containing a public TTY. In addition, where signs provide direction to public pay telephones, they shall also provide direction to public TTYs. Directional signs shall comply with 703.5 and shall include the International Symbol of TTY complying with 703.7.2.2.

216.10 Assistive Listening Systems. Each *assembly area* required by 219 to provide *assistive listening systems* shall provide signs informing patrons of the availability of the *assistive listening system*. Assistive listening signs shall comply with 703.5 and shall include the International Symbol of Access for Hearing Loss complying with 703.7.2.4.

EXCEPTION: Where ticket offices or windows are provided, signs shall not be required at each *assembly area* provided that signs are displayed at each ticket office or window informing patrons of the availability of *assistive listening systems*.

216.11 Check-Out Aisles. Where more than one check-out aisle is provided, check-out aisles complying with 904.3 shall be identified by the International Symbol of *Accessibility* complying with 703.7.2.1. Where check-out aisles are identified by numbers, letters, or functions, signs identifying

check-out aisles complying with 904.3 shall be located in the same location as the check-out aisle identification.

EXCEPTION: Where all check-out aisles serving a single function comply with 904.3, signs complying with 703.7.2.1 shall not be required.

216.12 Amusement Rides. Signs identifying the type of access provided on *amusement rides* shall be provided at entries to queues and waiting lines. In addition, where *accessible* unload areas also serve as *accessible* load areas, signs indicating the location of the *accessible* load and unload areas shall be provided at entries to queues and waiting lines.

Advisory 216.12 Amusement Rides. Amusement rides designed primarily for children, amusement rides that are controlled or operated by the rider, and amusement rides without seats, are not required to provide wheelchair spaces, transfer seats, or transfer systems, and need not meet the sign requirements in 216.12. The load and unload areas of these rides must, however, be on an accessible route and must provide turning space.

217 Telephones

217.1 General. Where coin-operated public pay telephones, coinless public pay telephones, public *closed-circuit telephones*, public courtesy phones, or other types of public telephones are provided, public telephones shall be provided in accordance with 217 for each type of public telephone provided. For purposes of this section, a bank of telephones shall be considered to be two or more adjacent telephones.

Advisory 217.1 General. These requirements apply to all types of public telephones including courtesy phones at airports and rail stations that provide a free direct connection to hotels, transportation services, and tourist attractions.

217.2 Wheelchair Accessible Telephones. Where public telephones are provided, wheelchair *accessible* telephones complying with 704.2 shall be provided in accordance with Table 217.2.

EXCEPTION: Drive-up only public telephones shall not be required to comply with 217.2.

Table 217.2 Wheelchair Accessible Telephones

Number of Telephones Provided on a Floor, Level, or Exterior Site	Minimum Number of Required Wheelchair Accessible Telephones
1 or more single units	1 per floor, level, and exterior <i>site</i>
1 bank	1 per floor, level, and exterior <i>site</i>
2 or more banks	1 per bank

217.3 Volume Controls. All public telephones shall have volume controls complying with 704.3.

217.4 TTYs. TTYs complying with 704.4 shall be provided in accordance with 217.4.

Advisory 217.4 TTYs. Separate requirements are provided based on the number of public pay telephones provided at a bank of telephones, within a floor, a building, or on a site. In some instances one TTY can be used to satisfy more than one of these requirements. For example, a TTY required for a bank can satisfy the requirements for a building. However, the requirement for at least one TTY on an exterior site cannot be met by installing a TTY in a bank inside a building. Consideration should be given to phone systems that can accommodate both digital and analog transmissions for compatibility with digital and analog TTYs.

217.4.1 Bank Requirement. Where four or more public pay telephones are provided at a bank of telephones, at least one public *TTY* complying with 704.4 shall be provided at that bank.

EXCEPTION: *TTYs* shall not be required at banks of telephones located within 200 feet (61 m) of, and on the same floor as, a bank containing a public *TTY*.

217.4.2 Floor Requirement. *TTYs* in *public buildings* shall be provided in accordance with 217.4.2.1. *TTYs* in *private buildings* shall be provided in accordance with 217.4.2.2.

217.4.2.1 Public Buildings. Where at least one public pay telephone is provided on a floor of a *public building*, at least one public *TTY* shall be provided on that floor.

217.4.2.2 Private Buildings. Where four or more public pay telephones are provided on a floor of a *private building*, at least one public *TTY* shall be provided on that floor.

217.4.3 Building Requirement. *TTYs* in *public buildings* shall be provided in accordance with 217.4.3.1. *TTYs* in *private buildings* shall be provided in accordance with 217.4.3.2.

217.4.3.1 Public Buildings. Where at least one public pay telephone is provided in a *public building*, at least one public *TTY* shall be provided in the *building*. Where at least one public pay telephone is provided in a *public use* area of a *public building*, at least one public *TTY* shall be provided in the *public building* in a *public use* area.

217.4.3.2 Private Buildings. Where four or more public pay telephones are provided in a *private building*, at least one public *TTY* shall be provided in the *building*.

217.4.4 Exterior Site Requirement. Where four or more public pay telephones are provided on an exterior *site*, at least one public *TTY* shall be provided on the *site*.

217.4.5 Rest Stops, Emergency Roadside Stops, and Service Plazas. Where at least one public pay telephone is provided at a public rest stop, emergency roadside stop, or service plaza, at least one public *TTY* shall be provided.

217.4.6 Hospitals. Where at least one public pay telephone is provided serving a hospital emergency room, hospital recovery room, or hospital waiting room, at least one public *TTY* shall be provided at each location.

217.4.7 Transportation Facilities. In transportation *facilities*, in addition to the requirements of 217.4.1 through 217.4.4, where at least one public pay telephone serves a particular *entrance* to a bus or rail *facility*, at least one public *TTY* shall be provided to serve that *entrance*. In airports, in addition to the requirements of 217.4.1 through 217.4.4, where four or more public pay telephones are located in a terminal outside the security areas, a concourse within the security areas, or a baggage claim area in a terminal, at least one public *TTY* shall be provided in each location.

217.4.8 Detention and Correctional Facilities. In detention and correctional *facilities*, where at least one pay telephone is provided in a secured area used only by detainees or inmates and security personnel, at least one *TTY* shall be provided in at least one secured area.

217.5 Shelves for Portable TTYs. Where a bank of telephones in the interior of a *building* consists of three or more public pay telephones, at least one public pay telephone at the bank shall be provided with a shelf and an electrical outlet in accordance with 704.5.

EXCEPTIONS: 1. Secured areas of detention and correctional *facilities* where shelves and outlets are prohibited for purposes of security or safety shall not be required to comply with 217.5.

2. The shelf and electrical outlet shall not be required at a bank of telephones with a *TTY*.

218 Transportation Facilities

218.1 General. Transportation *facilities* shall comply with 218.

218.2 New and Altered Fixed Guideway Stations. New and altered stations in rapid rail, light rail, commuter rail, intercity rail, high speed rail, and other fixed guideway systems shall comply with 810.5 through 810.10.

218.3 Key Stations and Existing Intercity Rail Stations. *Key stations* and existing intercity rail stations shall comply with 810.5 through 810.10.

218.4 Bus Shelters. Where provided, bus shelters shall comply with 810.3.

218.5 Other Transportation Facilities. In other transportation *facilities*, public address systems shall comply with 810.7 and clocks shall comply with 810.8.

219 Assistive Listening Systems

219.1 General. *Assistive listening systems* shall be provided in accordance with 219 and shall comply with 706.

219.2 Required Systems. In each *assembly area* where audible communication is integral to the use of the *space*, an *assistive listening system* shall be provided.

EXCEPTION: Other than in courtrooms, *assistive listening systems* shall not be required where audio amplification is not provided.

219.3 Receivers. Receivers complying with 706.2 shall be provided for *assistive listening systems* in each *assembly area* in accordance with Table 219.3. Twenty-five percent minimum of receivers provided, but no fewer than two, shall be hearing-aid compatible in accordance with 706.3.

EXCEPTIONS: 1. Where a *building* contains more than one *assembly area* and the *assembly areas* required to provide *assistive listening systems* are under one management, the total number of required receivers shall be permitted to be calculated according to the total number of seats in the *assembly areas* in the *building* provided that all receivers are usable with all systems.

2. Where all seats in an *assembly area* are served by an induction loop *assistive listening system*, the minimum number of receivers required by Table 219.3 to be hearing-aid compatible shall not be required to be provided.

Table 219.3 Receivers for Assistive Listening Systems

Capacity of Seating in Assembly Area	Minimum Number of Required Receivers	Minimum Number of Required Receivers Required to be Hearing-aid Compatible
50 or less	2	2
51 to 200	2, plus 1 per 25 seats over 50 seats ¹	2
201 to 500	2, plus 1 per 25 seats over 50 seats ¹	1 per 4 receivers ¹
501 to 1000	20, plus 1 per 33 seats over 500 seats ¹	1 per 4 receivers ¹
1001 to 2000	35, plus 1 per 50 seats over 1000 seats ¹	1 per 4 receivers ¹
2001 and over	55 plus 1 per 100 seats over 2000 seats ¹	1 per 4 receivers ¹

1. Or fraction thereof.

220 Automatic Teller Machines and Fare Machines

220.1 General. Where automatic teller machines or self-service fare vending, collection, or adjustment machines are provided, at least one of each type provided at each location shall comply with 707. Where bins are provided for envelopes, waste paper, or other purposes, at least one of each type shall comply with 811.

Advisory 220.1 General. If a bank provides both interior and exterior ATMs, each such installation is considered a separate location. Accessible ATMs, including those with speech and those that are within reach of people who use wheelchairs, must provide all the functions provided to customers at that location at all times. For example, it is unacceptable for the accessible ATM only to provide cash withdrawals while inaccessible ATMs also sell theater tickets.

221 Assembly Areas

221.1 General. *Assembly areas* shall provide *wheelchair spaces*, companion seats, and designated aisle seats complying with 221 and 802. In addition, lawn seating shall comply with 221.5.

[See additional requirements at 28 CFR 35.151(g), p. 12, and 28 CFR 36.406(f), p. 29.]

221.2 Wheelchair Spaces. *Wheelchair spaces* complying with 221.2 shall be provided in *assembly areas* with fixed seating.

221.2.1 Number and Location. *Wheelchair spaces* shall be provided complying with 221.2.1.

221.2.1.1 General Seating. *Wheelchair spaces* complying with 802.1 shall be provided in accordance with Table 221.2.1.1.

Table 221.2.1.1 Number of Wheelchair Spaces in Assembly Areas

Number of Seats	Minimum Number of Required Wheelchair Spaces
4 to 25	1
26 to 50	2
51 to 150	4
151 to 300	5
301 to 500	6
501 to 5000	6, plus 1 for each 150, or fraction thereof, between 501 through 5000
5001 and over	36, plus 1 for each 200, or fraction thereof, over 5000

221.2.1.2 Luxury Boxes, Club Boxes, and Suites in Arenas, Stadiums, and Grandstands. In each luxury box, club box, and suite within arenas, stadiums, and grandstands, *wheelchair spaces* complying with 802.1 shall be provided in accordance with Table 221.2.1.1.

Advisory 221.2.1.2 Luxury Boxes, Club Boxes, and Suites in Arenas, Stadiums, and Grandstands. The number of wheelchair spaces required in luxury boxes, club boxes, and suites within an arena, stadium, or grandstand is to be calculated box by box and suite by suite.

221.2.1.3 Other Boxes. In boxes other than those required to comply with 221.2.1.2, the total number of *wheelchair spaces* required shall be determined in accordance with Table 221.2.1.1. *Wheelchair spaces* shall be located in not less than 20 percent of all boxes provided. *Wheelchair spaces* shall comply with 802.1.

Advisory 221.2.1.3 Other Boxes. The provision for seating in “other boxes” includes box seating provided in facilities such as performing arts auditoria where tiered boxes are designed for spatial and acoustical purposes. The number of wheelchair spaces required in boxes covered by 221.2.1.3 is calculated based on the total number of seats provided in these other boxes. The resulting number of wheelchair spaces must be located in no fewer than 20% of the boxes covered by this section. For example, a concert hall has 20 boxes, each of which contains 10 seats, totaling 200 seats. In this example, 5 wheelchair spaces would be required, and they must be placed in at least 4 of the boxes. Additionally, because the wheelchair spaces must also meet the dispersion requirements of 221.2.3, the boxes containing these wheelchair spaces cannot all be located in one area unless an exception to the dispersion requirements applies.

221.2.1.4 Team or Player Seating. At least one *wheelchair space* complying with 802.1 shall be provided in team or player seating areas serving *areas of sport activity*.

EXCEPTION: *Wheelchair spaces* shall not be required in team or player seating areas serving bowling lanes not required to comply with 206.2.11.

221.2.2 Integration. *Wheelchair spaces* shall be an integral part of the seating plan.

Advisory 221.2.2 Integration. The requirement that wheelchair spaces be an “integral part of the seating plan” means that wheelchair spaces must be placed within the footprint of the seating area. Wheelchair spaces cannot be segregated from seating areas. For example, it would be unacceptable to place only the wheelchair spaces, or only the wheelchair spaces and their associated companion seats, outside the seating areas defined by risers in an assembly area.

221.2.3 Lines of Sight and Dispersion. *Wheelchair spaces* shall provide lines of sight complying with 802.2 and shall comply with 221.2.3. In providing lines of sight, *wheelchair spaces* shall be dispersed. *Wheelchair spaces* shall provide spectators with choices of seating locations and viewing angles that are substantially equivalent to, or better than, the choices of seating locations and viewing angles available to all other spectators. When the number of *wheelchair spaces* required by 221.2.1 has been met, further dispersion shall not be required.

EXCEPTION: *Wheelchair spaces* in team or player seating areas serving *areas of sport activity* shall not be required to comply with 221.2.3.

Advisory 221.2.3 Lines of Sight and Dispersion. Consistent with the overall intent of the ADA, individuals who use wheelchairs must be provided equal access so that their experience is substantially equivalent to that of other members of the audience. Thus, while individuals who use wheelchairs need not be provided with the best seats in the house, neither may they be relegated to the worst.

221.2.3.1 Horizontal Dispersion. *Wheelchair spaces* shall be dispersed horizontally.

EXCEPTIONS: 1. Horizontal dispersion shall not be required in *assembly areas* with 300 or fewer seats if the companion seats required by 221.3 and *wheelchair spaces* are located within the 2nd or 3rd quartile of the total row length. Intermediate aisles shall be included in

determining the total row length. If the row length in the 2nd and 3rd quartile of a row is insufficient to accommodate the required number of companion seats and *wheelchair spaces*, the additional companion seats and *wheelchair spaces* shall be permitted to be located in the 1st and 4th quartile of the row.

2. In row seating, two *wheelchair spaces* shall be permitted to be located side-by-side.

Advisory 221.2.3.1 Horizontal Dispersion. Horizontal dispersion of wheelchair spaces is the placement of spaces in an assembly facility seating area from side-to-side or, in the case of an arena or stadium, around the field of play or performance area.

221.2.3.2 Vertical Dispersion. *Wheelchair spaces* shall be dispersed vertically at varying distances from the screen, performance area, or playing field. In addition, *wheelchair spaces* shall be located in each balcony or *mezzanine* that is located on an *accessible* route.

EXCEPTIONS: 1. Vertical dispersion shall not be required in *assembly areas* with 300 or fewer seats if the *wheelchair spaces* provide viewing angles that are equivalent to, or better than, the average viewing angle provided in the *facility*.

2. In bleachers, *wheelchair spaces* shall not be required to be provided in rows other than rows at points of entry to bleacher seating.

Advisory 221.2.3.2 Vertical Dispersion. When wheelchair spaces are dispersed vertically in an assembly facility they are placed at different locations within the seating area from front-to-back so that the distance from the screen, stage, playing field, area of sports activity, or other focal point is varied among wheelchair spaces.

Advisory 221.2.3.2 Vertical Dispersion Exception 2. Points of entry to bleacher seating may include, but are not limited to, cross aisles, concourses, vomitories, and entrance ramps and stairs. Vertical, center, or side aisles adjoining bleacher seating that are stepped or tiered are not considered entry points.

221.3 Companion Seats. At least one companion seat complying with 802.3 shall be provided for each *wheelchair space* required by 221.2.1.

221.4 Designated Aisle Seats. At least 5 percent of the total number of aisle seats provided shall comply with 802.4 and shall be the aisle seats located closest to *accessible* routes.

EXCEPTION: Team or player seating areas serving *areas of sport activity* shall not be required to comply with 221.4.

Advisory 221.4 Designated Aisle Seats. When selecting which aisle seats will meet the requirements of 802.4, those aisle seats which are closest to, not necessarily on, accessible routes must be selected first. For example, an assembly area has two aisles (A and B) serving seating areas with an accessible route connecting to the top and bottom of Aisle A only. The aisle seats chosen to meet 802.4 must be those at the top and bottom of Aisle A, working toward the middle. Only when all seats on Aisle A would not meet the five percent minimum would seats on Aisle B be designated.

221.5 Lawn Seating. Lawn seating areas and exterior overflow seating areas, where fixed seats are not provided, shall connect to an *accessible* route.

222 Dressing, Fitting, and Locker Rooms

222.1 General. Where dressing rooms, fitting rooms, or locker rooms are provided, at least 5 percent, but no fewer than one, of each type of use in each cluster provided shall comply with 803.

EXCEPTION: In *alterations*, where it is *technically infeasible* to provide rooms in accordance with 222.1, one room for each sex on each level shall comply with 803. Where only unisex rooms are provided, unisex rooms shall be permitted.

Advisory 222.1 General. A “cluster” is a group of rooms proximate to one another. Generally, rooms in a cluster are within sight of, or adjacent to, one another. Different styles of design provide users varying levels of privacy and convenience. Some designs include private changing facilities that are close to core areas of the facility, while other designs use space more economically and provide only group dressing facilities. Regardless of the type of facility, dressing, fitting, and locker rooms should provide people with disabilities rooms that are equally private and convenient to those provided others. For example, in a physician’s office, if people without disabilities must traverse the full length of the office suite in clothing other than their street clothes, it is acceptable for people with disabilities to be asked to do the same.

222.2 Coat Hooks and Shelves. Where coat hooks or shelves are provided in dressing, fitting or locker rooms without individual compartments, at least one of each type shall comply with 803.5. Where coat hooks or shelves are provided in individual compartments at least one of each type complying with 803.5 shall be provided in individual compartments in dressing, fitting, or locker rooms required to comply with 222.1.

223 Medical Care and Long-Term Care Facilities

223.1 General. In licensed medical care *facilities* and licensed long-term care *facilities* where the period of stay exceeds twenty-four hours, patient or resident sleeping rooms shall be provided in accordance with 223. **[See additional requirements at 28 CFR 35.151(h), p. 13, and 28 CFR 36.406(g), p. 30.]**

EXCEPTION: Toilet rooms that are part of critical or intensive care patient sleeping rooms shall not be required to comply with 603.

Advisory 223.1 General. Because medical facilities frequently reconfigure spaces to reflect changes in medical specialties, Section 223.1 does not include a provision for dispersion of accessible patient or resident sleeping rooms. The lack of a design requirement does not mean that covered entities are not required to provide services to people with disabilities where accessible rooms are not dispersed in specialty areas. Locate accessible rooms near core areas that are less likely to change over time. While dispersion is not required, the flexibility it provides can be a critical factor in ensuring cost effective compliance with applicable civil rights laws, including titles II and III of the ADA and Section 504 of the Rehabilitation Act of 1973, as amended.

Advisory 223.1 General (Continued). Additionally, all types of features and amenities should be dispersed among accessible sleeping rooms to ensure equal access to and a variety of choices for all patients and residents.

223.1.1 Alterations. Where sleeping rooms are *altered* or *added*, the requirements of 223 shall apply only to the sleeping rooms being *altered* or *added* until the number of sleeping rooms complies with the minimum number required for new construction.

Advisory 223.1.1 Alterations. In alterations and additions, the minimum required number is based on the total number of sleeping rooms altered or added instead of on the total number of sleeping rooms provided in a facility. As a facility is altered over time, every effort should be made to disperse accessible sleeping rooms among patient care areas such as pediatrics, cardiac care, maternity, and other units. In this way, people with disabilities can have access to the full-range of services provided by a medical care facility.

223.2 Hospitals, Rehabilitation Facilities, Psychiatric Facilities and Detoxification Facilities.

Hospitals, rehabilitation *facilities*, psychiatric *facilities* and detoxification *facilities* shall comply with 223.2.

223.2.1 Facilities Not Specializing in Treating Conditions That Affect Mobility. In *facilities* not specializing in treating conditions that affect mobility, at least 10 percent but no fewer than one, of the patient sleeping rooms shall provide mobility features complying with 805.

223.2.2 Facilities Specializing in Treating Conditions That Affect Mobility. In *facilities* specializing in treating conditions that affect mobility, 100 percent of the patient sleeping rooms shall provide mobility features complying with 805.

Advisory 223.2.2 Facilities Specializing in Treating Conditions That Affect Mobility. Conditions that affect mobility include conditions requiring the use or assistance of a brace, cane, crutch, prosthetic device, wheelchair, or powered mobility aid; arthritic, neurological, or orthopedic conditions that severely limit one's ability to walk; respiratory diseases and other conditions which may require the use of portable oxygen; and cardiac conditions that impose significant functional limitations. Facilities that may provide treatment for, but that do not specialize in treatment of such conditions, such as general rehabilitation hospitals, are not subject to this requirement but are subject to Section 223.2.1.

223.3 Long-Term Care Facilities. In licensed long-term care *facilities*, at least 50 percent, but no fewer than one, of each type of resident sleeping room shall provide mobility features complying with 805.

224 Transient Lodging Guest Rooms

224.1 General. *Transient lodging facilities* shall provide guest rooms in accordance with 224.

[See additional requirements for places of lodging at 28 CFR 36.406(c), p. 28. and for housing at a place of education at 28 CFR 35.151(f), p. 11, and 28 CFR 36.406(e), p. 29.]

Advisory 224.1 General. Certain facilities used for transient lodging, including time shares, dormitories, and town homes may be covered by both these requirements and the Fair Housing Amendments Act. The Fair Housing Amendments Act requires that certain residential structures having four or more multi-family dwelling units, regardless of whether they are privately owned or federally assisted, include certain features of accessible and adaptable design according to guidelines established by the U.S. Department of Housing and Urban Development (HUD). This law and the appropriate regulations should be consulted before proceeding with the design and construction of residential housing.

224.1.1 Alterations. Where guest rooms are *altered* or *added*, the requirements of 224 shall apply only to the guest rooms being *altered* or *added* until the number of guest rooms complies with the minimum number required for new construction.

Advisory 224.1.1 Alterations. In alterations and additions, the minimum required number of accessible guest rooms is based on the total number of guest rooms altered or added instead of the total number of guest rooms provided in a facility. Typically, each alteration of a facility is limited to a particular portion of the facility. When accessible guest rooms are added as a result of subsequent alterations, compliance with 224.5 (Dispersion) is more likely to be achieved if all of the accessible guest rooms are not provided in the same area of the facility.

224.1.2 Guest Room Doors and Doorways. Entrances, doors, and doorways providing user passage into and within guest rooms that are not required to provide mobility features complying with 806.2 shall comply with 404.2.3.

EXCEPTION: Shower and sauna doors in guest rooms that are not required to provide mobility features complying with 806.2 shall not be required to comply with 404.2.3.

Advisory 224.1.2 Guest Room Doors and Doorways. Because of the social interaction that often occurs in lodging facilities, an accessible clear opening width is required for doors and doorways to and within all guest rooms, including those not required to be accessible. This applies to all doors, including bathroom doors, that allow full user passage. Other requirements for doors and doorways in Section 404 do not apply to guest rooms not required to provide mobility features.

224.2 Guest Rooms with Mobility Features. In *transient lodging facilities*, guest rooms with mobility features complying with 806.2 shall be provided in accordance with Table 224.2.

Table 224.2 Guest Rooms with Mobility Features

Total Number of Guest Rooms Provided	Minimum Number of Required Rooms Without Roll-in Showers	Minimum Number of Required Rooms With Roll-in Showers	Total Number of Required Rooms
1 to 25	1	0	1
26 to 50	2	0	2
51 to 75	3	1	4
76 to 100	4	1	5
101 to 150	5	2	7
151 to 200	6	2	8
201 to 300	7	3	10
301 to 400	8	4	12
401 to 500	9	4	13
501 to 1000	2 percent of total	1 percent of total	3 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000	10, plus 1 for each 100, or fraction thereof, over 1000	30, plus 2 for each 100, or fraction thereof, over 1000

224.3 Beds. In guest rooms having more than 25 beds, 5 percent minimum of the beds shall have clear floor *space* complying with 806.2.3.

224.4 Guest Rooms with Communication Features. In *transient lodging facilities*, guest rooms with communication features complying with 806.3 shall be provided in accordance with Table 224.4.

Table 224.4 Guest Rooms with Communication Features

Total Number of Guest Rooms Provided	Minimum Number of Required Guest Rooms With Communication Features
2 to 25	2
26 to 50	4
51 to 75	7
76 to 100	9
101 to 150	12

Table 224.4 Guest Rooms with Communication Features

Total Number of Guest Rooms Provided	Minimum Number of Required Guest Rooms With Communication Features
151 to 200	14
201 to 300	17
301 to 400	20
401 to 500	22
501 to 1000	5 percent of total
1001 and over	50, plus 3 for each 100 over 1000

224.5 Dispersion. Guest rooms required to provide mobility features complying with 806.2 and guest rooms required to provide communication features complying with 806.3 shall be dispersed among the various classes of guest rooms, and shall provide choices of types of guest rooms, number of beds, and other amenities comparable to the choices provided to other guests. Where the minimum number of guest rooms required to comply with 806 is not sufficient to allow for complete dispersion, guest rooms shall be dispersed in the following priority: guest room type, number of beds, and amenities. At least one guest room required to provide mobility features complying with 806.2 shall also provide communication features complying with 806.3. Not more than 10 percent of guest rooms required to provide mobility features complying with 806.2 shall be used to satisfy the minimum number of guest rooms required to provide communication features complying with 806.3.

Advisory 224.5 Dispersion. Factors to be considered in providing an equivalent range of options may include, but are not limited to, room size, bed size, cost, view, bathroom fixtures such as hot tubs and spas, smoking and nonsmoking, and the number of rooms provided.

225 Storage

225.1 General. Storage *facilities* shall comply with 225.

225.2 Storage. Where storage is provided in accessible *spaces*, at least one of each type shall comply with 811.

Advisory 225.2 Storage. Types of storage include, but are not limited to, closets, cabinets, shelves, clothes rods, hooks, and drawers. Where provided, at least one of each type of storage must be within the reach ranges specified in 308; however, it is permissible to install additional storage outside the reach ranges.

225.2.1 Lockers. Where lockers are provided, at least 5 percent, but no fewer than one of each type, shall comply with 811.

Advisory 225.2.1 Lockers. Different types of lockers may include full-size and half-size lockers, as well as those specifically designed for storage of various sports equipment.

225.2.2 Self-Service Shelving. Self-service shelves shall be located on an *accessible* route complying with 402. Self-service shelving shall not be required to comply with 308.

Advisory 225.2.2 Self-Service Shelving. Self-service shelves include, but are not limited to, library, store, or post office shelves.

225.3 Self-Service Storage Facilities. *Self-service storage facilities* shall provide individual *self-service storage spaces* complying with these requirements in accordance with Table 225.3.

Table 225.3 Self-Service Storage Facilities

Total Spaces in Facility	Minimum Number of Spaces Required to be Accessible
1 to 200	5 percent, but no fewer than 1
201 and over	10, plus 2 percent of total number of units over 200

Advisory 225.3 Self-Service Storage Facilities. Although there are no technical requirements that are unique to self-service storage facilities, elements and spaces provided in facilities containing self-service storage spaces required to comply with these requirements must comply with this document where applicable. For example: the number of storage spaces required to comply with these requirements must provide Accessible Routes complying with Section 206; Accessible Means of Egress complying with Section 207; Parking Spaces complying with Section 208; and, where provided, other public use or common use elements and facilities such as toilet rooms, drinking fountains, and telephones must comply with the applicable requirements of this document.

225.3.1 Dispersion. Individual *self-service storage spaces* shall be dispersed throughout the various classes of *spaces* provided. Where more classes of *spaces* are provided than the number required to be *accessible*, the number of *spaces* shall not be required to exceed that required by Table 225.3. *Self-service storage spaces* complying with Table 225.3 shall not be required to be dispersed among *buildings* in a multi-*building facility*.

226 Dining Surfaces and Work Surfaces

226.1 General. Where dining surfaces are provided for the consumption of food or drink, at least 5 percent of the seating *spaces* and standing *spaces* at the dining surfaces shall comply with 902. In addition, where work surfaces are provided for use by other than employees, at least 5 percent shall comply with 902.

EXCEPTIONS: 1. Sales counters and service counters shall not be required to comply with 902.

2. Check writing surfaces provided at check-out aisles not required to comply with 904.3 shall not be required to comply with 902.

Advisory 226.1 General. In facilities covered by the ADA, this requirement does not apply to work surfaces used only by employees. However, the ADA and, where applicable, Section 504 of the Rehabilitation Act of 1973, as amended, provide that employees are entitled to “reasonable accommodations.” With respect to work surfaces, this means that employers may need to procure or adjust work stations such as desks, laboratory and work benches, fume hoods, reception counters, teller windows, study carrels, commercial kitchen counters, and conference tables to accommodate the individual needs of employees with disabilities on an “as needed” basis. Consider work surfaces that are flexible and permit installation at variable heights and clearances.

226.2 Dispersion. Dining surfaces and work surfaces required to comply with 902 shall be dispersed throughout the *space* or *facility* containing dining surfaces and work surfaces.

227 Sales and Service

227.1 General. Where provided, check-out aisles, sales counters, service counters, food service lines, queues, and waiting lines shall comply with 227 and 904.

227.2 Check-Out Aisles. Where check-out aisles are provided, check-out aisles complying with 904.3 shall be provided in accordance with Table 227.2. Where check-out aisles serve different functions, check-out aisles complying with 904.3 shall be provided in accordance with Table 227.2 for each function. Where check-out aisles are dispersed throughout the *building* or *facility*, check-out aisles complying with 904.3 shall be dispersed.

EXCEPTION: Where the selling *space* is under 5000 square feet (465 m²) no more than one check-out aisle complying with 904.3 shall be required.

Table 227.2 Check-Out Aisles

Number of Check-Out Aisles of Each Function	Minimum Number of Check-Out Aisles of Each Function Required to Comply with 904.3
1 to 4	1
5 to 8	2
9 to 15	3
16 and over	3, plus 20 percent of additional aisles

227.2.1 Altered Check-Out Aisles. Where check-out aisles are *altered*, at least one of each check-out aisle serving each function shall comply with 904.3 until the number of check-out aisles complies with 227.2.

227.3 Counters. Where provided, at least one of each type of sales counter and service counter shall comply with 904.4. Where counters are dispersed throughout the *building* or *facility*, counters complying with 904.4 also shall be dispersed.

Advisory 227.3 Counters. Types of counters that provide different services in the same facility include, but are not limited to, order, pick-up, express, and returns. One continuous counter can be used to provide different types of service. For example, order and pick-up are different services. It would not be acceptable to provide access only to the part of the counter where orders are taken when orders are picked-up at a different location on the same counter. Both the order and pick-up section of the counter must be accessible.

227.4 Food Service Lines. Food service lines shall comply with 904.5. Where self-service shelves are provided, at least 50 percent, but no fewer than one, of each type provided shall comply with 308.

227.5 Queues and Waiting Lines. Queues and waiting lines servicing counters or check-out aisles required to comply with 904.3 or 904.4 shall comply with 403.

228 Depositories, Vending Machines, Change Machines, Mail Boxes, and Fuel Dispensers

228.1 General. Where provided, at least one of each type of depository, vending machine, change machine, and fuel dispenser shall comply with 309.

EXCEPTION: Drive-up only depositories shall not be required to comply with 309.

Advisory 228.1 General. Depositories include, but are not limited to, night receptacles in banks, post offices, video stores, and libraries.

228.2 Mail Boxes. Where *mail boxes* are provided in an interior location, at least 5 percent, but no fewer than one, of each type shall comply with 309. In residential *facilities*, where *mail boxes* are provided for each *residential dwelling unit*, *mail boxes* complying with 309 shall be provided for each *residential dwelling unit* required to provide mobility features complying with 809.2 through 809.4.

229 Windows

229.1 General. Where glazed openings are provided in *accessible* rooms or *spaces* for operation by occupants, at least one opening shall comply with 309. Each glazed opening required by an *administrative authority* to be operable shall comply with 309.

EXCEPTION: 1. Glazed openings in *residential dwelling units* required to comply with 809 shall not be required to comply with 229.

2. Glazed openings in guest rooms required to provide communication features and in guest rooms required to comply with 206.5.3 shall not be required to comply with 229.

230 Two-Way Communication Systems

230.1 General. Where a two-way communication system is provided to gain admittance to a *building* or *facility* or to restricted areas within a *building* or *facility*, the system shall comply with 708.

Advisory 230.1 General. This requirement applies to facilities such as office buildings, courthouses, and other facilities where admittance to the building or restricted spaces is dependent on two-way communication systems.

231 Judicial Facilities

231.1 General. Judicial *facilities* shall comply with 231.

231.2 Courtrooms. Each courtroom shall comply with 808.

231.3 Holding Cells. Where provided, central holding cells and court-floor holding cells shall comply with 231.3.

231.3.1 Central Holding Cells. Where separate central holding cells are provided for adult male, juvenile male, adult female, or juvenile female, one of each type shall comply with 807.2. Where central holding cells are provided and are not separated by age or sex, at least one cell complying with 807.2 shall be provided.

231.3.2 Court-Floor Holding Cells. Where separate court-floor holding cells are provided for adult male, juvenile male, adult female, or juvenile female, each courtroom shall be served by one cell of each type complying with 807.2. Where court-floor holding cells are provided and are not separated by age or sex, courtrooms shall be served by at least one cell complying with 807.2. Cells may serve more than one courtroom.

231.4 Visiting Areas. Visiting areas shall comply with 231.4.

231.4.1 Cubicles and Counters. At least 5 percent, but no fewer than one, of cubicles shall comply with 902 on both the visitor and detainee sides. Where counters are provided, at least one shall comply with 904.4.2 on both the visitor and detainee sides.

EXCEPTION: The detainee side of cubicles or counters at non-contact visiting areas not serving holding cells required to comply with 231 shall not be required to comply with 902 or 904.4.2.

231.4.2 Partitions. Where solid partitions or security glazing separate visitors from detainees at least one of each type of cubicle or counter partition shall comply with 904.6.

232 Detention Facilities and Correctional Facilities

232.1 General. *Buildings, facilities,* or portions thereof, in which people are detained for penal or correction purposes, or in which the liberty of the inmates is restricted for security reasons shall comply with 232. **[See additional requirements at 28 CFR 35.151(k), p. 13.]**

Advisory 232.1 General. Detention facilities include, but are not limited to, jails, detention centers, and holding cells in police stations. Correctional facilities include, but are not limited to, prisons, reformatories, and correctional centers.

232.2 General Holding Cells and General Housing Cells. General holding cells and general housing cells shall be provided in accordance with 232.2.

EXCEPTION: *Alterations* to cells shall not be required to comply except to the extent determined by the Attorney General.

Advisory 232.2 General Holding Cells and General Housing Cells. Accessible cells or rooms should be dispersed among different levels of security, housing categories, and holding classifications (e.g., male/female and adult/juvenile) to facilitate access. Many detention and correctional facilities are designed so that certain areas (e.g., "shift" areas) can be adapted to serve as different types of housing according to need. For example, a shift area serving as a medium-security housing unit might be redesignated for a period of time as a high-security housing unit to meet capacity needs. Placement of accessible cells or rooms in shift areas may allow additional flexibility in meeting requirements for dispersion of accessible cells or rooms.

Advisory 232.2 General Holding Cells and General Housing Cells Exception. Although these requirements do not specify that cells be accessible as a consequence of an alteration, title II of the ADA requires that each service, program, or activity conducted by a public entity, when viewed in its entirety, be readily accessible to and usable by individuals with disabilities. This requirement must be met unless doing so would fundamentally alter the nature of a service, program, or activity or would result in undue financial and administrative burdens.

232.2.1 Cells with Mobility Features. At least 2 percent, but no fewer than one, of the total number of cells in a *facility* shall provide mobility features complying with 807.2.

232.2.1.1 Beds. In cells having more than 25 beds, at least 5 percent of the beds shall have clear floor *space* complying with 807.2.3.

232.2.2 Cells with Communication Features. At least 2 percent, but no fewer than one, of the total number of general holding cells and general housing cells equipped with audible emergency alarm systems and permanently installed telephones within the cell shall provide communication features complying with 807.3.

232.3 Special Holding Cells and Special Housing Cells. Where special holding cells or special housing cells are provided, at least one cell serving each purpose shall provide mobility features complying with 807.2. Cells subject to this requirement include, but are not limited to, those used for purposes of orientation, protective custody, administrative or disciplinary detention or segregation, detoxification, and medical isolation.

EXCEPTION: *Alterations* to cells shall not be required to comply except to the extent determined by the Attorney General.

232.4 Medical Care Facilities. Patient bedrooms or cells required to comply with 223 shall be provided in addition to any medical isolation cells required to comply with 232.3.

232.5 Visiting Areas. Visiting areas shall comply with 232.5.

232.5.1 Cubicles and Counters. At least 5 percent, but no fewer than one, of cubicles shall comply with 902 on both the visitor and detainee sides. Where counters are provided, at least one shall comply with 904.4.2 on both the visitor and detainee or inmate sides.

EXCEPTION: The inmate or detainee side of cubicles or counters at non-contact visiting areas not serving holding cells or housing cells required to comply with 232 shall not be required to comply with 902 or 904.4.2.

232.5.2 Partitions. Where solid partitions or security glazing separate visitors from detainees or inmates at least one of each type of cubicle or counter partition shall comply with 904.6.

233 Residential Facilities

233.1 General. *Facilities with residential dwelling units* shall comply with 233. [See additional requirements at 28 CFR 35.151(e) and (f), p. 11, and 28 CFR 36.406(d) and (e), pp. 28 and 29.]

Advisory 233.1 General. Section 233 outlines the requirements for residential facilities subject to the Americans with Disabilities Act of 1990. The facilities covered by Section 233, as well as other facilities not covered by this section, may still be subject to other Federal laws such as the Fair Housing Act and Section 504 of the Rehabilitation Act of 1973, as amended. For example, the Fair Housing Act requires that certain residential structures having four or more multi-family dwelling units, regardless of whether they are privately owned or federally assisted, include certain features of accessible and adaptable design according to guidelines established by the U.S. Department of Housing and Urban Development (HUD). These laws and the appropriate regulations should be consulted before proceeding with the design and construction of residential facilities.

Residential facilities containing residential dwelling units provided by entities subject to HUD's Section 504 regulations and residential dwelling units covered by Section 233.3 must comply with the technical and scoping requirements in Chapters 1 through 10 included in this document. Section 233 is not a stand-alone section; this section only addresses the minimum number of residential dwelling units within a facility required to comply with Chapter 8. However, residential facilities must also comply with the requirements of this document. For example: Section 206.5.4 requires all doors and doorways providing user passage in residential dwelling units providing mobility features to comply with Section 404; Section 206.7.6 permits platform lifts to be used to connect levels within residential dwelling units providing mobility features; Section 208 provides general scoping for accessible parking and Section 208.2.3.1 specifies the required number of accessible parking spaces for each residential dwelling unit providing mobility features; Section 228.2 requires mail boxes to be within reach ranges when they serve residential dwelling units providing mobility features; play areas are addressed in Section 240; and swimming pools are addressed in Section 242. There are special provisions applicable to facilities containing residential dwelling units at: Exception 3 to 202.3; Exception to 202.4; 203.8; and Exception 4 to 206.2.3.

233.2 Residential Dwelling Units Provided by Entities Subject to HUD Section 504 Regulations. Where *facilities with residential dwelling units* are provided by entities subject to regulations issued by the Department of Housing and Urban Development (HUD) under Section 504 of the Rehabilitation Act

of 1973, as amended, such entities shall provide *residential dwelling units* with mobility features complying with 809.2 through 809.4 in a number required by the applicable HUD regulations. *Residential dwelling units* required to provide mobility features complying with 809.2 through 809.4 shall be on an *accessible* route as required by 206. In addition, such entities shall provide *residential dwelling units* with communication features complying with 809.5 in a number required by the applicable HUD regulations. Entities subject to 233.2 shall not be required to comply with 233.3.

Advisory 233.2 Residential Dwelling Units Provided by Entities Subject to HUD Section 504 Regulations. Section 233.2 requires that entities subject to HUD's regulations implementing Section 504 of the Rehabilitation Act of 1973, as amended, provide residential dwelling units containing mobility features and residential dwelling units containing communication features complying with these regulations in a number specified in HUD's Section 504 regulations. Further, the residential dwelling units provided must be dispersed according to HUD's Section 504 criteria. In addition, Section 233.2 defers to HUD the specification of criteria by which the technical requirements of this document will apply to alterations of existing facilities subject to HUD's Section 504 regulations.

233.3 Residential Dwelling Units Provided by Entities Not Subject to HUD Section 504

Regulations. *Facilities* with *residential dwelling units* provided by entities not subject to regulations issued by the Department of Housing and Urban Development (HUD) under Section 504 of the Rehabilitation Act of 1973, as amended, shall comply with 233.3.

233.3.1 Minimum Number: New Construction. Newly constructed *facilities* with *residential dwelling units* shall comply with 233.3.1.

EXCEPTION: Where *facilities* contain 10 or fewer *residential dwelling units*, the requirements of 233.3.1.1 and 233.3.1.2 shall apply to the total number of *residential dwelling units* that are constructed under a single contract, or are developed as a whole, whether or not located on a common *site*.

233.3.1.1 Residential Dwelling Units with Mobility Features. In *facilities* with *residential dwelling units*, at least 5 percent, but no fewer than one unit, of the total number of *residential dwelling units* shall provide mobility features complying with 809.2 through 809.4 and shall be on an *accessible* route as required by 206.

233.3.1.2 Residential Dwelling Units with Communication Features. In *facilities* with *residential dwelling units*, at least 2 percent, but no fewer than one unit, of the total number of *residential dwelling units* shall provide communication features complying with 809.5.

233.3.2 Residential Dwelling Units for Sale. *Residential dwelling units* offered for sale shall provide *accessible* features to the extent required by regulations issued by Federal agencies under the Americans with Disabilities Act or Section 504 of the Rehabilitation Act of 1973, as amended.

[See additional requirements at 28 CFR 35.151(j), p. 13.]

Advisory 233.3.2 Residential Dwelling Units for Sale. A public entity that conducts a program to build housing for purchase by individual home buyers must provide access according to the requirements of the ADA regulations and a program receiving Federal financial assistance must comply with the applicable Section 504 regulation.

233.3.3 Additions. Where an *addition* to an existing *building* results in an increase in the number of *residential dwelling units*, the requirements of 233.3.1 shall apply only to the *residential dwelling units* that are *added* until the total number of *residential dwelling units* complies with the minimum number required by 233.3.1. *Residential dwelling units* required to comply with 233.3.1.1 shall be on an *accessible* route as required by 206.

233.3.4 Alterations. *Alterations* shall comply with 233.3.4.

EXCEPTION: Where compliance with 809.2, 809.3, or 809.4 is *technically infeasible*, or where it is *technically infeasible* to provide an *accessible* route to a *residential dwelling unit*, the entity shall be permitted to *alter* or construct a comparable *residential dwelling unit* to comply with 809.2 through 809.4 provided that the minimum number of *residential dwelling units* required by 233.3.1.1 and 233.3.1.2, as applicable, is satisfied.

Advisory 233.3.4 Alterations Exception. A substituted dwelling unit must be comparable to the dwelling unit that is not made accessible. Factors to be considered in comparing one dwelling unit to another should include the number of bedrooms; amenities provided within the dwelling unit; types of common spaces provided within the facility; and location with respect to community resources and services, such as public transportation and civic, recreational, and mercantile facilities.

233.3.4.1 Alterations to Vacated Buildings. Where a *building* is vacated for the purposes of *alteration*, and the *altered building* contains more than 15 *residential dwelling units*, at least 5 percent of the *residential dwelling units* shall comply with 809.2 through 809.4 and shall be on an *accessible* route as required by 206. In addition, at least 2 percent of the *residential dwelling units* shall comply with 809.9.

Advisory 233.3.4.1 Alterations to Vacated Buildings. This provision is intended to apply where a building is vacated with the intent to alter the building. Buildings that are vacated solely for pest control or asbestos removal are not subject to the requirements to provide *residential dwelling units* with mobility features or communication features.

233.3.4.2 Alterations to Individual Residential Dwelling Units. In individual *residential dwelling units*, where a bathroom or a kitchen is substantially *altered*, and at least one other room is *altered*, the requirements of 233.3.1 shall apply to the *altered residential dwelling units* until the total number of *residential dwelling units* complies with the minimum number required by 233.3.1.1 and 233.3.1.2. *Residential dwelling units* required to comply with 233.3.1.1 shall be on an *accessible* route as required by 206.

EXCEPTION: Where *facilities* contain 15 or fewer *residential dwelling units*, the requirements of 233.3.1.1 and 233.3.1.2 shall apply to the total number of *residential dwelling units* that are *altered* under a single contract, or are developed as a whole, whether or not located on a *common site*.

Advisory 233.3.4.2 Alterations to Individual Residential Dwelling Units. Section 233.3.4.2 uses the terms “substantially altered” and “altered.” A substantial alteration to a kitchen or bathroom includes, but is not limited to, alterations that are changes to or rearrangements in the plan configuration, or replacement of cabinetry. Substantial alterations do not include normal maintenance or appliance and fixture replacement, unless such maintenance or replacement requires changes to or rearrangements in the plan configuration, or replacement of cabinetry. The term “alteration” is defined both in Section 106 of these requirements and in the Department of Justice ADA regulations.

233.3.5 Dispersion. *Residential dwelling units* required to provide mobility features complying with 809.2 through 809.4 and *residential dwelling units* required to provide communication features complying with 809.5 shall be dispersed among the various types of *residential dwelling units* in the *facility* and shall provide choices of *residential dwelling units* comparable to, and integrated with, those available to other residents.

EXCEPTION: Where multi-story *residential dwelling units* are one of the types of *residential dwelling units* provided, one-story *residential dwelling units* shall be permitted as a substitute for multi-story *residential dwelling units* where equivalent *spaces* and amenities are provided in the one-story *residential dwelling unit*.

234 Amusement Rides

234.1 General. *Amusement rides* shall comply with 234.

EXCEPTION: Mobile or portable *amusement rides* shall not be required to comply with 234.

Advisory 234.1 General. These requirements apply generally to newly designed and constructed amusement rides and attractions. A custom designed and constructed ride is new upon its first use, which is the first time amusement park patrons take the ride. With respect to amusement rides purchased from other entities, new refers to the first permanent installation of the ride, whether it is used off the shelf or modified before it is installed. Where amusement rides are moved after several seasons to another area of the park or to another park, the ride would not be considered newly designed or newly constructed.

Some amusement rides and attractions that have unique designs and features are not addressed by these requirements. In those situations, these requirements are to be applied to the extent possible. An example of an amusement ride not specifically addressed by these requirements includes “virtual reality” rides where the device does not move through a fixed course within a defined area. An accessible route must be provided to these rides. Where an attraction or ride has unique features for which there are no applicable scoping provisions, then a reasonable number, but at least one, of the features must be located on an accessible route. Where there are appropriate technical provisions, they must be applied to the elements that are covered by the scoping provisions.

Advisory 234.1 General Exception. Mobile or temporary rides are those set up for short periods of time such as traveling carnivals, State and county fairs, and festivals. The amusement rides that are covered by 234.1 are ones that are not regularly assembled and disassembled.

234.2 Load and Unload Areas. Load and unload areas serving *amusement rides* shall comply with 1002.3.

234.3 Minimum Number. *Amusement rides* shall provide at least one *wheelchair space* complying with 1002.4, or at least one *amusement ride seat* designed for transfer complying with 1002.5, or at least one *transfer device* complying with 1002.6.

EXCEPTIONS: 1. *Amusement rides* that are controlled or operated by the rider shall not be required to comply with 234.3.

2. *Amusement rides* designed primarily for children, where children are assisted on and off the ride by an adult, shall not be required to comply with 234.3.

3. *Amusement rides* that do not provide *amusement ride seats* shall not be required to comply with 234.3.

Advisory 234.3 Minimum Number Exceptions 1 through 3. Amusement rides controlled or operated by the rider, designed for children, or rides without ride seats are not required to comply with 234.3. These rides are not exempt from the other provisions in 234 requiring an accessible route to the load and unload areas and to the ride. The exception does not apply to those rides where patrons may cause the ride to make incidental movements, but where the patron otherwise has no control over the ride.

Advisory 234.3 Minimum Number Exception 2. The exception is limited to those rides designed "primarily" for children, where children are assisted on and off the ride by an adult. This exception is limited to those rides designed for children and not for the occasional adult user. An accessible route to and turning space in the load and unload area will provide access for adults and family members assisting children on and off these rides.

234.4 Existing Amusement Rides. Where existing *amusement rides* are *altered*, the *alteration* shall comply with 234.4.

Advisory 234.4 Existing Amusement Rides. Routine maintenance, painting, and changing of theme boards are examples of activities that do not constitute an alteration subject to this section.

234.4.1 Load and Unload Areas. Where load and unload areas serving existing *amusement rides* are newly designed and constructed, the load and unload areas shall comply with 1002.3.

234.4.2 Minimum Number. Where the structural or operational characteristics of an *amusement ride* are *altered* to the extent that the *amusement ride's* performance differs from that specified by the manufacturer or the original design, the *amusement ride* shall comply with 234.3.

235 Recreational Boating Facilities

235.1 General. Recreational boating *facilities* shall comply with 235.

235.2 Boat Slips. *Boat slips* complying with 1003.3.1 shall be provided in accordance with Table 235.2. Where the number of *boat slips* is not identified, each 40 feet (12 m) of *boat slip* edge provided along the perimeter of the pier shall be counted as one *boat slip* for the purpose of this section.

Table 235.2 Boat Slips

Total Number of Boat Slips Provided in Facility	Minimum Number of Required Accessible Boat Slips
1 to 25	1
26 to 50	2
51 to 100	3
101 to 150	4
151 to 300	5
301 to 400	6
401 to 500	7
501 to 600	8
601 to 700	9
701 to 800	10
801 to 900	11
901 to 1000	12
1001 and over	12, plus 1 for every 100, or fraction thereof, over 1000

Advisory 235.2 Boat Slips. The requirement for boat slips also applies to piers where boat slips are not demarcated. For example, a single pier 25 feet (7620 mm) long and 5 feet (1525 mm) wide (the minimum width specified by Section 1003.3) allows boats to moor on three sides. Because the number of boat slips is not demarcated, the total length of boat slip edge (55 feet, 17 m) must be used to determine the number of boat slips provided (two). This number is based on the specification in Section 235.2 that each 40 feet (12 m) of boat slip edge, or fraction thereof, counts as one boat slip. In this example, Table 235.2 would require one boat slip to be accessible.

235.2.1 Dispersion. *Boat slips* complying with 1003.3.1 shall be dispersed throughout the various types of *boat slips* provided. Where the minimum number of *boat slips* required to comply with 1003.3.1 has been met, no further dispersion shall be required.

Advisory 235.2.1 Dispersion. Types of boat slips are based on the size of the boat slips; whether single berths or double berths, shallow water or deep water, transient or longer-term lease, covered or uncovered; and whether slips are equipped with features such as telephone, water, electricity or cable connections. The term “boat slip” is intended to cover any pier area other than launch ramp boarding piers where recreational boats are moored for purposes of berthing, embarking, or disembarking. For example, a fuel pier may contain boat slips, and this type of short term slip would be included in determining compliance with 235.2.

235.3 Boarding Piers at Boat Launch Ramps. Where *boarding piers* are provided at *boat launch ramps*, at least 5 percent, but no fewer than one, of the *boarding piers* shall comply with 1003.3.2.

236 Exercise Machines and Equipment

236.1 General. At least one of each type of exercise machine and equipment shall comply with 1004.

Advisory 236.1 General. Most strength training equipment and machines are considered different types. Where operators provide a biceps curl machine and cable-cross-over machine, both machines are required to meet the provisions in this section, even though an individual may be able to work on their biceps through both types of equipment.

Similarly, there are many types of cardiovascular exercise machines, such as stationary bicycles, rowing machines, stair climbers, and treadmills. Each machine provides a cardiovascular exercise and is considered a different type for purposes of these requirements.

237 Fishing Piers and Platforms

237.1 General. Fishing piers and platforms shall comply with 1005.

238 Golf Facilities

238.1 General. Golf *facilities* shall comply with 238.

238.2 Golf Courses. Golf courses shall comply with 238.2.

238.2.1 Teeing Grounds. Where one *teeing ground* is provided for a hole, the *teeing ground* shall be designed and constructed so that a golf car can enter and exit the *teeing ground*. Where two *teeing grounds* are provided for a hole, the forward *teeing ground* shall be designed and constructed so that a golf car can enter and exit the *teeing ground*. Where three or more *teeing grounds* are provided for a hole, at least two *teeing grounds*, including the forward *teeing ground*, shall be designed and constructed so that a golf car can enter and exit each *teeing ground*.

EXCEPTION: In existing golf courses, the forward *teeing ground* shall not be required to be one of the *teeing grounds* on a hole designed and constructed so that a golf car can enter and exit the *teeing ground* where compliance is not feasible due to terrain.

238.2.2 Putting Greens. Putting greens shall be designed and constructed so that a golf car can enter and exit the putting green.

238.2.3 Weather Shelters. Where provided, weather shelters shall be designed and constructed so that a golf car can enter and exit the weather shelter and shall comply with 1006.4.

238.3 Practice Putting Greens, Practice Teeing Grounds, and Teeing Stations at Driving Ranges. At least 5 percent, but no fewer than one, of practice putting greens, practice *teeing grounds*, and teeing stations at driving ranges shall be designed and constructed so that a golf car can enter and exit the practice putting greens, practice *teeing grounds*, and teeing stations at driving ranges.

239 Miniature Golf Facilities

239.1 General. Miniature golf *facilities* shall comply with 239.

239.2 Minimum Number. At least 50 percent of holes on miniature golf courses shall comply with 1007.3.

Advisory 239.2 Minimum Number. Where possible, providing access to all holes on a miniature golf course is recommended. If a course is designed with the minimum 50 percent accessible holes, designers or operators are encouraged to select holes which provide for an equivalent experience to the maximum extent possible.

239.3 Miniature Golf Course Configuration. Miniature golf courses shall be configured so that the holes complying with 1007.3 are consecutive. Miniature golf courses shall provide an *accessible* route from the last hole complying with 1007.3 to the course *entrance* or exit without requiring travel through any other holes on the course.

EXCEPTION: One break in the sequence of consecutive holes shall be permitted provided that the last hole on the miniature golf course is the last hole in the sequence.

Advisory 239.3 Miniature Golf Course Configuration. Where only the minimum 50 percent of the holes are accessible, an accessible route from the last accessible hole to the course exit or entrance must not require travel back through other holes. In some cases, this may require an additional accessible route. Other options include increasing the number of accessible holes in a way that limits the distance needed to connect the last accessible hole with the course exit or entrance.

240 Play Areas

240.1 General. *Play areas* for children ages 2 and over shall comply with 240. Where separate *play areas* are provided within a *site* for specific age groups, each *play area* shall comply with 240.

EXCEPTIONS: 1. *Play areas* located in family child care *facilities* where the proprietor actually resides shall not be required to comply with 240.

2. In existing *play areas*, where *play components* are relocated for the purposes of creating safe *use zones* and the ground surface is not *altered* or extended for more than one *use zone*, the *play area* shall not be required to comply with 240.

3. *Amusement attractions* shall not be required to comply with 240.
4. Where *play components* are *altered* and the ground surface is not *altered*, the ground surface shall not be required to comply with 1008.2.6 unless required by 202.4.

Advisory 240.1 General. Play areas may be located on exterior sites or within a building. Where separate play areas are provided within a site for children in specified age groups (e.g., preschool (ages 2 to 5) and school age (ages 5 to 12)), each play area must comply with this section. Where play areas are provided for the same age group on a site but are geographically separated (e.g., one is located next to a picnic area and another is located next to a softball field), they are considered separate play areas and each play area must comply with this section.

240.1.1 Additions. Where *play areas* are designed and constructed in phases, the requirements of 240 shall apply to each successive *addition* so that when the *addition* is completed, the entire *play area* complies with all the applicable requirements of 240.

Advisory 240.1.1 Additions. These requirements are to be applied so that when each successive addition is completed, the entire play area complies with all applicable provisions. For example, a play area is built in two phases. In the first phase, there are 10 elevated play components and 10 elevated play components are added in the second phase for a total of 20 elevated play components in the play area. When the first phase was completed, at least 5 elevated play components, including at least 3 different types, were to be provided on an accessible route. When the second phase is completed, at least 10 elevated play components must be located on an accessible route, and at least 7 ground level play components, including 4 different types, must be provided on an accessible route. At the time the second phase is complete, ramps must be used to connect at least 5 of the elevated play components and transfer systems are permitted to be used to connect the rest of the elevated play components required to be located on an accessible route.

240.2 Play Components. Where provided, *play components* shall comply with 240.2.

240.2.1 Ground Level Play Components. *Ground level play components* shall be provided in the number and types required by 240.2.1. *Ground level play components* that are provided to comply with 240.2.1.1 shall be permitted to satisfy the additional number required by 240.2.1.2 if the minimum required types of *play components* are satisfied. Where two or more required *ground level play components* are provided, they shall be dispersed throughout the *play area* and integrated with other *play components*.

Advisory 240.2.1 Ground Level Play Components. Examples of ground level play components may include spring rockers, swings, diggers, and stand-alone slides. When distinguishing between the different types of ground level play components, consider the general experience provided by the play component. Examples of different types of experiences include, but are not limited to, rocking, swinging, climbing, spinning, and sliding.

Advisory 240.2.1 Ground Level Play Components (Continued). A spiral slide may provide a slightly different experience from a straight slide, but sliding is the general experience and therefore a spiral slide is not considered a different type of play component from a straight slide.

Ground level play components accessed by children with disabilities must be integrated into the play area. Designers should consider the optimal layout of ground level play components accessed by children with disabilities to foster interaction and socialization among all children. Grouping all ground level play components accessed by children with disabilities in one location is not considered integrated.

Where a stand-alone slide is provided, an accessible route must connect the base of the stairs at the entry point to the exit point of the slide. A ramp or transfer system to the top of the slide is not required. Where a sand box is provided, an accessible route must connect to the border of the sand box. Accessibility to the sand box would be enhanced by providing a transfer system into the sand or by providing a raised sand table with knee clearance complying with 1008.4.3.

Ramps are preferred over transfer systems since not all children who use wheelchairs or other mobility devices may be able to use, or may choose not to use, transfer systems. Where ramps connect elevated play components, the maximum rise of any ramp run is limited to 12 inches (305 mm). Where possible, designers and operators are encouraged to provide ramps with a slope less than the 1:12 maximum. Berms or sculpted dirt may be used to provide elevation and may be part of an accessible route to composite play structures.

Platform lifts are permitted as a part of an accessible route. Because lifts must be independently operable, operators should carefully consider the appropriateness of their use in unsupervised settings.

240.2.1.1 Minimum Number and Types. Where *ground level play components* are provided, at least one of each type shall be on an *accessible* route and shall comply with 1008.4.

240.2.1.2 Additional Number and Types. Where *elevated play components* are provided, *ground level play components* shall be provided in accordance with Table 240.2.1.2 and shall comply with 1008.4.

EXCEPTION: If at least 50 percent of the *elevated play components* are connected by a *ramp* and at least 3 of the *elevated play components* connected by the *ramp* are different types of *play components*, the *play area* shall not be required to comply with 240.2.1.2.

Table 240.2.1.2 Number and Types of Ground Level Play Components Required to be on Accessible Routes

Number of Elevated Play Components Provided	Minimum Number of Ground Level Play Components Required to be on an Accessible Route	Minimum Number of Different Types of Ground Level Play Components Required to be on an Accessible Route
1	Not applicable	Not applicable
2 to 4	1	1
5 to 7	2	2
8 to 10	3	3
11 to 13	4	3
14 to 16	5	3
17 to 19	6	3
20 to 22	7	4
23 to 25	8	4
26 and over	8, plus 1 for each additional 3, or fraction thereof, over 25	5

Advisory 240.2.1.2 Additional Number and Types. Where a large play area includes two or more composite play structures designed for the same age group, the total number of elevated play components on all the composite play structures must be added to determine the additional number and types of ground level play components that must be provided on an accessible route.

240.2.2 Elevated Play Components. Where *elevated play components* are provided, at least 50 percent shall be on an *accessible* route and shall comply with 1008.4.

Advisory 240.2.2 Elevated Play Components. A double or triple slide that is part of a composite play structure is one elevated play component. For purposes of this section, ramps, transfer systems, steps, decks, and roofs are not considered elevated play components. Although socialization and pretend play can occur on these elements, they are not primarily intended for play.

Some play components that are attached to a composite play structure can be approached or exited at the ground level or above grade from a platform or deck. For example, a climber attached to a composite play structure can be approached or exited at the ground level or above grade from a platform or deck on a composite play structure.

Advisory 240.2.2 Elevated Play Components (Continued). Play components that are attached to a composite play structure and can be approached from a platform or deck (e.g., climbers and overhead play components) are considered elevated play components. These play components are not considered ground level play components and do not count toward the requirements in 240.2.1.2 regarding the number of ground level play components that must be located on an accessible route.

241 Saunas and Steam Rooms

241 General. Where provided, saunas and steam rooms shall comply with 612.

EXCEPTION: Where saunas or steam rooms are clustered at a single location, no more than 5 percent of the saunas and steam rooms, but no fewer than one, of each type in each cluster shall be required to comply with 612.

242 Swimming Pools, Wading Pools, and Spas

242.1 General. Swimming pools, wading pools, and spas shall comply with 242.

242.2 Swimming Pools. At least two *accessible* means of entry shall be provided for swimming pools. *Accessible* means of entry shall be swimming pool lifts complying with 1009.2; sloped entries complying with 1009.3; transfer walls complying with 1009.4; transfer systems complying with 1009.5; and pool stairs complying with 1009.6. At least one *accessible* means of entry provided shall comply with 1009.2 or 1009.3.

EXCEPTIONS:

1. Where a swimming pool has less than 300 linear feet (91 m) of swimming pool wall, no more than one *accessible* means of entry shall be required provided that the *accessible* means of entry is a swimming pool lift complying with 1009.2 or sloped entry complying with 1009.3.
2. Wave action pools, leisure rivers, sand bottom pools, and other pools where user access is limited to one area shall not be required to provide more than one *accessible* means of entry provided that the *accessible* means of entry is a swimming pool lift complying with 1009.2, a sloped entry complying with 1009.3, or a transfer system complying with 1009.5.
3. *Catch pools* shall not be required to provide an *accessible* means of entry provided that the *catch pool* edge is on an *accessible* route.

Advisory 242.2 Swimming Pools. Where more than one means of access is provided into the water, it is recommended that the means be different. Providing different means of access will better serve the varying needs of people with disabilities in getting into and out of a swimming pool. It is also recommended that where two or more means of access are provided, they not be provided in the same location in the pool. Different locations will provide increased options for entry and exit, especially in larger pools.

Advisory 242.2 Swimming Pools Exception 1. Pool walls at diving areas and areas along pool walls where there is no pool entry because of landscaping or adjacent structures are to be counted when determining the number of accessible means of entry required.

242.3 Wading Pools. At least one *accessible* means of entry shall be provided for wading pools. *Accessible* means of entry shall comply with sloped entries complying with 1009.3.

242.4 Spas. At least one *accessible* means of entry shall be provided for spas. *Accessible* means of entry shall comply with swimming pool lifts complying with 1009.2; transfer walls complying with 1009.4; or transfer systems complying with 1009.5.

EXCEPTION: Where spas are provided in a cluster, no more than 5 percent, but no fewer than one, spa in each cluster shall be required to comply with 242.4.

243 Shooting Facilities with Firing Positions

243.1 General. Where shooting *facilities* with firing positions are designed and constructed at a *site*, at least 5 percent, but no fewer than one, of each type of firing position shall comply with 1010.

cited in *Kirola v. City & County of San Francisco*
No. 14-17521 archived on June 19, 2017

CHAPTER 3: BUILDING BLOCKS

301 General

301.1 Scope. The provisions of Chapter 3 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

302 Floor or Ground Surfaces

302.1 General. Floor and ground surfaces shall be stable, firm, and slip resistant and shall comply with 302.

EXCEPTIONS: 1. Within animal containment areas, floor and ground surfaces shall not be required to be stable, firm, and slip resistant.

2. *Areas of sport activity* shall not be required to comply with 302.

Advisory 302.1 General. A stable surface is one that remains unchanged by contaminants or applied force, so that when the contaminant or force is removed, the surface returns to its original condition. A firm surface resists deformation by either indentations or particles moving on its surface. A slip-resistant surface provides sufficient frictional counterforce to the forces exerted in walking to permit safe ambulation.

302.2 Carpet. Carpet or carpet tile shall be securely attached and shall have a firm cushion, pad, or backing or no cushion or pad. Carpet or carpet tile shall have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. Pile height shall be ½ inch (13 mm) maximum. Exposed edges of carpet shall be fastened to floor surfaces and shall have trim on the entire length of the exposed edge. Carpet edge trim shall comply with 303.

Advisory 302.2 Carpet. Carpets and permanently affixed mats can significantly increase the amount of force (roll resistance) needed to propel a wheelchair over a surface. The firmer the carpeting and backing, the lower the roll resistance. A pile thickness up to ½ inch (13 mm) (measured to the backing, cushion, or pad) is allowed, although a lower pile provides easier wheelchair maneuvering. If a backing, cushion or pad is used, it must be firm. Preferably, carpet pad should not be used because the soft padding increases roll resistance.

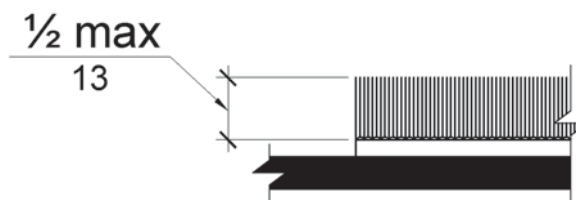
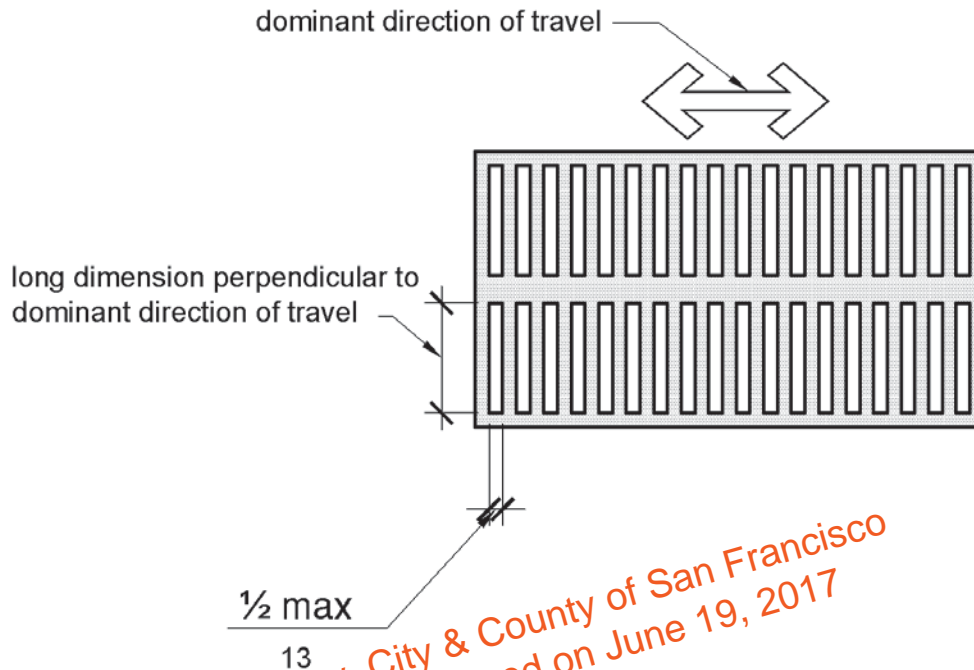


Figure 302.2
Carpet Pile Height

302.3 Openings. Openings in floor or ground surfaces shall not allow passage of a sphere more than ½ inch (13 mm) diameter except as allowed in 407.4.3, 409.4.3, 410.4, 810.5.3 and 810.10. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.



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 No. 14-17521 archived on June 19, 2017
 Figure 302.3
 Elongated Openings in Floor or Ground Surfaces

303 Changes in Level

303.1 General. Where changes in level are permitted in floor or ground surfaces, they shall comply with 303.

- EXCEPTIONS:**
1. Animal containment areas shall not be required to comply with 303.
 2. Areas of sport activity shall not be required to comply with 303.

303.2 Vertical. Changes in level of ¼ inch (6.4 mm) high maximum shall be permitted to be vertical.

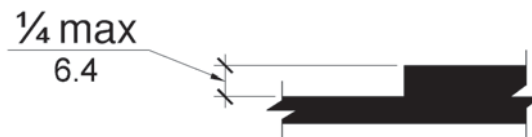


Figure 303.2
 Vertical Change in Level

303.3 Beveled. Changes in level between $\frac{1}{4}$ inch (6.4 mm) high minimum and $\frac{1}{2}$ inch (13 mm) high maximum shall be beveled with a slope not steeper than 1:2.

Advisory 303.3 Beveled. A change in level of $\frac{1}{2}$ inch (13 mm) is permitted to be $\frac{1}{4}$ inch (6.4 mm) vertical plus $\frac{1}{4}$ inch (6.4 mm) beveled. However, in no case may the combined change in level exceed $\frac{1}{2}$ inch (13 mm). Changes in level exceeding $\frac{1}{2}$ inch (13 mm) must comply with 405 (Ramps) or 406 (Curb Ramps).

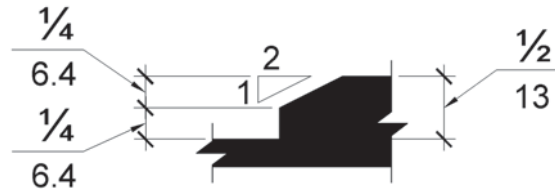


Figure 303.3
Beveled Change in Level

303.4 Ramps. Changes in level greater than $\frac{1}{2}$ inch (13 mm) high shall be *ramped*, and shall comply with 405 or 406.

304 Turning Space

304.1 General. Turning *space* shall comply with 304.

304.2 Floor or Ground Surfaces. Floor or ground surfaces of a turning *space* shall comply with 302. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

Advisory 304.2 Floor or Ground Surface Exception. As used in this section, the phrase "changes in level" refers to surfaces with slopes and to surfaces with abrupt rise exceeding that permitted in Section 303.3. Such changes in level are prohibited in required clear floor and ground spaces, turning spaces, and in similar spaces where people using wheelchairs and other mobility devices must park their mobility aids such as in wheelchair spaces, or maneuver to use elements such as at doors, fixtures, and telephones. The exception permits slopes not steeper than 1:48.

304.3 Size. Turning *space* shall comply with 304.3.1 or 304.3.2.

304.3.1 Circular Space. The turning *space* shall be a *space* of 60 inches (1525 mm) diameter minimum. The *space* shall be permitted to include knee and toe clearance complying with 306.

304.3.2 T-Shaped Space. The turning *space* shall be a T-shaped *space* within a 60 inch (1525 mm) square minimum with arms and base 36 inches (915 mm) wide minimum. Each arm of the T shall be clear of obstructions 12 inches (305 mm) minimum in each direction and the base shall be clear of

obstructions 24 inches (610 mm) minimum. The *space* shall be permitted to include knee and toe clearance complying with 306 only at the end of either the base or one arm.

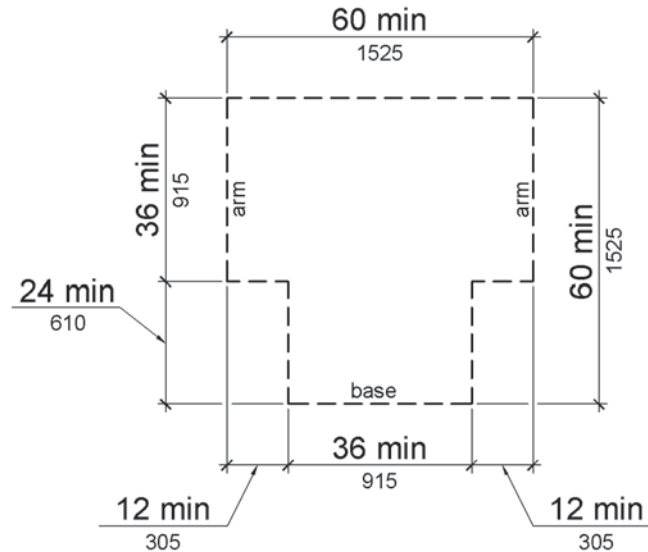


Figure 304.3.2
T-Shaped Turning Space

304.4 Door Swing. Doors shall be permitted to swing into turning spaces.

305 Clear Floor or Ground Space

305.1 General. Clear floor or ground space shall comply with 305.

305.2 Floor or Ground Surfaces. Floor or ground surfaces of a clear floor or ground space shall comply with 302. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

305.3 Size. The clear floor or ground space shall be 30 inches (760 mm) minimum by 48 inches (1220 mm) minimum.

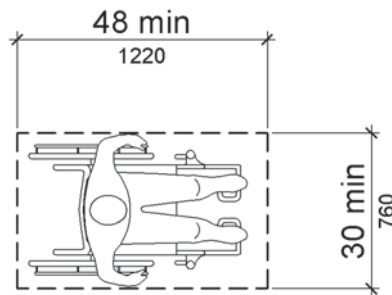


Figure 305.3
Clear Floor or Ground Space

305.4 Knee and Toe Clearance. Unless otherwise specified, clear floor or ground *space* shall be permitted to include knee and toe clearance complying with 306.

305.5 Position. Unless otherwise specified, clear floor or ground *space* shall be positioned for either forward or parallel approach to an *element*.

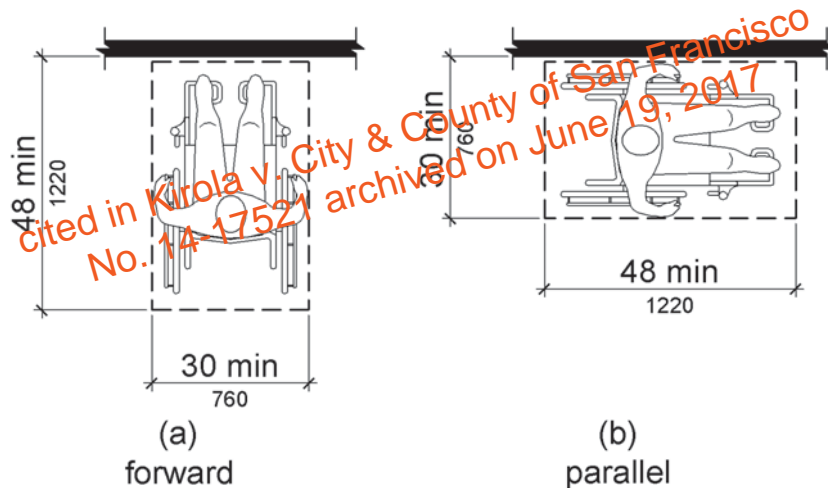


Figure 305.5
Position of Clear Floor or Ground Space

305.6 Approach. One full unobstructed side of the clear floor or ground *space* shall adjoin an *accessible* route or adjoin another clear floor or ground *space*.

305.7 Maneuvering Clearance. Where a clear floor or ground *space* is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearance shall be provided in accordance with 305.7.1 and 305.7.2.

305.7.1 Forward Approach. Alcoves shall be 36 inches (915 mm) wide minimum where the depth exceeds 24 inches (610 mm).

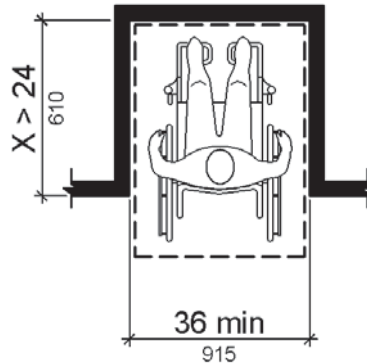


Figure 305.7.1
Maneuvering Clearance in an Alcove, Forward Approach

305.7.2 Parallel Approach. Alcoves shall be 60 inches (1525 mm) wide minimum where the depth exceeds 15 inches (380 mm).

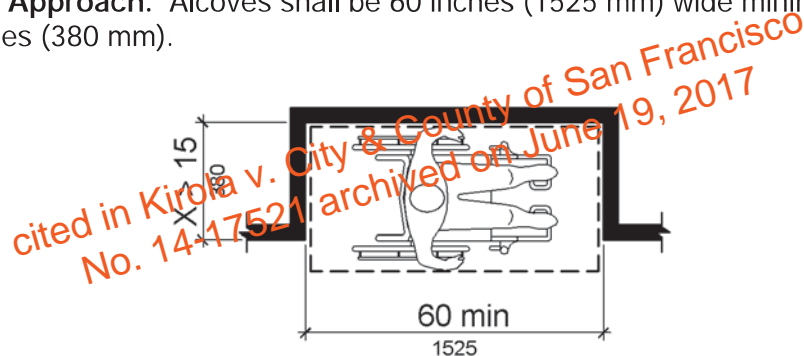


Figure 305.7.2
Maneuvering Clearance in an Alcove, Parallel Approach

306 Knee and Toe Clearance

306.1 General. Where *space* beneath an *element* is included as part of clear floor or ground *space* or turning *space*, the *space* shall comply with 306. Additional *space* shall not be prohibited beneath an *element* but shall not be considered as part of the clear floor or ground *space* or turning *space*.

Advisory 306.1 General. Clearances are measured in relation to the usable clear floor space, not necessarily to the vertical support for an element. When determining clearance under an object for required turning or maneuvering space, care should be taken to ensure the space is clear of any obstructions.

306.2 Toe Clearance.

306.2.1 General. *Space* under an *element* between the finish floor or ground and 9 inches (230 mm) above the finish floor or ground shall be considered toe clearance and shall comply with 306.2.

306.2.2 Maximum Depth. Toe clearance shall extend 25 inches (635 mm) maximum under an *element*.

306.2.3 Minimum Required Depth. Where toe clearance is required at an *element* as part of a clear floor *space*, the toe clearance shall extend 17 inches (430 mm) minimum under the *element*.

306.2.4 Additional Clearance. *Space* extending greater than 6 inches (150 mm) beyond the available knee clearance at 9 inches (230 mm) above the finish floor or ground shall not be considered toe clearance.

306.2.5 Width. Toe clearance shall be 30 inches (760 mm) wide minimum.

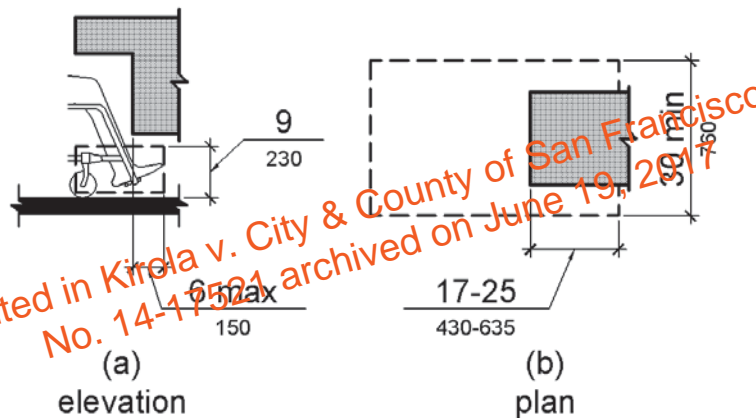


Figure 306.2
Toe Clearance

306.3 Knee Clearance.

306.3.1 General. *Space* under an *element* between 9 inches (230 mm) and 27 inches (685 mm) above the finish floor or ground shall be considered knee clearance and shall comply with 306.3.

306.3.2 Maximum Depth. Knee clearance shall extend 25 inches (635 mm) maximum under an *element* at 9 inches (230 mm) above the finish floor or ground.

306.3.3 Minimum Required Depth. Where knee clearance is required under an *element* as part of a clear floor *space*, the knee clearance shall be 11 inches (280 mm) deep minimum at 9 inches (230 mm) above the finish floor or ground, and 8 inches (205 mm) deep minimum at 27 inches (685 mm) above the finish floor or ground.

306.3.4 Clearance Reduction. Between 9 inches (230 mm) and 27 inches (685 mm) above the finish floor or ground, the knee clearance shall be permitted to reduce at a rate of 1 inch (25 mm) in depth for each 6 inches (150 mm) in height.

306.3.5 Width. Knee clearance shall be 30 inches (760 mm) wide minimum.

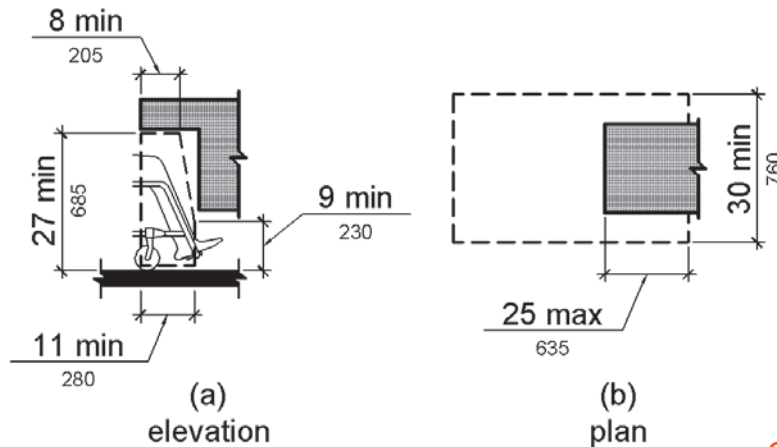


Figure 306.3
Knee Clearance

307 Protruding Objects

307.1 General. Protruding objects shall comply with 307.

307.2 Protrusion Limits. Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the finish floor or ground shall protrude 4 inches (100 mm) maximum horizontally into the *circulation path*.

EXCEPTION: Handrails shall be permitted to protrude 4½ inches (115 mm) maximum.

Advisory 307.2 Protrusion Limits. When a cane is used and the element is in the detectable range, it gives a person sufficient time to detect the element with the cane before there is body contact. Elements located on circulation paths, including operable elements, must comply with requirements for protruding objects. For example, awnings and their supporting structures cannot reduce the minimum required vertical clearance. Similarly, casement windows, when open, cannot encroach more than 4 inches (100 mm) into circulation paths above 27 inches (685 mm).

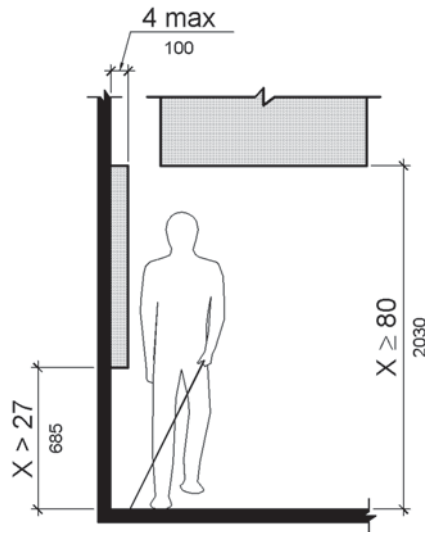


Figure 307.2
Limits of Protruding Objects

307.3 Post-Mounted Objects. Free-standing objects mounted on posts or pylons shall overhang *circulation paths* 12 inches (305 mm) maximum when located 27 inches (685 mm) minimum and 80 inches (2030 mm) maximum above the finish floor or ground. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (685 mm) maximum or 80 inches (2030 mm) minimum above the finish floor or ground.

EXCEPTION: The sloping portions of handrails serving stairs and *ramps* shall not be required to comply with 307.3.

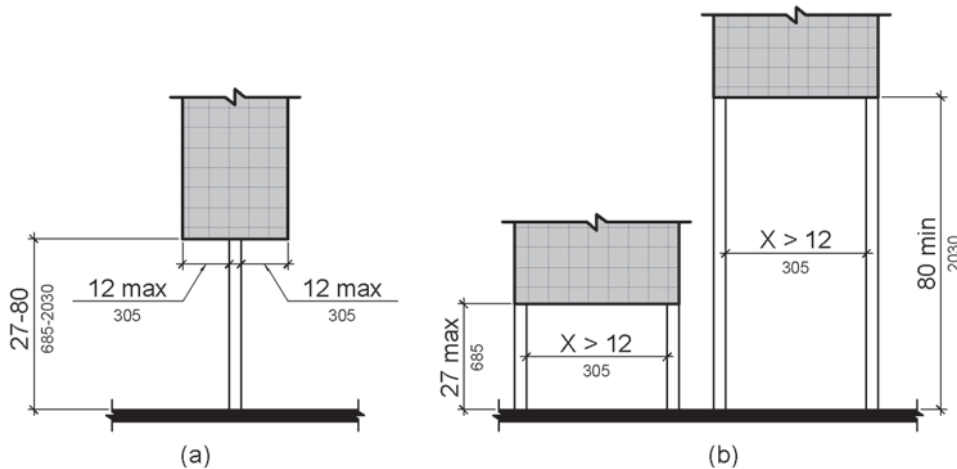


Figure 307.3
Post-Mounted Protruding Objects

307.4 Vertical Clearance. Vertical clearance shall be 80 inches (2030 mm) high minimum. Guardrails or other barriers shall be provided where the vertical clearance is less than 80 inches (2030 mm) high. The leading edge of such guardrail or barrier shall be located 27 inches (685 mm) maximum above the finish floor or ground.

EXCEPTION: Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the finish floor or ground.

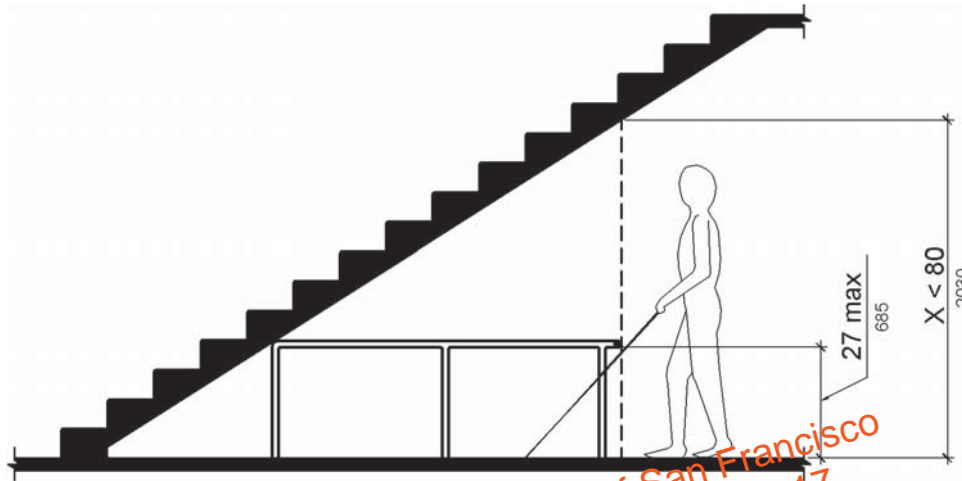


Figure 307.4
Vertical Clearance

307.5 Required Clear Width. Protruding objects shall not reduce the clear width required for *accessible* routes.

308 Reach Ranges

308.1 General. Reach ranges shall comply with 308.

Advisory 308.1 General. The following table provides guidance on reach ranges for children according to age where building elements such as coat hooks, lockers, or operable parts are designed for use primarily by children. These dimensions apply to either forward or side reaches. Accessible elements and operable parts designed for adult use or children over age 12 can be located outside these ranges but must be within the adult reach ranges required by 308.

Children's Reach Ranges			
Forward or Side Reach	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
High (maximum)	36 in (915 mm)	40 in (1015 mm)	44 in (1120 mm)
Low (minimum)	20 in (510 mm)	18 in (455 mm)	16 in (405 mm)

308.2 Forward Reach.

308.2.1 Unobstructed. Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the finish floor or ground.

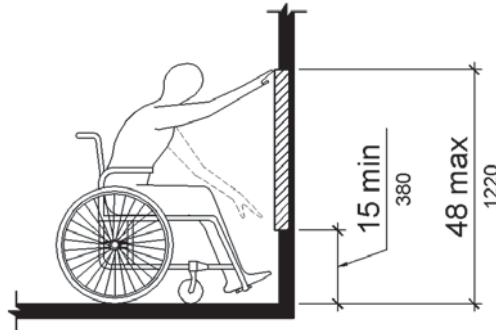


Figure 308.2.1
Unobstructed Forward Reach

308.2.2 Obstructed High Reach. Where a high forward reach is over an obstruction, the clear floor space shall extend beneath the *element* for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches (1220 mm) maximum where the reach depth is 20 inches (510 mm) maximum. Where the reach depth exceeds 20 inches (510 mm), the high forward reach shall be 44 inches (1120 mm) maximum and the reach depth shall be 25 inches (635 mm) maximum.

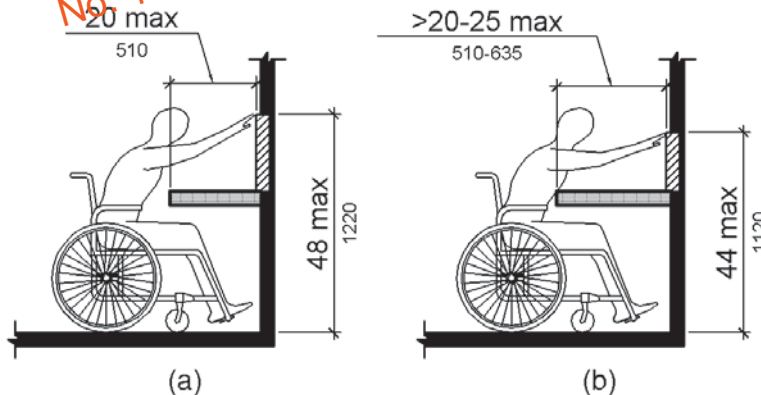


Figure 308.2.2
Obstructed High Forward Reach

308.3 Side Reach.

308.3.1 Unobstructed. Where a clear floor or ground *space* allows a parallel approach to an *element* and the side reach is unobstructed, the high side reach shall be 48 inches (1220 mm)

maximum and the low side reach shall be 15 inches (380 mm) minimum above the finish floor or ground.

- EXCEPTIONS:** 1. An obstruction shall be permitted between the clear floor or ground *space* and the *element* where the depth of the obstruction is 10 inches (255 mm) maximum.
2. *Operable parts* of fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum measured from the surface of the *vehicular way* where fuel dispensers are installed on existing curbs.

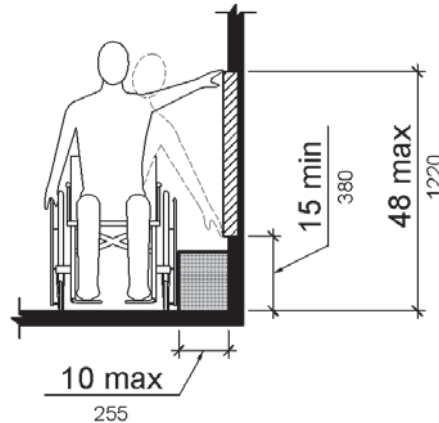


Figure 308.3.1
Unobstructed Side Reach

308.3.2 Obstructed High Reach. Where a clear floor or ground *space* allows a parallel approach to an *element* and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches (865 mm) maximum and the depth of the obstruction shall be 24 inches (610 mm) maximum. The high side reach shall be 48 inches (1220 mm) maximum for a reach depth of 10 inches (255 mm) maximum. Where the reach depth exceeds 10 inches (255 mm), the high side reach shall be 46 inches (1170 mm) maximum for a reach depth of 24 inches (610 mm) maximum.

- EXCEPTIONS:** 1. The top of washing machines and clothes dryers shall be permitted to be 36 inches (915 mm) maximum above the finish floor.
2. *Operable parts* of fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum measured from the surface of the *vehicular way* where fuel dispensers are installed on existing curbs.

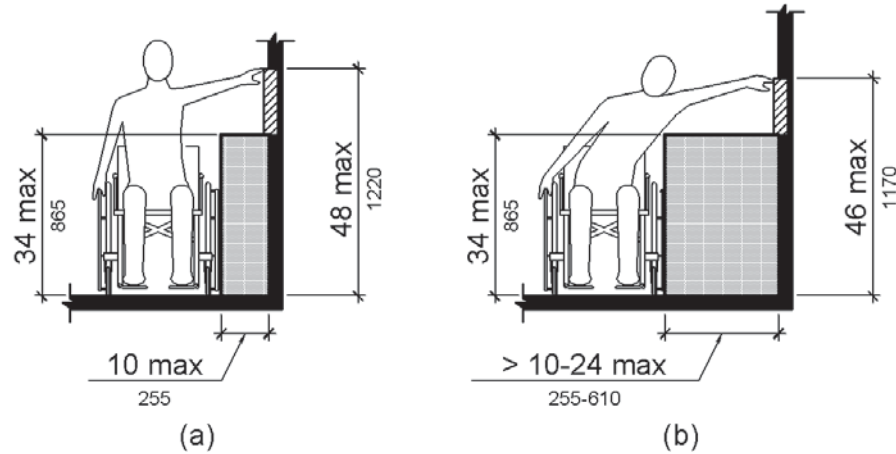


Figure 308.3.2
Obstructed High Side Reach

309 Operable Parts

309.1 General. *Operable parts* shall comply with 309.

309.2 Clear Floor Space. A clear floor or ground space complying with 305 shall be provided.

309.3 Height. *Operable parts* shall be placed within one or more of the reach ranges specified in 308.

309.4 Operation. *Operable parts* shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate *operable parts* shall be 5 pounds (22.2 N) maximum.

EXCEPTION: Gas pump nozzles shall not be required to provide *operable parts* that have an activating force of 5 pounds (22.2 N) maximum.

CHAPTER 4: ACCESSIBLE ROUTES

401 General

401.1 Scope. The provisions of Chapter 4 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

402 Accessible Routes

402.1 General. *Accessible* routes shall comply with 402.

402.2 Components. *Accessible* routes shall consist of one or more of the following components: walking surfaces with a *running slope* not steeper than 1:20, doorways, *ramps*, *curb ramps* excluding the flared sides, elevators, and platform lifts. All components of an *accessible* route shall comply with the applicable requirements of Chapter 4.

Advisory 402.2 Components. Walking surfaces must have running slopes not steeper than 1:20, see 403.3. Other components of accessible routes, such as ramps (405) and curb ramps (406), are permitted to be more steeply sloped.

403 Walking Surfaces

403.1 General. Walking surfaces that are a part of an *accessible* route shall comply with 403.

403.2 Floor or Ground Surface. Floor or ground surfaces shall comply with 302.

403.3 Slope. The *running slope* of walking surfaces shall not be steeper than 1:20. The *cross slope* of walking surfaces shall not be steeper than 1:48.

403.4 Changes in Level. Changes in level shall comply with 303.

403.5 Clearances. Walking surfaces shall provide clearances complying with 403.5.

EXCEPTION: Within *employee work areas*, clearances on *common use circulation paths* shall be permitted to be decreased by *work area equipment* provided that the decrease is essential to the function of the work being performed.

403.5.1 Clear Width. Except as provided in 403.5.2 and 403.5.3, the clear width of walking surfaces shall be 36 inches (915 mm) minimum.

EXCEPTION: The clear width shall be permitted to be reduced to 32 inches (815 mm) minimum for a length of 24 inches (610 mm) maximum provided that reduced width segments are separated by segments that are 48 inches (1220 mm) long minimum and 36 inches (915 mm) wide minimum.

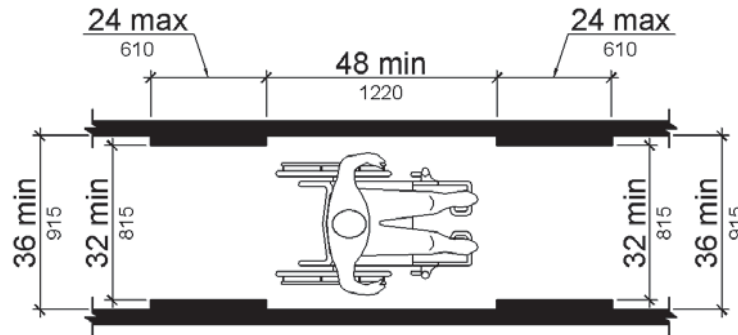


Figure 403.5.1
Clear Width of an Accessible Route

403.5.2 Clear Width at Turn. Where the *accessible* route makes a 180 degree turn around an *element* which is less than 48 inches (1220 mm) wide, clear width shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum at the turn and 42 inches (1065 mm) minimum leaving the turn.

EXCEPTION: Where the clear width at the turn is 60 inches (1525 mm) minimum compliance with 403.5.2 shall not be required.

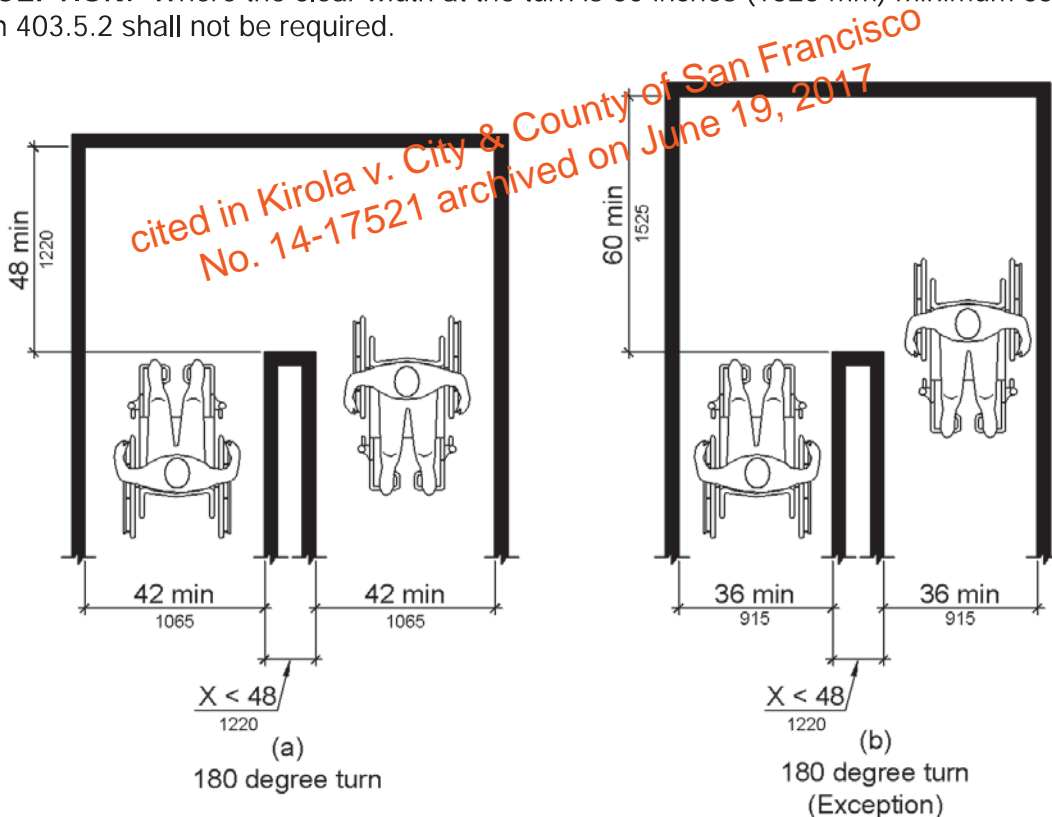


Figure 403.5.2
Clear Width at Turn

403.5.3 Passing Spaces. An *accessible* route with a clear width less than 60 inches (1525 mm) shall provide passing *spaces* at intervals of 200 feet (61 m) maximum. Passing *spaces* shall be either: a *space* 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum; or, an intersection of two walking surfaces providing a T-shaped *space* complying with 304.3.2 where the base and arms of the T-shaped *space* extend 48 inches (1220 mm) minimum beyond the intersection.

403.6 Handrails. Where handrails are provided along walking surfaces with *running slopes* not steeper than 1:20 they shall comply with 505.

Advisory 403.6 Handrails. Handrails provided in elevator cabs and platform lifts are not required to comply with the requirements for handrails on walking surfaces.

404 Doors, Doorways, and Gates

404.1 General. Doors, doorways, and gates that are part of an *accessible* route shall comply with 404. **EXCEPTION:** Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with 404.2.7, 404.2.8, 404.2.9, 404.3.2 and 404.3.4 through 404.3.7.

Advisory 404.1 General Exception. Security personnel must have sole control of doors that are eligible for the Exception at 404.1. It would not be acceptable for security personnel to operate the doors for people with disabilities while allowing others to have independent access.

404.2 Manual Doors, Doorways, and Manual Gates. Manual doors and doorways and manual gates intended for user passage shall comply with 404.2.

404.2.1 Revolving Doors, Gates, and Turnstiles. Revolving doors, revolving gates, and turnstiles shall not be part of an *accessible* route.

404.2.2 Double-Leaf Doors and Gates. At least one of the active leaves of doorways with two leaves shall comply with 404.2.3 and 404.2.4.

404.2.3 Clear Width. Door openings shall provide a clear width of 32 inches (815 mm) minimum. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Openings more than 24 inches (610 mm) deep shall provide a clear opening of 36 inches (915 mm) minimum. There shall be no projections into the required clear opening width lower than 34 inches (865 mm) above the finish floor or ground. Projections into the clear opening width between 34 inches (865 mm) and 80 inches (2030 mm) above the finish floor or ground shall not exceed 4 inches (100 mm).

EXCEPTIONS: 1. In *alterations*, a projection of 5/8 inch (16 mm) maximum into the required clear width shall be permitted for the latch side stop.

2. Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the finish floor or ground.

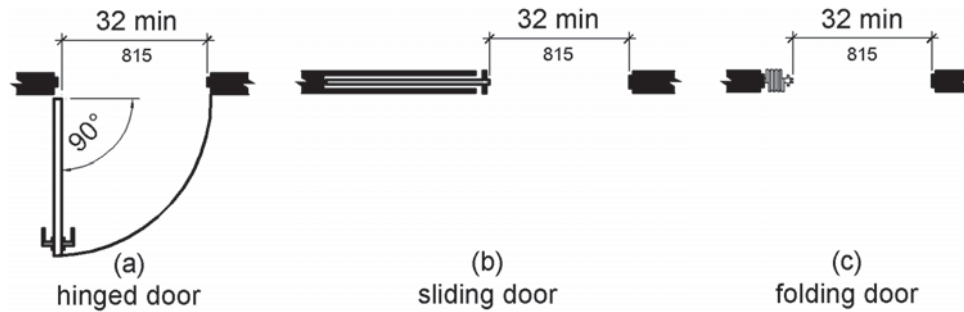


Figure 404.2.3
Clear Width of Doorways

404.2.4 Maneuvering Clearances. Minimum maneuvering clearances at doors and gates shall comply with 404.2.4. Maneuvering clearances shall extend the full width of the doorway and the required latch side or hinge side clearance.

EXCEPTION: Entry doors to hospital patient rooms shall not be required to provide the clearance beyond the latch side of the door.

404.2.4.1 Swinging Doors and Gates. Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.4.1.

Table 404.2.4.1 Maneuvering Clearances at Manual Swinging Doors and Gates

Type of Use		Minimum Maneuvering Clearance	
Approach Direction	Door or Gate Side	Perpendicular to Doorway	Parallel to Doorway (beyond latch side unless noted)
From front	Pull	60 inches (1525 mm)	18 inches (455 mm)
From front	Push	48 inches (1220 mm)	0 inches (0 mm) ¹
From hinge side	Pull	60 inches (1525 mm)	36 inches (915 mm)
From hinge side	Pull	54 inches (1370 mm)	42 inches (1065 mm)
From hinge side	Push	42 inches (1065 mm) ²	22 inches (560 mm) ³
From latch side	Pull	48 inches (1220 mm) ⁴	24 inches (610 mm)
From latch side	Push	42 inches (1065 mm) ⁴	24 inches (610 mm)

1. Add 12 inches (305 mm) if closer and latch are provided.
2. Add 6 inches (150 mm) if closer and latch are provided.
3. Beyond hinge side.
4. Add 6 inches (150 mm) if closer is provided.

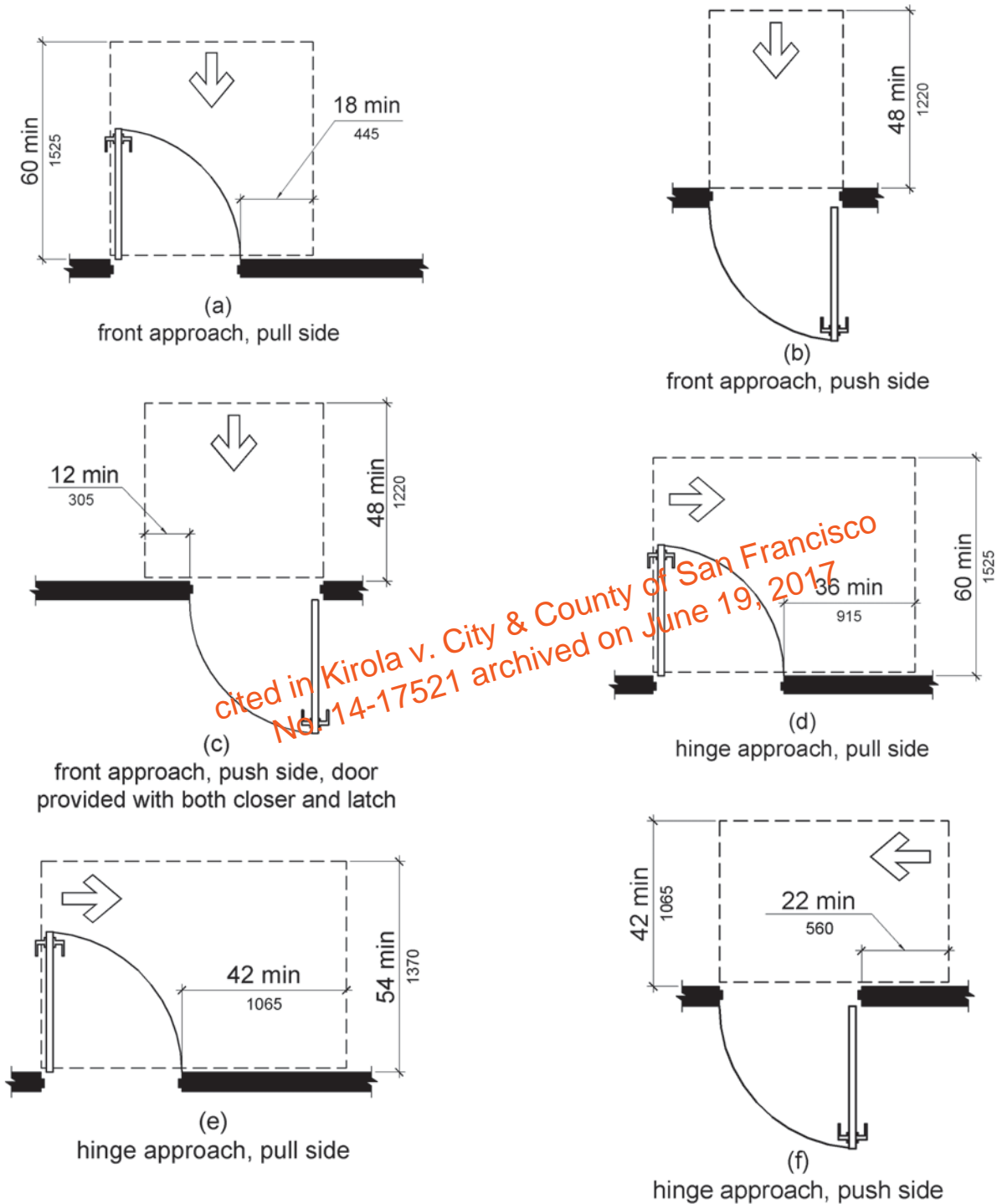


Figure 404.2.4.1
 Maneuvering Clearances at Manual Swinging Doors and Gates

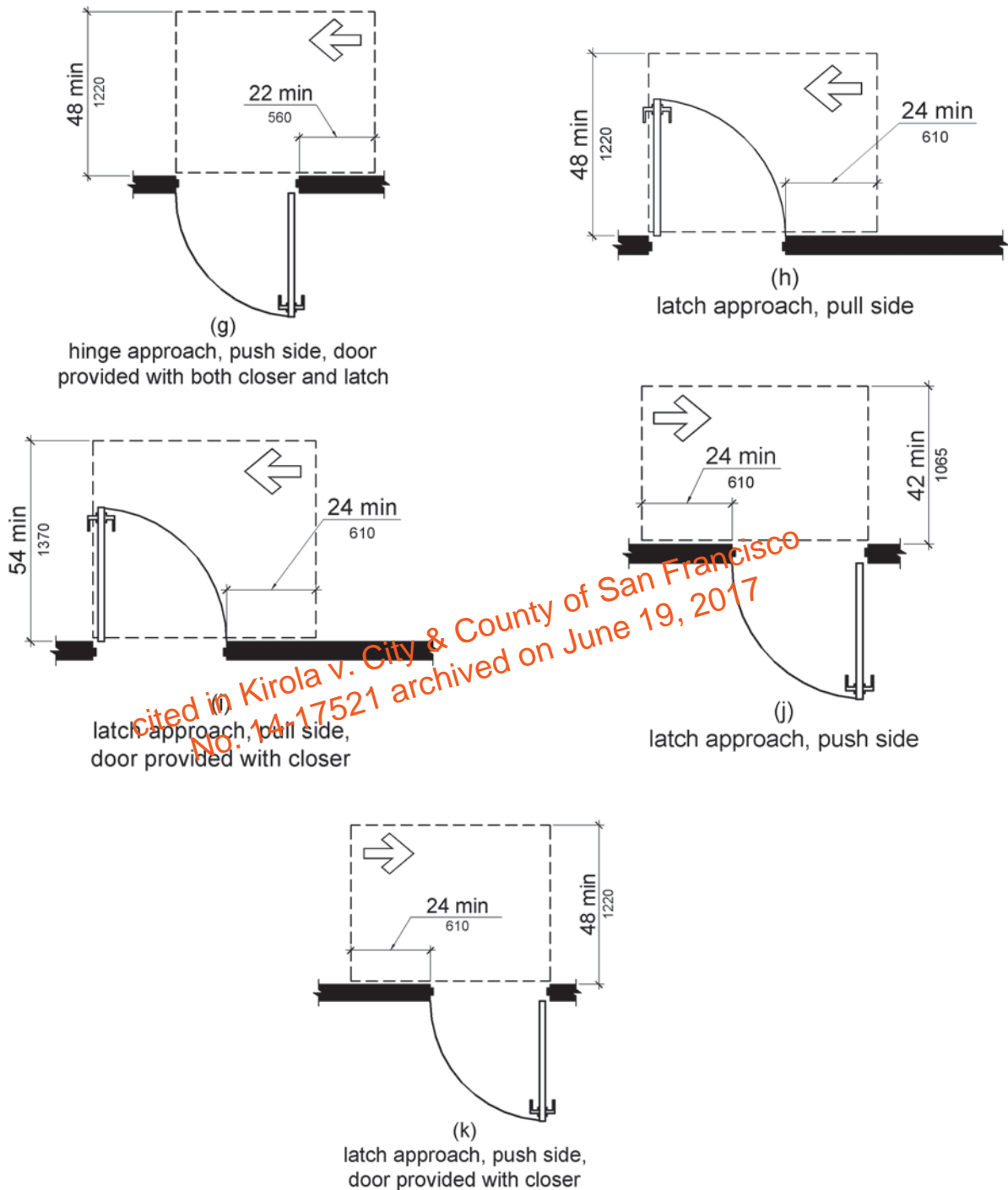


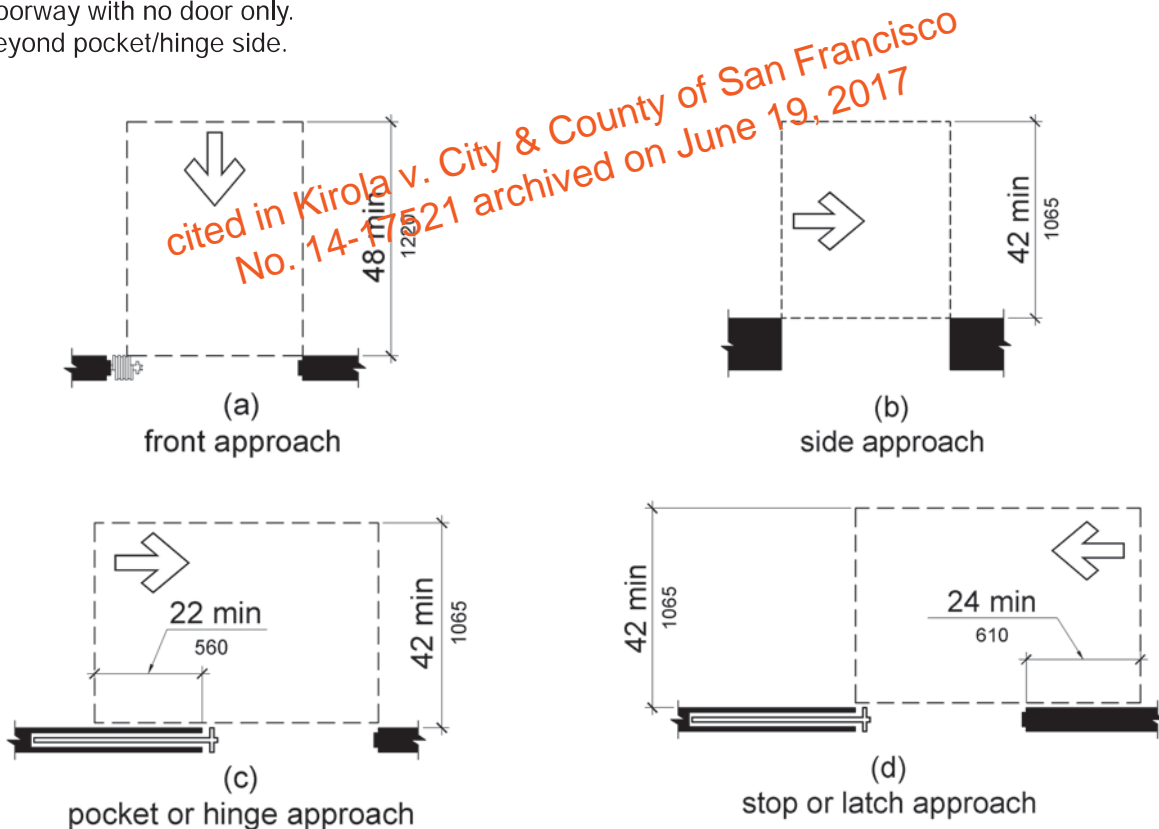
Figure 404.2.4.1
Maneuvering Clearances at Manual Swinging Doors and Gates

404.2.4.2 Doorways without Doors or Gates, Sliding Doors, and Folding Doors. Doorways less than 36 inches (915 mm) wide without doors or gates, sliding doors, or folding doors shall have maneuvering clearances complying with Table 404.2.4.2.

Table 404.2.4.2 Maneuvering Clearances at Doorways without Doors or Gates, Manual Sliding Doors, and Manual Folding Doors

Approach Direction	Minimum Maneuvering Clearance	
	Perpendicular to Doorway	Parallel to Doorway (beyond stop/latch side unless noted)
From Front	48 inches (1220 mm)	0 inches (0 mm)
From side ¹	42 inches (1065 mm)	0 inches (0 mm)
From pocket/hinge side	42 inches (1065 mm)	22 inches (560 mm) ²
From stop/latch side	42 inches (1065 mm)	24 inches (610 mm)

1. Doorway with no door only.
2. Beyond pocket/hinge side.



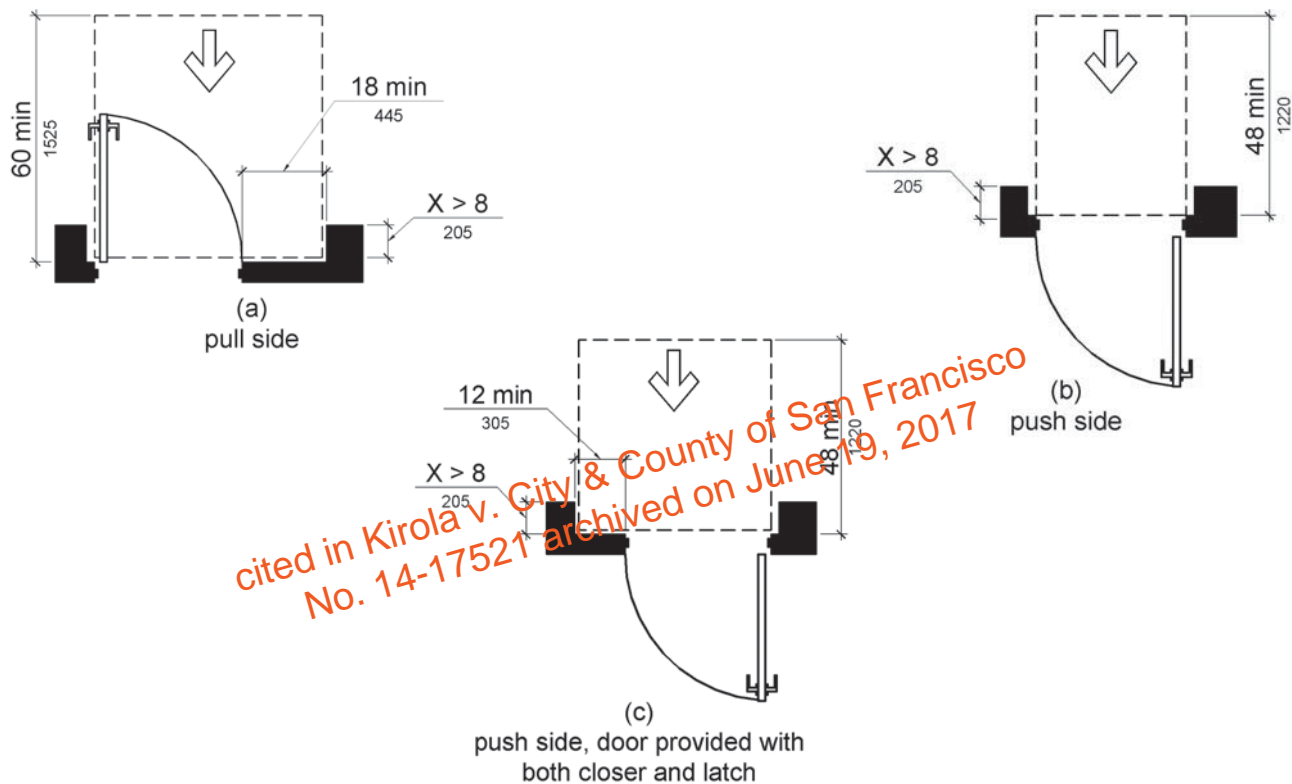
*cited in Kirola v. City & County of San Francisco
No. 14-17521 archived on June 19, 2017*

Figure 404.2.4.2

Maneuvering Clearances at Doorways without Doors, Sliding Doors, Gates, and Folding Doors

404.2.4.3 Recessed Doors and Gates. Maneuvering clearances for forward approach shall be provided when any obstruction within 18 inches (455 mm) of the latch side of a doorway projects more than 8 inches (205 mm) beyond the face of the door, measured perpendicular to the face of the door or gate.

Advisory 404.2.4.3 Recessed Doors and Gates. A door can be recessed due to wall thickness or because of the placement of casework and other fixed elements adjacent to the doorway. This provision must be applied wherever doors are recessed.



cited in *Kirola v. City & County of San Francisco*
No. 14-17521 archived on June 19, 2017

Figure 404.2.4.3
Maneuvering Clearances at Recessed Doors and Gates

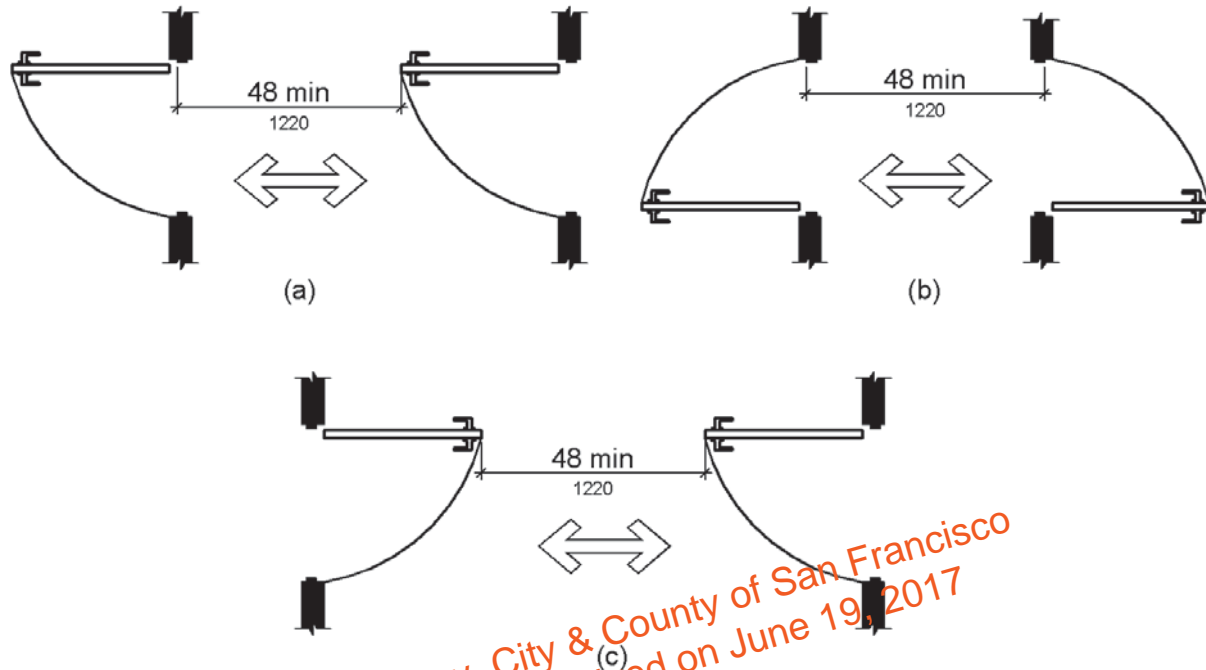
404.2.4.4 Floor or Ground Surface. Floor or ground surface within required maneuvering clearances shall comply with 302. Changes in level are not permitted.

- EXCEPTIONS:**
1. Slopes not steeper than 1:48 shall be permitted.
 2. Changes in level at thresholds complying with 404.2.5 shall be permitted.

404.2.5 Thresholds. Thresholds, if provided at doorways, shall be ½ inch (13 mm) high maximum. Raised thresholds and changes in level at doorways shall comply with 302 and 303.

EXCEPTION: Existing or *altered* thresholds ¾ inch (19 mm) high maximum that have a beveled edge on each side with a slope not steeper than 1:2 shall not be required to comply with 404.2.5.

404.2.6 Doors in Series and Gates in Series. The distance between two hinged or pivoted doors in series and gates in series shall be 48 inches (1220 mm) minimum plus the width of doors or gates swinging into the *space*.



cited in *Kirola v. City & County of San Francisco*
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Figure 404.2.6
Doors in Series and Gates in Series

404.2.7 Door and Gate Hardware. Handles, pulls, latches, locks, and other *operable parts* on doors and gates shall comply with 309.4. *Operable parts* of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.

- EXCEPTIONS:**
- Existing locks shall be permitted in any location at existing glazed doors without stiles, existing overhead rolling doors or grilles, and similar existing doors or grilles that are designed with locks that are activated only at the top or bottom rail.
 - Access gates in barrier walls and fences protecting pools, spas, and hot tubs shall be permitted to have *operable parts* of the release of latch on self-latching devices at 54 inches (1370 mm) maximum above the finish floor or ground provided the self-latching devices are not also self-locking devices and operated by means of a key, electronic opener, or integral combination lock.

Advisory 404.2.7 Door and Gate Hardware. Door hardware that can be operated with a closed fist or a loose grip accommodates the greatest range of users. Hardware that requires simultaneous hand and finger movements require greater dexterity and coordination, and is not recommended.

404.2.8 Closing Speed. Door and gate closing speed shall comply with 404.2.8.

404.2.8.1 Door Closers and Gate Closers. Door closers and gate closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to a position of 12 degrees from the latch is 5 seconds minimum.

404.2.8.2 Spring Hinges. Door and gate spring hinges shall be adjusted so that from the open position of 70 degrees, the door or gate shall move to the closed position in 1.5 seconds minimum.

404.2.9 Door and Gate Opening Force. Fire doors shall have a minimum opening force allowable by the appropriate *administrative authority*. The force for pushing or pulling open a door or gate other than fire doors shall be as follows:

1. Interior hinged doors and gates: 5 pounds (22.2 N) maximum.
2. Sliding or folding doors: 5 pounds (22.2 N) maximum.

These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door or gate in a closed position.

Advisory 404.2.9 Door and Gate Opening Force. The maximum force pertains to the continuous application of force necessary to fully open a door, not the initial force needed to overcome the inertia of the door. It does not apply to the force required to retract bolts or to disengage other devices used to keep the door in a closed position.

404.2.10 Door and Gate Surfaces. Swinging door and gate surfaces within 10 inches (255 mm) of the finish floor or ground measured vertically shall have a smooth surface on the push side extending the full width of the door or gate. Parts creating horizontal or vertical joints in these surfaces shall be within 1/16 inch (1.6 mm) of the same plane as the other. Cavities created by added kick plates shall be capped.

- EXCEPTIONS:**
1. Sliding doors shall not be required to comply with 404.2.10.
 2. Tempered glass doors without stiles and having a bottom rail or shoe with the top leading edge tapered at 60 degrees minimum from the horizontal shall not be required to meet the 10 inch (255 mm) bottom smooth surface height requirement.
 3. Doors and gates that do not extend to within 10 inches (255 mm) of the finish floor or ground shall not be required to comply with 404.2.10.
 4. Existing doors and gates without smooth surfaces within 10 inches (255 mm) of the finish floor or ground shall not be required to provide smooth surfaces complying with 404.2.10 provided that if added kick plates are installed, cavities created by such kick plates are capped.

404.2.11 Vision Lights. Doors, gates, and side lights adjacent to doors or gates, containing one or more glazing panels that permit viewing through the panels shall have the bottom of at least one glazed panel located 43 inches (1090 mm) maximum above the finish floor.

EXCEPTION: Vision lights with the lowest part more than 66 inches (1675 mm) from the finish floor or ground shall not be required to comply with 404.2.11.

404.3 Automatic and Power-Assisted Doors and Gates. Automatic doors and automatic gates shall comply with 404.3. Full-powered automatic doors shall comply with ANSI/BHMA A156.10 (incorporated

by reference, see "Referenced Standards" in Chapter 1). Low-energy and power-assisted doors shall comply with ANSI/BHMA A156.19 (1997 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1).

404.3.1 Clear Width. Doorways shall provide a clear opening of 32 inches (815 mm) minimum in power-on and power-off mode. The minimum clear width for automatic door systems in a doorway shall be based on the clear opening provided by all leaves in the open position.

404.3.2 Maneuvering Clearance. Clearances at power-assisted doors and gates shall comply with 404.2.4. Clearances at automatic doors and gates without standby power and serving an *accessible means of egress* shall comply with 404.2.4.

EXCEPTION: Where automatic doors and gates remain open in the power-off condition, compliance with 404.2.4 shall not be required.

404.3.3 Thresholds. Thresholds and changes in level at doorways shall comply with 404.2.5.

404.3.4 Doors in Series and Gates in Series. Doors in series and gates in series shall comply with 404.2.6.

404.3.5 Controls. Manually operated controls shall comply with 309. The clear floor *space* adjacent to the control shall be located beyond the arc of the door swing.

404.3.6 Break Out Opening. Where doors and gates without standby power are a part of a means of egress, the clear break out opening at swinging or sliding doors and gates shall be 32 inches (815 mm) minimum when operated in emergency mode.

EXCEPTION: Where manual swinging doors and gates comply with 404.2 and serve the same means of egress compliance with 404.3.6 shall not be required.

404.3.7 Revolving Doors, Revolving Gates, and Turnstiles. Revolving doors, revolving gates, and turnstiles shall not be part of an *accessible* route.

405 Ramps

405.1 General. *Ramps* on *accessible* routes shall comply with 405.

EXCEPTION: In *assembly areas*, aisle *ramps* adjacent to seating and not serving *elements* required to be on an *accessible* route shall not be required to comply with 405.

405.2 Slope. *Ramp* runs shall have a *running slope* not steeper than 1:12.

EXCEPTION: In existing *sites*, *buildings*, and *facilities*, *ramps* shall be permitted to have *running slopes* steeper than 1:12 complying with Table 405.2 where such slopes are necessary due to *space* limitations.

Table 405.2 Maximum Ramp Slope and Rise for Existing Sites, Buildings, and Facilities

Slope ¹	Maximum Rise
Steeper than 1:10 but not steeper than 1:8	3 inches (75 mm)
Steeper than 1:12 but not steeper than 1:10	6 inches (150 mm)

1. A slope steeper than 1:8 is prohibited.

Advisory 405.2 Slope. To accommodate the widest range of users, provide ramps with the least possible running slope and, wherever possible, accompany ramps with stairs for use by those individuals for whom distance presents a greater barrier than steps, e.g., people with heart disease or limited stamina.

405.3 Cross Slope. *Cross slope* of *ramp* runs shall not be steeper than 1:48.

Advisory 405.3 Cross Slope. Cross slope is the slope of the surface perpendicular to the direction of travel. Cross slope is measured the same way as slope is measured (i.e., the rise over the run).

405.4 Floor or Ground Surfaces. Floor or ground surfaces of *ramp* runs shall comply with 302. Changes in level other than the *running slope* and *cross slope* are not permitted on *ramp* runs.

405.5 Clear Width. The clear width of a *ramp* run and, where handrails are provided, the clear width between handrails shall be 36 inches (915 mm) minimum.

EXCEPTION: Within *employee work areas*, the required clear width of *ramps* that are a part of *common use circulation paths* shall be permitted to be decreased by *work area equipment* provided that the decrease is essential to the function of the work being performed.

405.6 Rise. The rise for any *ramp* run shall be 30 inches (760 mm) maximum.

405.7 Landings. *Ramps* shall have landings at the top and the bottom of each *ramp* run. Landings shall comply with 405.7.

Advisory 405.7 Landings. Ramps that do not have level landings at changes in direction can create a compound slope that will not meet the requirements of this document. Circular or curved ramps continually change direction. Curvilinear ramps with small radii also can create compound cross slopes and cannot, by their nature, meet the requirements for accessible routes. A level landing is needed at the accessible door to permit maneuvering and simultaneously door operation.

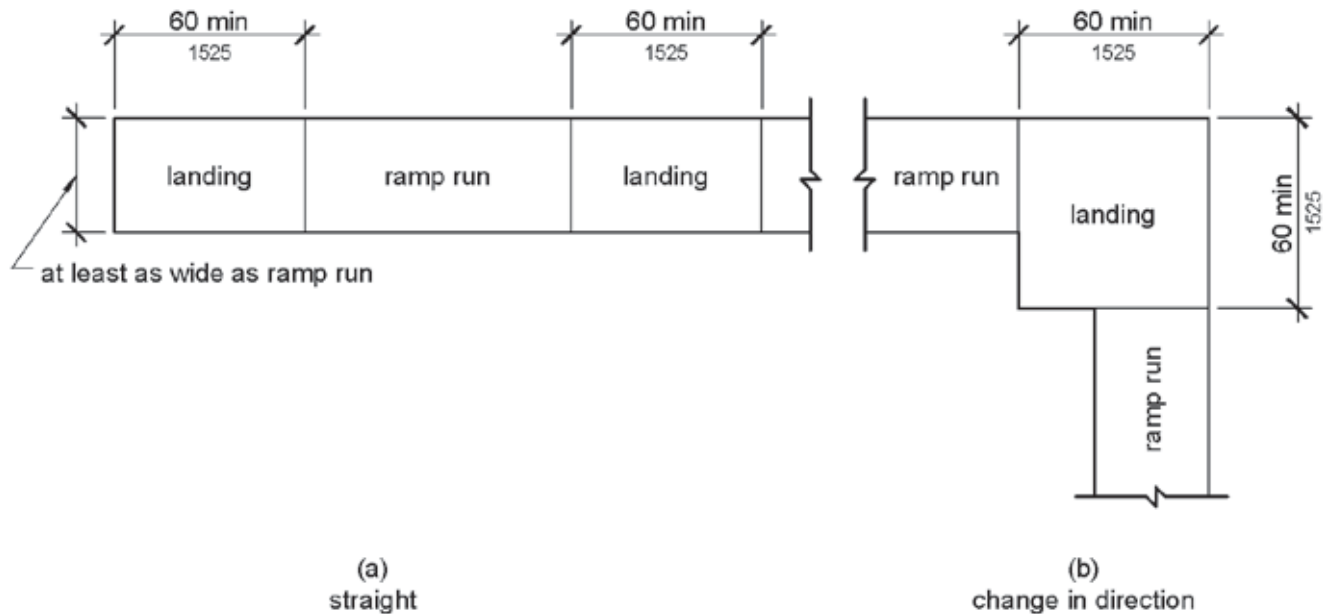


Figure 405.7
Ramp Landings

405.7.1 Slope. Landings shall comply with 302. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

405.7.2 Width. The landing clear width shall be at least as wide as the widest *ramp* run leading to the landing.

405.7.3 Length. The landing clear length shall be 60 inches (1525 mm) long minimum.

405.7.4 Change in Direction. *Ramps* that change direction between runs at landings shall have a clear landing 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum.

405.7.5 Doorways. Where doorways are located adjacent to a *ramp* landing, maneuvering clearances required by 404.2.4 and 404.3.2 shall be permitted to overlap the required landing area.

405.8 Handrails. *Ramp* runs with a rise greater than 6 inches (150 mm) shall have handrails complying with 505.

EXCEPTION: Within *employee work areas*, handrails shall not be required where *ramps* that are part of *common use circulation paths* are designed to permit the installation of handrails complying with 505. *Ramps* not subject to the exception to 405.5 shall be designed to maintain a 36 inch (915 mm) minimum clear width when handrails are installed.

405.9 Edge Protection. Edge protection complying with 405.9.1 or 405.9.2 shall be provided on each side of *ramp* runs and at each side of *ramp* landings.

- EXCEPTIONS:**
1. Edge protection shall not be required on *ramps* that are not required to have handrails and have sides complying with 406.3.
 2. Edge protection shall not be required on the sides of *ramp* landings serving an adjoining *ramp* run or stairway.
 3. Edge protection shall not be required on the sides of *ramp* landings having a vertical drop-off of ½ inch (13 mm) maximum within 10 inches (255 mm) horizontally of the minimum landing area specified in 405.7.

405.9.1 Extended Floor or Ground Surface. The floor or ground surface of the *ramp* run or landing shall extend 12 inches (305 mm) minimum beyond the inside face of a handrail complying with 505.

Advisory 405.9.1 Extended Floor or Ground Surface. The extended surface prevents wheelchair casters and crutch tips from slipping off the ramp surface.

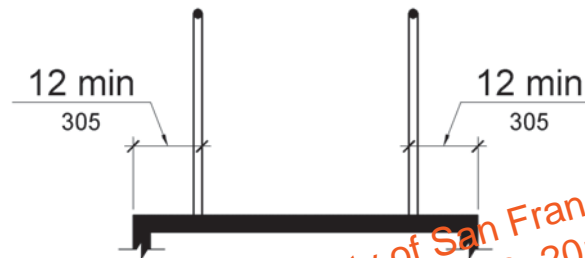


Figure 405.9.1
Extended Floor or Ground Surface Edge Protection

405.9.2 Curb or Barrier. A curb or barrier shall be provided that prevents the passage of a 4 inch (100 mm) diameter sphere, where any portion of the sphere is within 4 inches (100 mm) of the finish floor or ground surface.

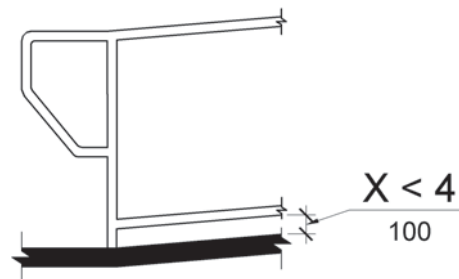


Figure 405.9.2
Curb or Barrier Edge Protection

405.10 Wet Conditions. Landings subject to wet conditions shall be designed to prevent the accumulation of water.

406 Curb Ramps

406.1 General. *Curb ramps* on *accessible* routes shall comply with 406, 405.2 through 405.5, and 405.10.

406.2 Counter Slope. Counter slopes of adjoining gutters and road surfaces immediately adjacent to the *curb ramp* shall not be steeper than 1:20. The adjacent surfaces at transitions at *curb ramps* to *walks*, gutters, and streets shall be at the same level.

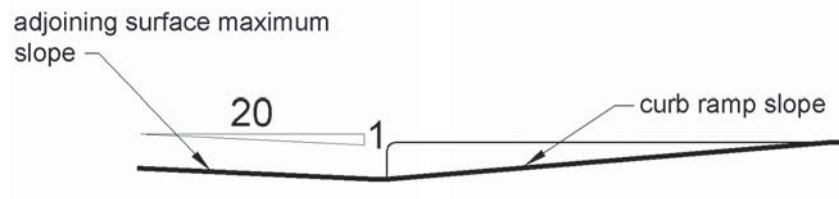


Figure 406.2
Counter Slope of Surfaces Adjacent to Curb Ramps

406.3 Sides of Curb Ramps. Where provided, *curb ramp* flares shall not be steeper than 1:10.

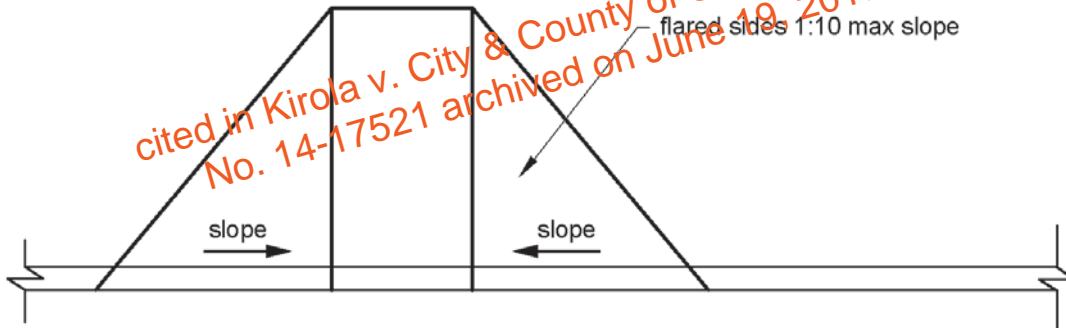


Figure 406.3
Sides of Curb Ramps

406.4 Landings. Landings shall be provided at the tops of *curb ramps*. The landing clear length shall be 36 inches (915 mm) minimum. The landing clear width shall be at least as wide as the *curb ramp*, excluding flared sides, leading to the landing.

EXCEPTION: In *alterations*, where there is no landing at the top of *curb ramps*, *curb ramp* flares shall be provided and shall not be steeper than 1:12.

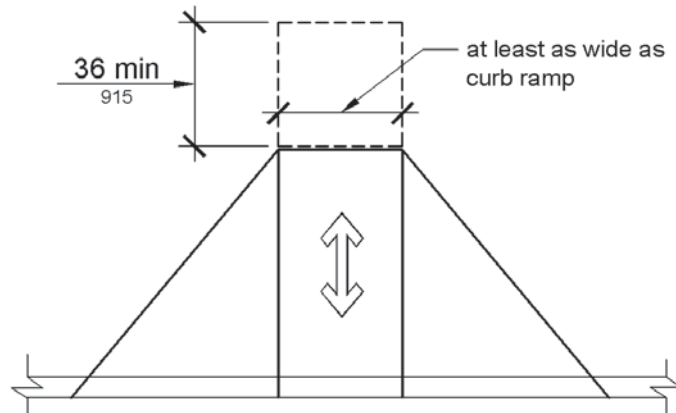


Figure 406.4
Landings at the Top of Curb Ramps

406.5 Location. *Curb ramps* and the flared sides of *curb ramps* shall be located so that they do not project into vehicular traffic lanes, parking spaces, or parking access aisles. *Curb ramps* at *marked crossings* shall be wholly contained within the markings, excluding any flared sides.

406.6 Diagonal Curb Ramps. Diagonal or corner type *curb ramps* with returned curbs or other well-defined edges shall have the edges parallel to the direction of pedestrian flow. The bottom of diagonal *curb ramps* shall have a clear space 48 inches (1220 mm) minimum outside active traffic lanes of the roadway. Diagonal *curb ramps* provided at *marked crossings* shall provide the 48 inches (1220 mm) minimum clear space within the markings. Diagonal *curb ramps* with flared sides shall have a segment of curb 24 inches (610 mm) long minimum located on each side of the *curb ramp* and within the *marked crossing*.

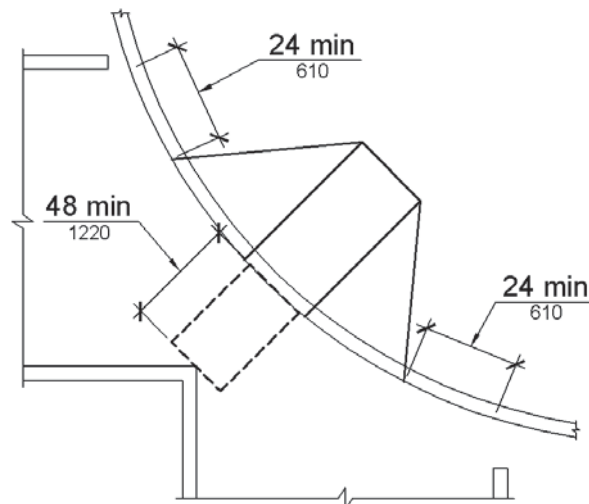


Figure 406.6
Diagonal or Corner Type Curb Ramps

406.7 Islands. Raised islands in crossings shall be cut through level with the street or have *curb ramps* at both sides. Each *curb ramp* shall have a level area 48 inches (1220 mm) long minimum by 36 inches (915 mm) wide minimum at the top of the *curb ramp* in the part of the island intersected by the crossings. Each 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum area shall be oriented so that the 48 inch (1220 mm) minimum length is in the direction of the *running slope* of the *curb ramp* it serves. The 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum areas and the *accessible* route shall be permitted to overlap.

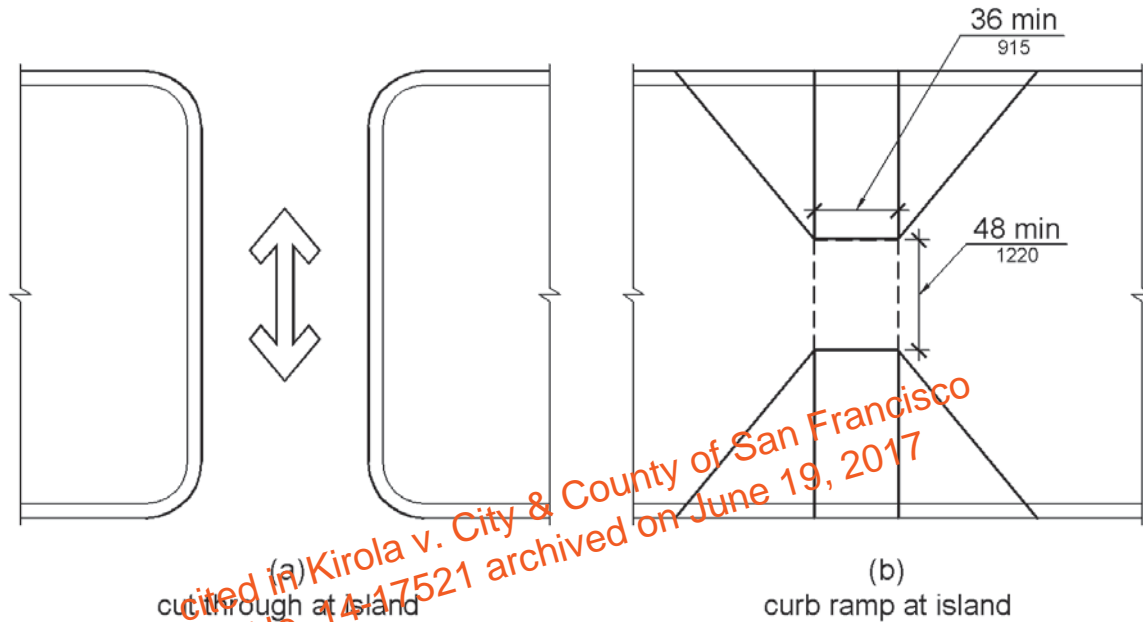


Figure 406.7
Islands in Crossings

407 Elevators

407.1 General. Elevators shall comply with 407 and with ASME A17.1 (incorporated by reference, see "Referenced Standards" in Chapter 1). They shall be passenger elevators as classified by ASME A17.1. Elevator operation shall be automatic.

Advisory 407.1 General. The ADA and other Federal civil rights laws require that accessible features be maintained in working order so that they are accessible to and usable by those people they are intended to benefit. Building owners should note that the ASME Safety Code for Elevators and Escalators requires routine maintenance and inspections. Isolated or temporary interruptions in service due to maintenance or repairs may be unavoidable; however, failure to take prompt action to effect repairs could constitute a violation of Federal laws and these requirements.

407.2 Elevator Landing Requirements. Elevator landings shall comply with 407.2.

407.2.1 Call Controls. Where elevator call buttons or keypads are provided, they shall comply with 407.2.1 and 309.4. Call buttons shall be raised or flush.

EXCEPTION: Existing elevators shall be permitted to have recessed call buttons.

407.2.1.1 Height. Call buttons and keypads shall be located within one of the reach ranges specified in 308, measured to the centerline of the highest *operable part*.

EXCEPTION: Existing call buttons and existing keypads shall be permitted to be located at 54 inches (1370 mm) maximum above the finish floor, measured to the centerline of the highest *operable part*.

407.2.1.2 Size. Call buttons shall be $\frac{3}{4}$ inch (19 mm) minimum in the smallest dimension.

EXCEPTION: Existing elevator call buttons shall not be required to comply with 407.2.1.2.

407.2.1.3 Clear Floor or Ground Space. A clear floor or ground *space* complying with 305 shall be provided at call controls.

Advisory 407.2.1.3 Clear Floor or Ground Space. The clear floor or ground space required at elevator call buttons must remain free of obstructions including ashtrays, plants, and other decorative elements that prevent wheelchair users and others from reaching the call buttons. The height of the clear floor or ground space is considered to be a volume from the floor to 80 inches (2030 mm) above the floor. Recessed ashtrays should not be placed near elevator call buttons so that persons who are blind or visually impaired do not inadvertently contact them or their contents as they reach for the call buttons.

407.2.1.4 Location. The call button that designates the up direction shall be located above the call button that designates the down direction.

EXCEPTION: Destination-oriented elevators shall not be required to comply with 407.2.1.4.

Advisory 407.2.1.4 Location Exception. A destination-oriented elevator system provides lobby controls enabling passengers to select floor stops, lobby indicators designating which elevator to use, and a car indicator designating the floors at which the car will stop. Responding cars are programmed for maximum efficiency by reducing the number of stops any passenger experiences.

407.2.1.5 Signals. Call buttons shall have visible signals to indicate when each call is registered and when each call is answered.

EXCEPTIONS: 1. Destination-oriented elevators shall not be required to comply with 407.2.1.5 provided that visible and audible signals complying with 407.2.2 indicating which elevator car to enter are provided.

2. Existing elevators shall not be required to comply with 407.2.1.5.

407.2.1.6 Keypads. Where keypads are provided, keypads shall be in a standard telephone keypad arrangement and shall comply with 407.4.7.2.

407.2.2 Hall Signals. Hall signals, including in-car signals, shall comply with 407.2.2.

407.2.2.1 Visible and Audible Signals. A visible and audible signal shall be provided at each hoistway entrance to indicate which car is answering a call and the car's direction of travel. Where in-car signals are provided, they shall be visible from the floor area adjacent to the hall call buttons.

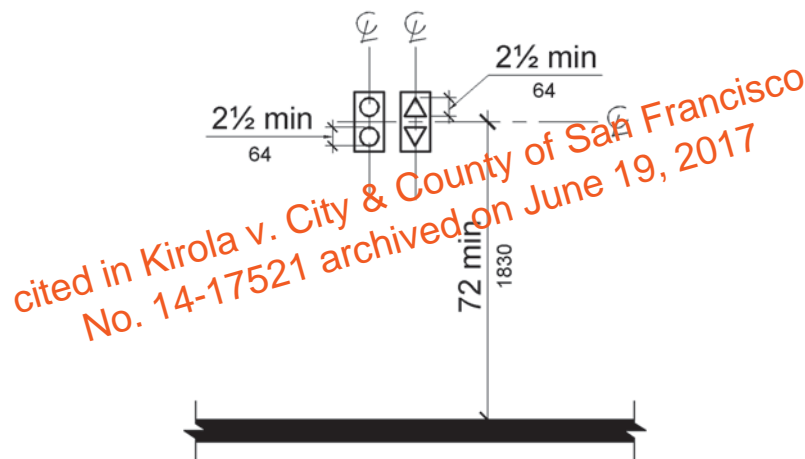
EXCEPTIONS: 1. Visible and audible signals shall not be required at each destination-oriented elevator where a visible and audible signal complying with 407.2.2 is provided indicating the elevator car designation information.

2. In existing elevators, a signal indicating the direction of car travel shall not be required.

407.2.2.2 Visible Signals. Visible signal fixtures shall be centered at 72 inches (1830 mm) minimum above the finish floor or ground. The visible signal *elements* shall be 2-½ inches (64 mm) minimum measured along the vertical centerline of the *element*. Signals shall be visible from the floor area adjacent to the hall call button.

EXCEPTIONS: 1. Destination-oriented elevators shall be permitted to have signals visible from the floor area adjacent to the hoistway entrance.

2. Existing elevators shall not be required to comply with 407.2.2.2.



**Figure 407.2.2.2
Visible Hall Signals**

407.2.2.3 Audible Signals. Audible signals shall sound once for the up direction and twice for the down direction, or shall have verbal annunciators that indicate the direction of elevator car travel. Audible signals shall have a frequency of 1500 Hz maximum. Verbal annunciators shall have a frequency of 300 Hz minimum and 3000 Hz maximum. The audible signal and verbal annunciator shall be 10 dB minimum above ambient, but shall not exceed 80 dB, measured at the hall call button.

EXCEPTIONS: 1. Destination-oriented elevators shall not be required to comply with 407.2.2.3 provided that the audible tone and verbal announcement is the same as those given at the call button or call button keypad.

2. Existing elevators shall not be required to comply with the requirements for frequency and dB range of audible signals.

407.2.2.4 Differentiation. Each destination-oriented elevator in a bank of elevators shall have audible and visible means for differentiation.

407.2.3 Hoistway Signs. Signs at elevator hoistways shall comply with 407.2.3.

407.2.3.1 Floor Designation. Floor designations complying with 703.2 and 703.4.1 shall be provided on both jambs of elevator hoistway entrances. Floor designations shall be provided in both *tactile characters* and braille. *Tactile characters* shall be 2 inches (51 mm) high minimum. A *tactile star* shall be provided on both jambs at the main entry level.

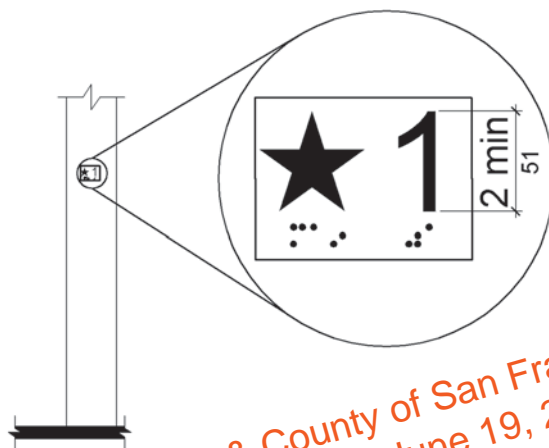


Figure 407.2.3.1
Floor Designations on Jambs of Elevator Hoistway Entrances

407.2.3.2 Car Designations. Destination-oriented elevators shall provide *tactile* car identification complying with 703.2 on both jambs of the hoistway immediately below the floor designation. Car designations shall be provided in both *tactile characters* and braille. *Tactile characters* shall be 2 inches (51 mm) high minimum.

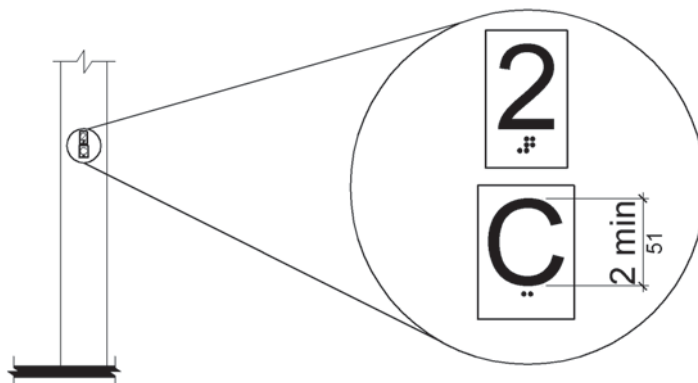


Figure 407.2.3.2
Car Designations on Jambs of Destination-Oriented Elevator Hoistway Entrances

407.3 Elevator Door Requirements. Hoistway and car doors shall comply with 407.3.

407.3.1 Type. Elevator doors shall be the horizontal sliding type. Car gates shall be prohibited.

407.3.2 Operation. Elevator hoistway and car doors shall open and close automatically.

EXCEPTION: Existing manually operated hoistway swing doors shall be permitted provided that they comply with 404.2.3 and 404.2.9. Car door closing shall not be initiated until the hoistway door is closed.

407.3.3 Reopening Device. Elevator doors shall be provided with a reopening device complying with 407.3.3 that shall stop and reopen a car door and hoistway door automatically if the door becomes obstructed by an object or person.

EXCEPTION: Existing elevators with manually operated doors shall not be required to comply with 407.3.3.

407.3.3.1 Height. The device shall be activated by sensing an obstruction passing through the opening at 5 inches (125 mm) nominal and 29 inches (735 mm) nominal above the finish floor.

407.3.3.2 Contact. The device shall not require physical contact to be activated, although contact is permitted to occur before the door reverses.

407.3.3.3 Duration. Door reopening devices shall remain effective for 20 seconds minimum.

407.3.4 Door and Signal Timing. The minimum acceptable time from notification that a car is answering a call or notification of the car assigned at the means for the entry of destination information until the doors of that car start to close shall be calculated from the following equation:

$T = D/(1.5 \text{ ft/s})$ or $T = D/(455 \text{ mm/s}) = 5$ seconds minimum where T equals the total time in seconds and D equals the distance (in feet or millimeters) from the point in the lobby or corridor 60 inches (1525 mm) directly in front of the farthest call button controlling that car to the centerline of its hoistway door.

EXCEPTIONS: 1. For cars with in-car lanterns, T shall be permitted to begin when the signal is visible from the point 60 inches (1525 mm) directly in front of the farthest hall call button and the audible signal is sounded.

2. Destination-oriented elevators shall not be required to comply with 407.3.4.

407.3.5 Door Delay. Elevator doors shall remain fully open in response to a car call for 3 seconds minimum.

407.3.6 Width. The width of elevator doors shall comply with Table 407.4.1.

EXCEPTION: In existing elevators, a power-operated car door complying with 404.2.3 shall be permitted.

407.4 Elevator Car Requirements. Elevator cars shall comply with 407.4.

407.4.1 Car Dimensions. Inside dimensions of elevator cars and clear width of elevator doors shall comply with Table 407.4.1.

EXCEPTION: Existing elevator car configurations that provide a clear floor area of 16 square feet (1.5 m²) minimum and also provide an inside clear depth 54 inches (1370 mm) minimum and a clear width 36 inches (915 mm) minimum shall be permitted.

Table 407.4.1 Elevator Car Dimensions

Door Location	Minimum Dimensions			
	Door Clear Width	Inside Car, Side to Side	Inside Car, Back Wall to Front Return	Inside Car, Back Wall to Inside Face of Door
Centered	42 inches (1065 mm)	80 inches (2030 mm)	51 inches (1295 mm)	54 inches (1370 mm)
Side (off-centered)	36 inches (915 mm) ¹	68 inches (1725 mm)	51 inches (1295 mm)	54 inches (1370 mm)
Any	36 inches (915 mm) ¹	54 inches (1370 mm)	80 inches (2030 mm)	80 inches (2030 mm)
Any	36 inches (915 mm) ¹	60 inches (1525 mm) ²	60 inches (1525 mm) ²	60 inches (1525 mm) ²

1. A tolerance of minus 5/8 inch (16 mm) is permitted.
2. Other car configurations that provide a turning space complying with 304 with the door closed shall be permitted.

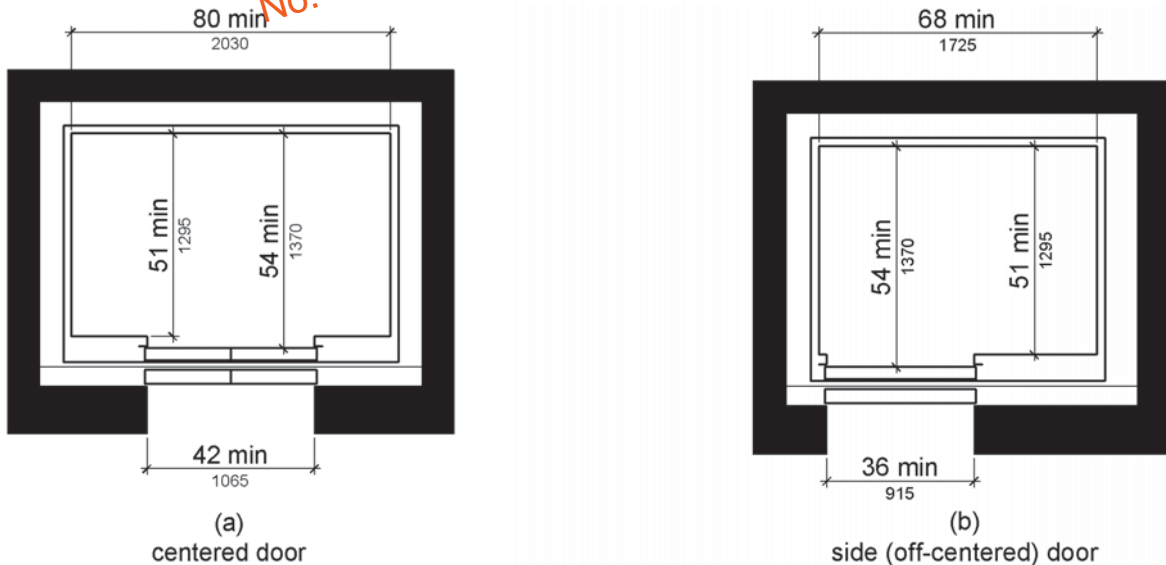
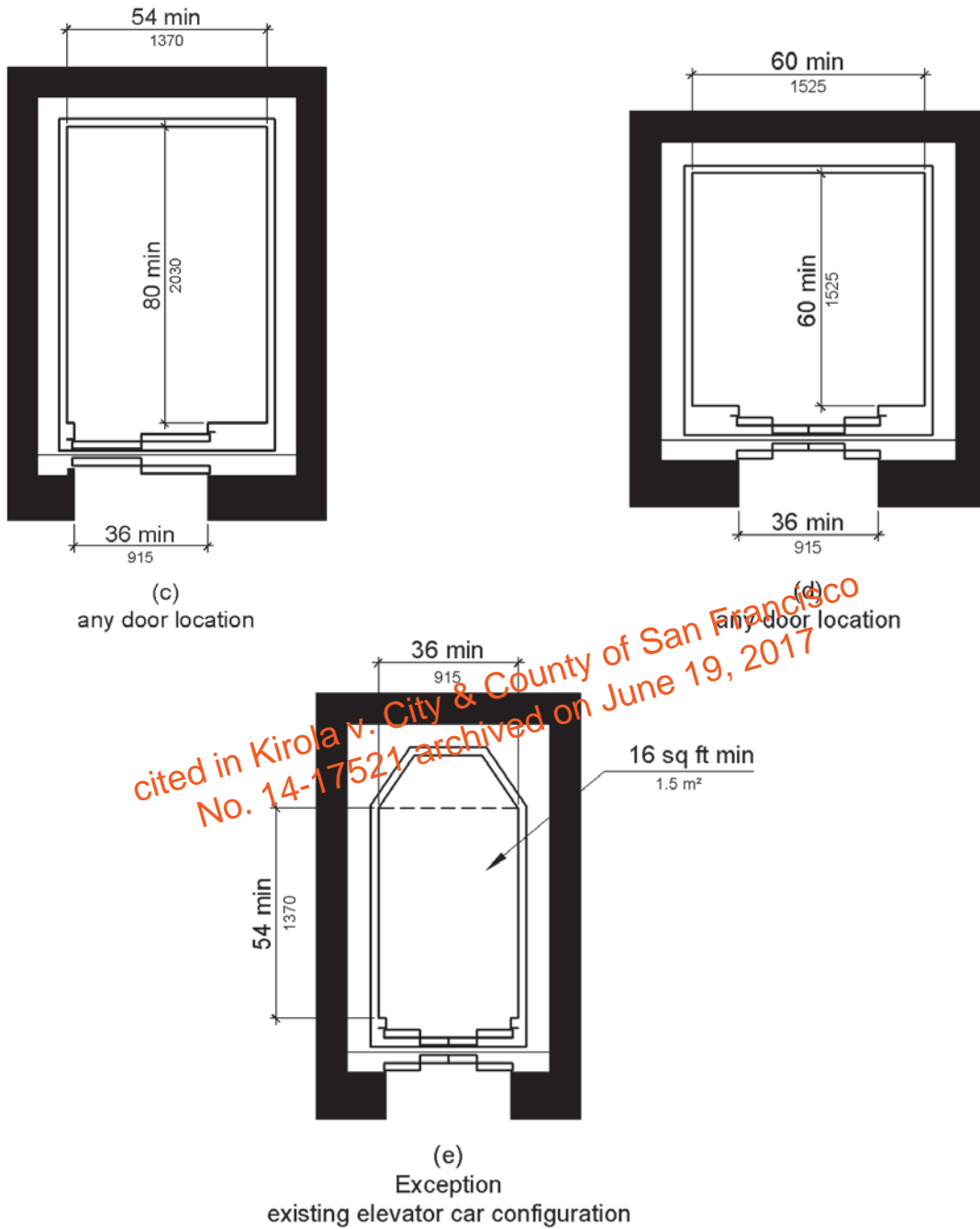


Figure 407.4.1 Elevator Car Dimensions



*cited in Kirola v. City & County of San Francisco
No. 14-17521 archived on June 19, 2017*

Figure 407.4.1
Elevator Car Dimensions

407.4.2 Floor Surfaces. Floor surfaces in elevator cars shall comply with 302 and 303.

407.4.3 Platform to Hoistway Clearance. The clearance between the car platform sill and the edge of any hoistway landing shall be 1¼ inch (32 mm) maximum.

407.4.4 Leveling. Each car shall be equipped with a self-leveling feature that will automatically bring and maintain the car at floor landings within a tolerance of ½ inch (13 mm) under rated loading to zero loading conditions.

407.4.5 Illumination. The level of illumination at the car controls, platform, car threshold and car landing sill shall be 5 foot candles (54 lux) minimum.

407.4.6 Elevator Car Controls. Where provided, elevator car controls shall comply with 407.4.6 and 309.4.

EXCEPTION: In existing elevators, where a new car operating panel complying with 407.4.6 is provided, existing car operating panels shall not be required to comply with 407.4.6.

407.4.6.1 Location. Controls shall be located within one of the reach ranges specified in 308.

EXCEPTIONS: 1. Where the elevator panel serves more than 16 openings and a parallel approach is provided, buttons with floor designations shall be permitted to be 54 inches (1370 mm) maximum above the finish floor.

2. In existing elevators, car control buttons with floor designations shall be permitted to be located 54 inches (1370 mm) maximum above the finish floor where a parallel approach is provided.

407.4.6.2 Buttons. Car control buttons with floor designations shall comply with 407.4.6.2 and shall be raised or flush.

EXCEPTION: In existing elevators, buttons shall be permitted to be recessed.

407.4.6.2.1 Size. Buttons shall be ¾ inch (19 mm) minimum in their smallest dimension.

407.4.6.2.2 Arrangement. Buttons shall be arranged with numbers in ascending order. When two or more columns of buttons are provided they shall read from left to right.

407.4.6.3 Keypads. Car control keypads shall be in a standard telephone keypad arrangement and shall comply with 407.4.7.2.

407.4.6.4 Emergency Controls. Emergency controls shall comply with 407.4.6.4.

407.4.6.4.1 Height. Emergency control buttons shall have their centerlines 35 inches (890 mm) minimum above the finish floor.

407.4.6.4.2 Location. Emergency controls, including the emergency alarm, shall be grouped at the bottom of the panel.

407.4.7 Designations and Indicators of Car Controls. Designations and indicators of car controls shall comply with 407.4.7.

EXCEPTION: In existing elevators, where a new car operating panel complying with 407.4.7 is provided, existing car operating panels shall not be required to comply with 407.4.7.

407.4.7.1 Buttons. Car control buttons shall comply with 407.4.7.1.













407.4.7.1.1 Type. Control buttons shall be identified by *tactile characters* complying with 703.2.

407.4.7.1.2 Location. Raised *character* and braille designations shall be placed immediately to the left of the control button to which the designations apply.

EXCEPTION: Where *space* on an existing car operating panel precludes *tactile* markings to the left of the controls, markings shall be placed as near to the control as possible.

407.4.7.1.3 Symbols. The control button for the emergency stop, alarm, door open, door close, main entry floor, and phone, shall be identified with *tactile* symbols as shown in Table 407.4.7.1.3.

Table 407.4.7.1.3 Elevator Control Button Identification

Control Button	Tactile Symbol	Braille Message
Emergency Stop		 "ST"OP Three cells
Alarm		 AL"AR"M Four cells
Door Open		 OP"EN" Three cells
Door Close		 CLOSE Five cells
Main Entry Floor		 MA"IN" Three cells
Phone		 PH"ONE" Four cells

407.4.7.1.4 Visible Indicators. Buttons with floor designations shall be provided with visible indicators to show that a call has been registered. The visible indication shall extinguish when the car arrives at the designated floor.

407.4.7.2 Keypads. Keypads shall be identified by *characters* complying with 703.5 and shall be centered on the corresponding keypad button. The number five key shall have a single raised dot. The dot shall be 0.118 inch (3 mm) to 0.120 inch (3.05 mm) base diameter and in other aspects comply with Table 703.3.1.

407.4.8 Car Position Indicators. Audible and visible car position indicators shall be provided in elevator cars.

407.4.8.1 Visible Indicators. Visible indicators shall comply with 407.4.8.1.

407.4.8.1.1 Size. *Characters* shall be ½ inch (13 mm) high minimum.

407.4.8.1.2 Location. Indicators shall be located above the car control panel or above the door.

407.4.8.1.3 Floor Arrival. As the car passes a floor and when a car stops at a floor served by the elevator, the corresponding *character* shall illuminate.

EXCEPTION: Destination-oriented elevators shall not be required to comply with 407.4.8.1.3 provided that the visible indicators extinguish when the call has been answered.

407.4.8.1.4 Destination Indicator. In destination-oriented elevators, a display shall be provided in the car with visible indicators to show car destinations.

407.4.8.2 Audible Indicators. Audible indicators shall comply with 407.4.8.2.

407.4.8.2.1 Signal Type. The signal shall be an automatic verbal annunciator which announces the floor at which the car is about to stop.

EXCEPTION: For elevators other than destination-oriented elevators that have a rated speed of 200 feet per minute (1 m/s) or less, a non-verbal audible signal with a frequency of 1500 Hz maximum which sounds as the car passes or is about to stop at a floor served by the elevator shall be permitted.

407.4.8.2.2 Signal Level. The verbal annunciator shall be 10 dB minimum above ambient, but shall not exceed 80 dB, measured at the annunciator.

407.4.8.2.3 Frequency. The verbal annunciator shall have a frequency of 300 Hz minimum to 3000 Hz maximum.

407.4.9 Emergency Communication. Emergency two-way communication systems shall comply with 308. *Tactile* symbols and *characters* shall be provided adjacent to the device and shall comply with 703.2.

408 Limited-Use/Limited-Application Elevators

408.1 General. Limited-use/limited-application elevators shall comply with 408 and with ASME A17.1 (incorporated by reference, see "Referenced Standards" in Chapter 1). They shall be passenger elevators as classified by ASME A17.1. Elevator operation shall be automatic.

408.2 Elevator Landings. Landings serving limited-use/limited-application elevators shall comply with 408.2.

408.2.1 Call Buttons. Elevator call buttons and keypads shall comply with 407.2.1.

408.2.2 Hall Signals. Hall signals shall comply with 407.2.2.

408.2.3 Hoistway Signs. Signs at elevator hoistways shall comply with 407.2.3.1.

408.3 Elevator Doors. Elevator hoistway doors shall comply with 408.3.

408.3.1 Sliding Doors. Sliding hoistway and car doors shall comply with 407.3.1 through 407.3.3 and 408.4.1.

408.3.2 Swinging Doors. Swinging hoistway doors shall open and close automatically and shall comply with 404, 407.3.2 and 408.3.2.

408.3.2.1 Power Operation. Swinging doors shall be power-operated and shall comply with ANSI/BHMA A156.19 (1997 or 2002 Edition) (incorporated by reference, see "Referenced Standards" in Chapter 1).

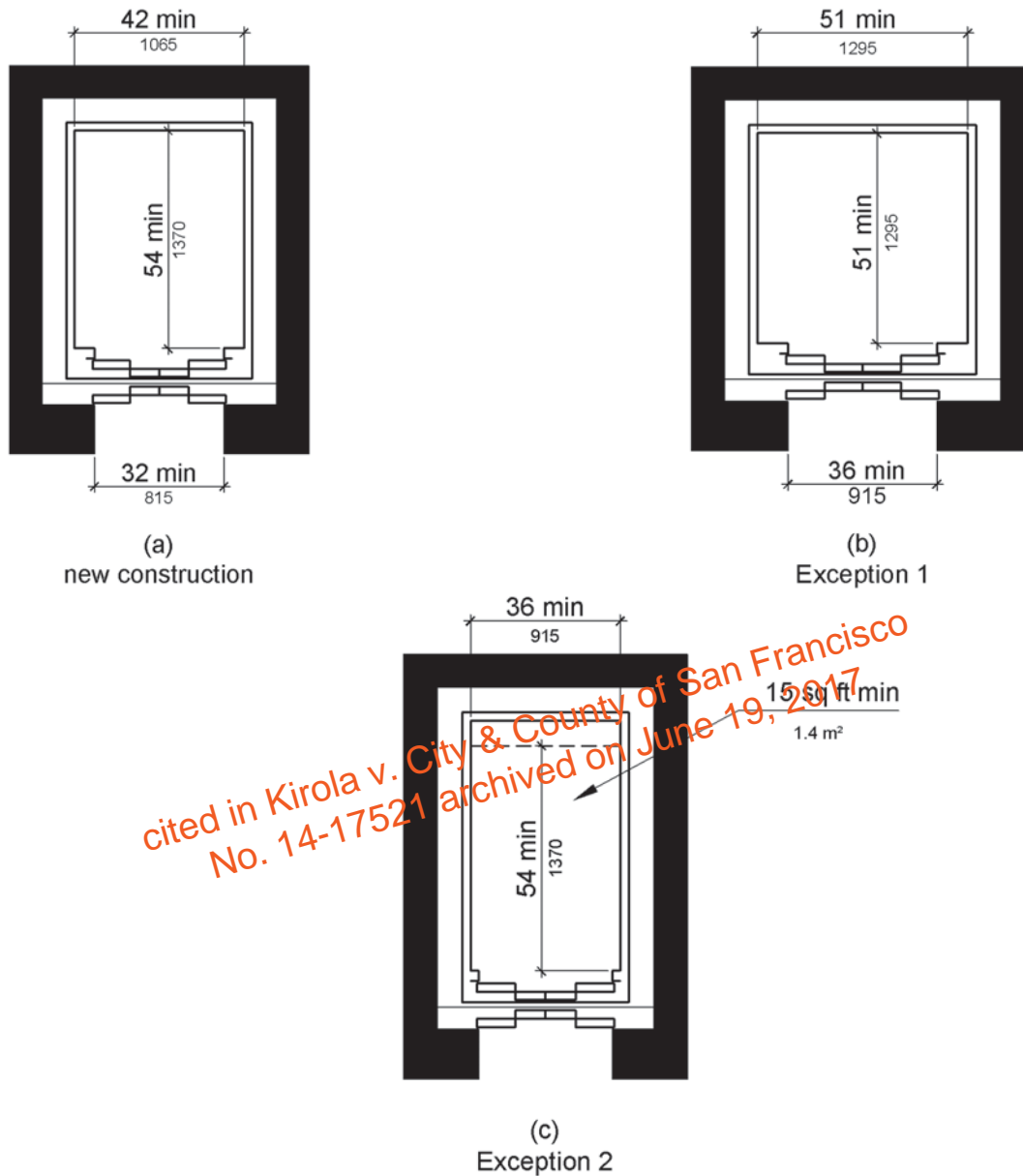
408.3.2.2 Duration. Power-operated swinging doors shall remain open for 20 seconds minimum when activated.

408.4 Elevator Cars. Elevator cars shall comply with 408.4.

408.4.1 Car Dimensions and Doors. Elevator cars shall provide a clear width 42 inches (1065 mm) minimum and a clear depth 54 inches (1370 mm) minimum. Car doors shall be positioned at the narrow ends of cars and shall provide 32 inches (815 mm) minimum clear width.

EXCEPTIONS: 1. Cars that provide a clear width 51 inches (1295 mm) minimum shall be permitted to provide a clear depth 51 inches (1295 mm) minimum provided that car doors provide a clear opening 36 inches (915 mm) wide minimum.

2. Existing elevator cars shall be permitted to provide a clear width 36 inches (915 mm) minimum, clear depth 54 inches (1370 mm) minimum, and a net clear platform area 15 square feet (1.4 m²) minimum.



*cited in Kirola v. City & County of San Francisco
No. 14-17521 archived on June 19, 2017*

Figure 408.4.1
Limited-Use/Limited-Application (LULA) Elevator Car Dimensions

408.4.2 Floor Surfaces. Floor surfaces in elevator cars shall comply with 302 and 303.

408.4.3 Platform to Hoistway Clearance. The platform to hoistway clearance shall comply with 407.4.3.

408.4.4 Leveling. Elevator car leveling shall comply with 407.4.4.

408.4.5 Illumination. Elevator car illumination shall comply with 407.4.5.

408.4.6 Car Controls. Elevator car controls shall comply with 407.4.6. Control panels shall be centered on a side wall.

408.4.7 Designations and Indicators of Car Controls. Designations and indicators of car controls shall comply with 407.4.7.

408.4.8 Emergency Communications. Car emergency signaling devices complying with 407.4.9 shall be provided.

409 Private Residence Elevators

409.1 General. Private residence elevators that are provided within a *residential dwelling unit* required to provide mobility features complying with 809.2 through 809.4 shall comply with 409 and with ASME A17.1 (incorporated by reference, see "Referenced Standards" in Chapter 1). They shall be passenger elevators as classified by ASME A17.1. Elevator operation shall be automatic.

409.2 Call Buttons. Call buttons shall be $\frac{3}{4}$ inch (19 mm) minimum in the smallest dimension and shall comply with 309.

409.3 Elevator Doors. Hoistway doors, car doors, and car gates shall comply with 409.3 and 404.

EXCEPTION: Doors shall not be required to comply with the maneuvering clearance requirements in 404.2.4.1 for approaches to the push side of swinging doors.

409.3.1 Power Operation. Elevator car and hoistway doors and gates shall be power operated and shall comply with ANSI/BHMA A156.19 (1997 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1). Power operated doors and gates shall remain open for 20 seconds minimum when activated.

EXCEPTION: In elevator cars with more than one opening, hoistway doors and gates shall be permitted to be of the manual-open, self-close type.

409.3.2 Location. Elevator car doors or gates shall be positioned at the narrow end of the clear floor spaces required by 409.4.1.

409.4 Elevator Cars. Private residence elevator cars shall comply with 409.4.

409.4.1 Inside Dimensions of Elevator Cars. Elevator cars shall provide a clear floor space of 36 inches (915 mm) minimum by 48 inches (1220 mm) minimum and shall comply with 305.

409.4.2 Floor Surfaces. Floor surfaces in elevator cars shall comply with 302 and 303.

409.4.3 Platform to Hoistway Clearance. The clearance between the car platform and the edge of any landing sill shall be $1\frac{1}{2}$ inch (38 mm) maximum.

409.4.4 Leveling. Each car shall automatically stop at a floor landing within a tolerance of $\frac{1}{2}$ inch (13 mm) under rated loading to zero loading conditions.

409.4.5 Illumination Levels. Elevator car illumination shall comply with 407.4.5.

409.4.6 Car Controls. Elevator car control buttons shall comply with 409.4.6, 309.3, 309.4, and shall be raised or flush.

409.4.6.1 Size. Control buttons shall be 3/4 inch (19 mm) minimum in their smallest dimension.

409.4.6.2 Location. Control panels shall be on a side wall, 12 inches (305 mm) minimum from any adjacent wall.

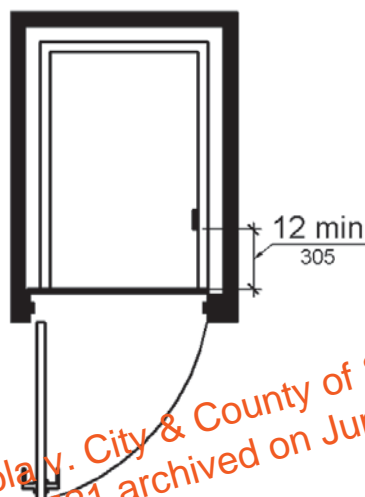


Figure 409.4.6.2
Location of Private Residence Elevator Control Panel

409.4.7 Emergency Communications. Emergency two-way communication systems shall comply with 409.4.7.

409.4.7.1 Type. A telephone and emergency signal device shall be provided in the car.

409.4.7.2 Operable Parts. The telephone and emergency signaling device shall comply with 309.3 and 309.4.

409.4.7.3 Compartment. If the telephone or device is in a closed compartment, the compartment door hardware shall comply with 309.

409.4.7.4 Cord. The telephone cord shall be 29 inches (735 mm) long minimum.

410 Platform Lifts

410.1 General. Platform lifts shall comply with ASME A18.1 (1999 edition or 2003 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1). Platform lifts shall not be attendant-operated and shall provide unassisted entry and exit from the lift.

Advisory 410.1 General. Inclined stairway chairlifts and inclined and vertical platform lifts are available for short-distance vertical transportation. Because an accessible route requires an 80 inch (2030 mm) vertical clearance, care should be taken in selecting lifts as they may not be equally suitable for use by people using wheelchairs and people standing. If a lift does not provide 80 inch (2030 mm) vertical clearance, it cannot be considered part of an accessible route in new construction.

The ADA and other Federal civil rights laws require that accessible features be maintained in working order so that they are accessible to and usable by those people they are intended to benefit. Building owners are reminded that the ASME A18 Safety Standard for Platform Lifts and Stairway Chairlifts requires routine maintenance and inspections. Isolated or temporary interruptions in service due to maintenance or repairs may be unavoidable; however, failure to take prompt action to effect repairs could constitute a violation of Federal laws and these requirements.

410.2 Floor Surfaces. Floor surfaces in platform lifts shall comply with 302 and 303.

410.3 Clear Floor Space. Clear floor space in platform lifts shall comply with 305.

410.4 Platform to Runway Clearance. The clearance between the platform sill and the edge of any runway landing shall be 1/4 inch (32 mm) maximum.

410.5 Operable Parts. Controls for platform lifts shall comply with 309.

410.6 Doors and Gates. Platform lifts shall have low-energy power-operated doors or gates complying with 404.3. Doors shall remain open for 20 seconds minimum. End doors and gates shall provide a clear width 32 inches (815 mm) minimum. Side doors and gates shall provide a clear width 42 inches (1065 mm) minimum.

EXCEPTION: Platform lifts serving two landings maximum and having doors or gates on opposite sides shall be permitted to have self-closing manual doors or gates.

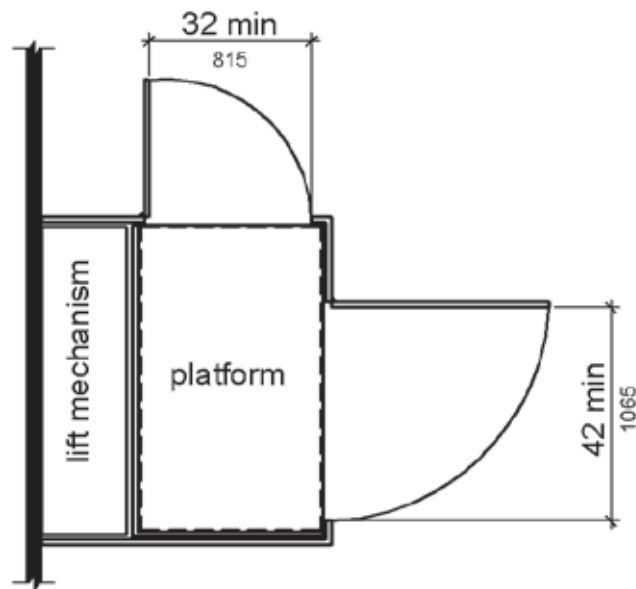


Figure 410.6
Platform Lift Doors and Gates

*cited in Kirola v. City & County of San Francisco
No. 14-17521 archived on June 19, 2017*

CHAPTER 5: GENERAL SITE AND BUILDING ELEMENTS

501 General

501.1 Scope. The provisions of Chapter 5 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

502 Parking Spaces

502.1 General. Car and van parking *spaces* shall comply with 502. Where parking *spaces* are marked with lines, width measurements of parking *spaces* and access aisles shall be made from the centerline of the markings.

EXCEPTION: Where parking *spaces* or access aisles are not adjacent to another parking *space* or access aisle, measurements shall be permitted to include the full width of the line defining the parking *space* or access aisle.

502.2 Vehicle Spaces. Car parking *spaces* shall be 96 inches (2440 mm) wide minimum and van parking *spaces* shall be 132 inches (3350 mm) wide minimum, shall be marked to define the width, and shall have an adjacent access aisle complying with 502.3.

EXCEPTION: Van parking *spaces* shall be permitted to be 96 inches (2440 mm) wide minimum where the access aisle is 96 inches (2440 mm) wide minimum.

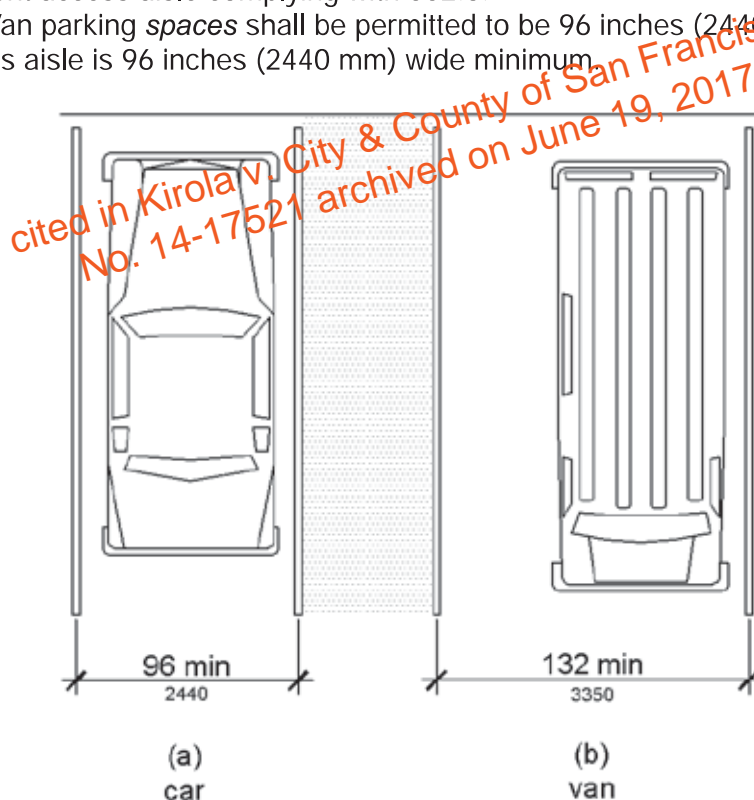


Figure 502.2
Vehicle Parking Spaces

502.3 Access Aisle. Access aisles serving parking *spaces* shall comply with 502.3. Access aisles shall adjoin an *accessible* route. Two parking *spaces* shall be permitted to share a common access aisle.

Advisory 502.3 Access Aisle. Accessible routes must connect parking spaces to accessible entrances. In parking facilities where the accessible route must cross vehicular traffic lanes, marked crossings enhance pedestrian safety, particularly for people using wheelchairs and other mobility aids. Where possible, it is preferable that the accessible route not pass behind parked vehicles.

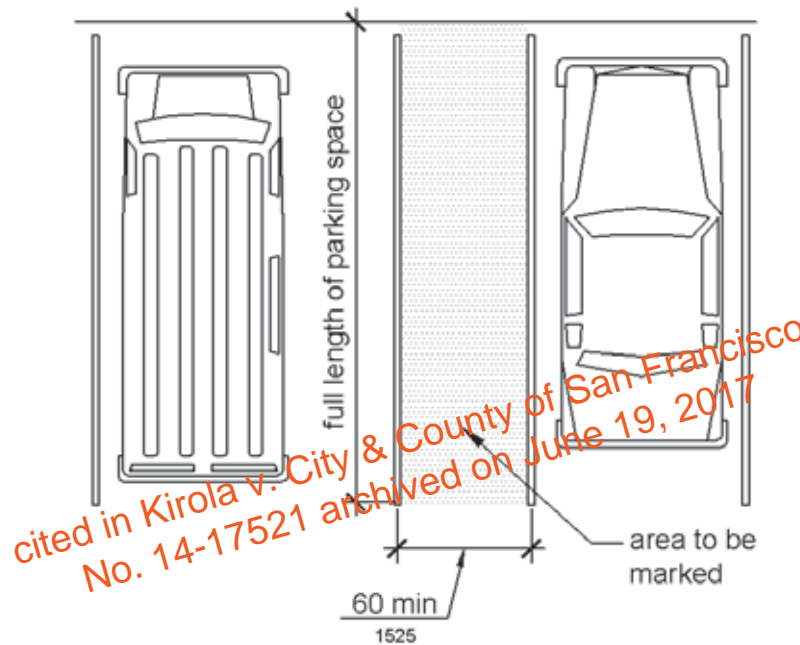


Figure 502.3
Parking Space Access Aisle

502.3.1 Width. Access aisles serving car and van parking *spaces* shall be 60 inches (1525 mm) wide minimum.

502.3.2 Length. Access aisles shall extend the full length of the parking *spaces* they serve.

502.3.3 Marking. Access aisles shall be marked so as to discourage parking in them.

Advisory 502.3.3 Marking. The method and color of marking are not specified by these requirements but may be addressed by State or local laws or regulations. Because these requirements permit the van access aisle to be as wide as a parking space, it is important that the aisle be clearly marked.

502.3.4 Location. Access aisles shall not overlap the *vehicular way*. Access aisles shall be permitted to be placed on either side of the parking *space* except for angled van parking *spaces* which shall have access aisles located on the passenger side of the parking *spaces*.

Advisory 502.3.4 Location. Wheelchair lifts typically are installed on the passenger side of vans. Many drivers, especially those who operate vans, find it more difficult to back into parking spaces than to back out into comparatively unrestricted vehicular lanes. For this reason, where a van and car share an access aisle, consider locating the van space so that the access aisle is on the passenger side of the van space.

502.4 Floor or Ground Surfaces. Parking *spaces* and access aisles serving them shall comply with 302. Access aisles shall be at the same level as the parking *spaces* they serve. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

Advisory 502.4 Floor or Ground Surfaces. Access aisles are required to be nearly level in all directions to provide a surface for wheelchair transfer to and from vehicles. The exception allows sufficient slope for drainage. Built-up curb ramps are not permitted to project into access aisles and parking spaces because they would create slopes greater than 1:48.

502.5 Vertical Clearance. Parking *spaces* for vans and access aisles and vehicular routes serving them shall provide a vertical clearance of 98 inches (2490 mm) minimum.

Advisory 502.5 Vertical Clearance. Signs provided at entrances to parking facilities informing drivers of clearances and the location of van accessible parking spaces can provide useful customer assistance.

502.6 Identification. Parking *space* identification signs shall include the International Symbol of *Accessibility* complying with 703.7.2.1. Signs identifying van parking *spaces* shall contain the designation "van accessible." Signs shall be 60 inches (1525 mm) minimum above the finish floor or ground surface measured to the bottom of the sign.

Advisory 502.6 Identification. The required "van accessible" designation is intended to be informative, not restrictive, in identifying those spaces that are better suited for van use. Enforcement of motor vehicle laws, including parking privileges, is a local matter.

502.7 Relationship to Accessible Routes. Parking *spaces* and access aisles shall be designed so that cars and vans, when parked, cannot obstruct the required clear width of adjacent *accessible* routes.

Advisory 502.7 Relationship to Accessible Routes. Wheel stops are an effective way to prevent vehicle overhangs from reducing the clear width of accessible routes.

503 Passenger Loading Zones

503.1 General. Passenger loading zones shall comply with 503.

503.2 Vehicle Pull-Up Space. Passenger loading zones shall provide a vehicular pull-up *space* 96 inches (2440 mm) wide minimum and 20 feet (6100 mm) long minimum.

503.3 Access Aisle. Passenger loading zones shall provide access aisles complying with 503 adjacent to the vehicle pull-up space. Access aisles shall adjoin an *accessible* route and shall not overlap the *vehicular way*.

503.3.1 Width. Access aisles serving vehicle pull-up *spaces* shall be 60 inches (1525 mm) wide minimum.

503.3.2 Length. Access aisles shall extend the full length of the vehicle pull-up *spaces* they serve.

503.3.3 Marking. Access aisles shall be marked so as to discourage parking in them.

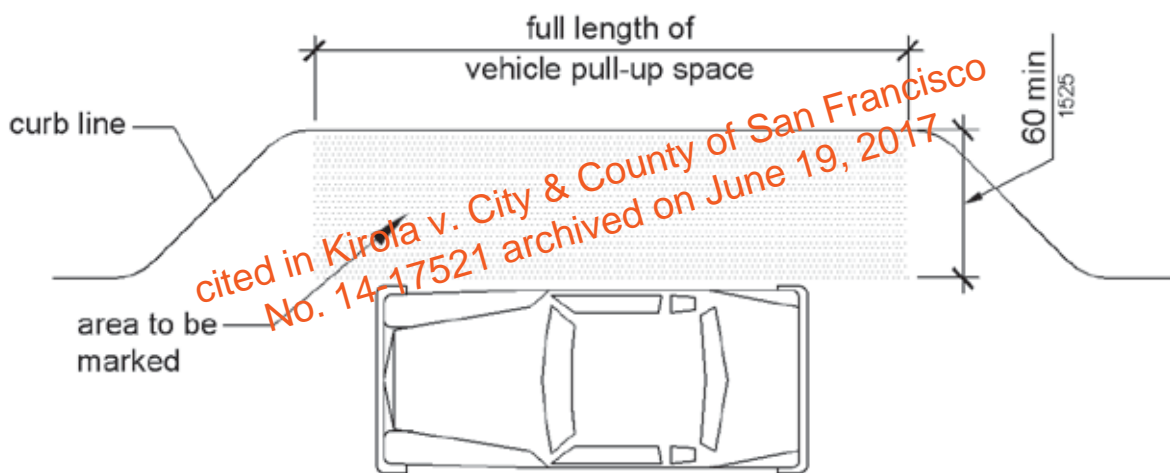


Figure 503.3
Passenger Loading Zone Access Aisle

503.4 Floor and Ground Surfaces. Vehicle pull-up *spaces* and access aisles serving them shall comply with 302. Access aisles shall be at the same level as the vehicle pull-up *space* they serve. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

503.5 Vertical Clearance. Vehicle pull-up *spaces*, access aisles serving them, and a vehicular route from an *entrance* to the passenger loading zone, and from the passenger loading zone to a vehicular exit shall provide a vertical clearance of 114 inches (2895 mm) minimum.

504 Stairways

504.1 General. Stairs shall comply with 504.

504.2 Treads and Risers. All steps on a flight of stairs shall have uniform riser heights and uniform tread depths. Risers shall be 4 inches (100 mm) high minimum and 7 inches (180 mm) high maximum. Treads shall be 11 inches (280 mm) deep minimum.

504.3 Open Risers. Open risers are not permitted.

504.4 Tread Surface. Stair treads shall comply with 302. Changes in level are not permitted.

EXCEPTION: Treads shall be permitted to have a slope not steeper than 1:48.

Advisory 504.4 Tread Surface. Consider providing visual contrast on tread nosings, or at the leading edges of treads without nosings, so that stair treads are more visible for people with low vision.

504.5 Nosings. The radius of curvature at the leading edge of the tread shall be ½ inch (13 mm) maximum. Nosings that project beyond risers shall have the underside of the leading edge curved or beveled. Risers shall be permitted to slope under the tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall extend 1½ inches (38 mm) maximum over the tread below.

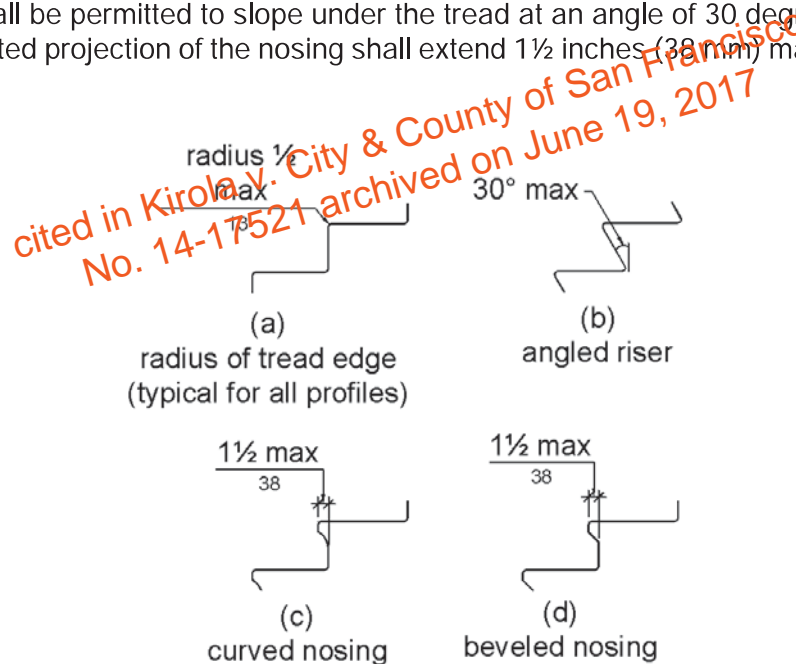


Figure 504.5
Stair Nosings

504.6 Handrails. Stairs shall have handrails complying with 505.

504.7 Wet Conditions. Stair treads and landings subject to wet conditions shall be designed to prevent the accumulation of water.

505 Handrails

505.1 General. Handrails provided along walking surfaces complying with 403, required at *ramps* complying with 405, and required at stairs complying with 504 shall comply with 505.

Advisory 505.1 General. Handrails are required on ramp runs with a rise greater than 6 inches (150 mm) (see 405.8) and on certain stairways (see 504). Handrails are not required on walking surfaces with running slopes less than 1:20. However, handrails are required to comply with 505 when they are provided on walking surfaces with running slopes less than 1:20 (see 403.6). Sections 505.2, 505.3, and 505.10 do not apply to handrails provided on walking surfaces with running slopes less than 1:20 as these sections only reference requirements for ramps and stairs.

505.2 Where Required. Handrails shall be provided on both sides of stairs and *ramps*.

EXCEPTION: In *assembly areas*, handrails shall not be required on both sides of aisle *ramps* where a handrail is provided at either side or within the aisle width.

505.3 Continuity. Handrails shall be continuous within the full length of each stair flight or *ramp* run. Inside handrails on switchback or dogleg stairs and *ramps* shall be continuous between flights or runs.

EXCEPTION: In *assembly areas*, handrails on *ramps* shall not be required to be continuous in aisles serving seating.

505.4 Height. Top of gripping surfaces of handrails shall be 34 inches (865 mm) minimum and 38 inches (965 mm) maximum vertically above walking surfaces, stair nosings, and *ramp* surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosings, and *ramp* surfaces.

Advisory 505.4 Height. The requirements for stair and ramp handrails in this document are for adults. When children are the principal users in a building or facility (e.g., elementary schools), a second set of handrails at an appropriate height can assist them and aid in preventing accidents. A maximum height of 28 inches (710 mm) measured to the top of the gripping surface from the ramp surface or stair nosing is recommended for handrails designed for children. Sufficient vertical clearance between upper and lower handrails, 9 inches (230 mm) minimum, should be provided to help prevent entrapment.

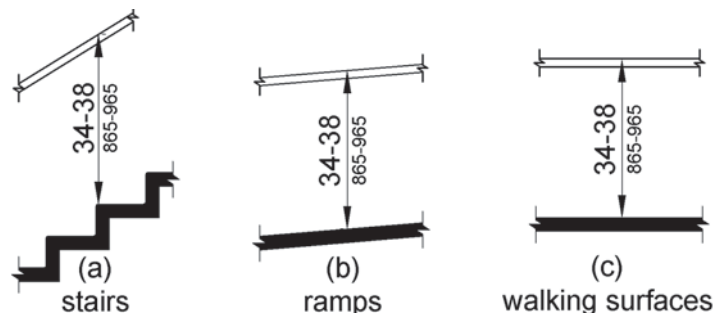


Figure 505.4
Handrail Height

505.5 Clearance. Clearance between handrail gripping surfaces and adjacent surfaces shall be 1½ inches (38 mm) minimum.

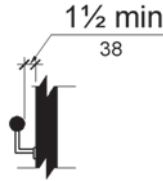


Figure 505.5
Handrail Clearance

505.6 Gripping Surface. Handrail gripping surfaces shall be continuous along their length and shall not be obstructed along their tops or sides. The bottoms of handrail gripping surfaces shall not be obstructed for more than 20 percent of their length. Where provided, horizontal projections shall occur 1½ inches (38 mm) minimum below the bottom of the handrail gripping surface.

EXCEPTIONS: 1. Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of handrail gripping surfaces shall be permitted to be obstructed along their entire length where they are integral to crash rails or bumper guards.

2. The distance between horizontal projections and the bottom of the gripping surface shall be permitted to be reduced by 1/8 inch (3.2 mm) for each ½ inch (13 mm) of additional handrail perimeter dimension that exceeds 4 inches (100 mm).

Advisory 505.6 Gripping Surface. People with disabilities, older people, and others benefit from continuous gripping surfaces that permit users to reach the fingers outward or downward to grasp the handrail, particularly as the user senses a loss of equilibrium or begins to fall.

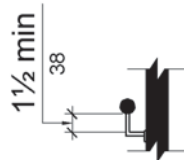


Figure 505.6
Horizontal Projections Below Gripping Surface

505.7 Cross Section. Handrail gripping surfaces shall have a cross section complying with 505.7.1 or 505.7.2.

505.7.1 Circular Cross Section. Handrail gripping surfaces with a circular cross section shall have an outside diameter of 1¼ inches (32 mm) minimum and 2 inches (51 mm) maximum.

505.7.2 Non-Circular Cross Sections. Handrail gripping surfaces with a non-circular cross section shall have a perimeter dimension of 4 inches (100 mm) minimum and 6¼ inches (160 mm) maximum, and a cross-section dimension of 2¼ inches (57 mm) maximum.

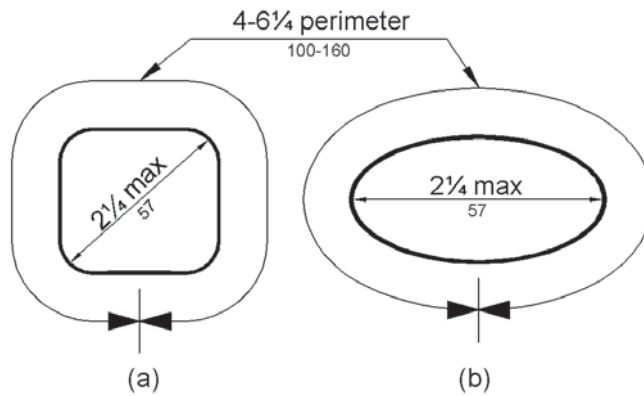


Figure 505.7.2
Handrail Non-Circular Cross Section

505.8 Surfaces. Handrail gripping surfaces and any surfaces adjacent to them shall be free of sharp or abrasive *elements* and shall have rounded edges.

505.9 Fittings. Handrails shall not rotate within their fittings.

505.10 Handrail Extensions. Handrail gripping surfaces shall extend beyond and in the same direction of stair flights and *ramp* runs in accordance with 505.10.

EXCEPTIONS: 1. Extensions shall not be required for continuous handrails at the inside turn of switchback or dogleg stairs and *ramps*.

2. In *assembly areas*, extensions shall not be required for *ramp* handrails in aisles serving seating where the handrails are discontinuous to provide access to seating and to permit crossovers within aisles.

3. In *alterations*, full extensions of handrails shall not be required where such extensions would be hazardous due to plan configuration.

505.10.1 Top and Bottom Extension at Ramps. *Ramp* handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beyond the top and bottom of *ramp* runs. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent *ramp* run.

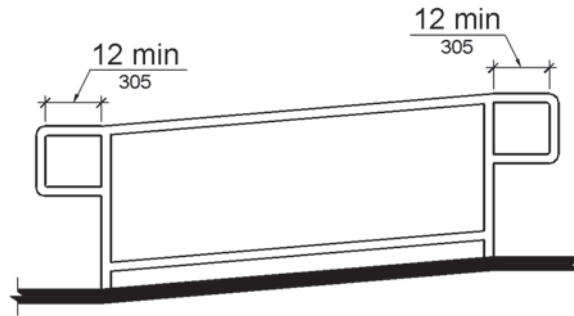


Figure 505.10.1
Top and Bottom Handrail Extension at Ramps

505.10.2 Top Extension at Stairs. At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beginning directly above the first riser nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

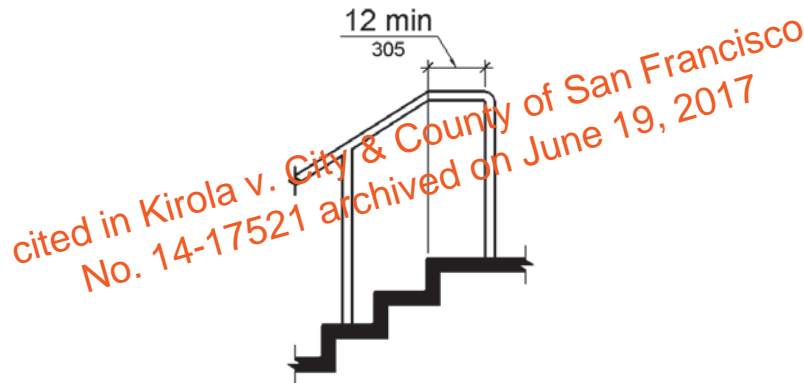
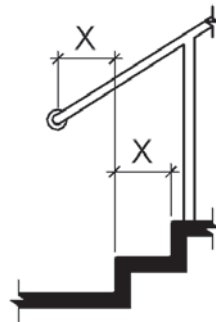


Figure 505.10.2
Top Handrail Extension at Stairs

505.10.3 Bottom Extension at Stairs. At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance at least equal to one tread depth beyond the last riser nosing. Extension shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.



Note: X = tread depth

Figure 505.10.3
Bottom Handrail Extension at Stairs

*cited in Kirola v. City & County of San Francisco
No. 14-17521 archived on June 19, 2017*

CHAPTER 6: PLUMBING ELEMENTS AND FACILITIES

601 General

601.1 Scope. The provisions of Chapter 6 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

602 Drinking Fountains

602.1 General. Drinking fountains shall comply with 307 and 602.

602.2 Clear Floor Space. Units shall have a clear floor or ground *space* complying with 305 positioned for a forward approach and centered on the unit. Knee and toe clearance complying with 306 shall be provided.

EXCEPTION: A parallel approach complying with 305 shall be permitted at units for *children's use* where the spout is 30 inches (760 mm) maximum above the finish floor or ground and is 3½ inches (90 mm) maximum from the front edge of the unit, including bumpers.

602.3 Operable Parts. *Operable parts* shall comply with 309.

602.4 Spout Height. Spout outlets shall be 36 inches (915 mm) maximum above the finish floor or ground.

602.5 Spout Location. The spout shall be located 15 inches (380 mm) minimum from the vertical support and 5 inches (125 mm) maximum from the front edge of the unit, including bumpers.

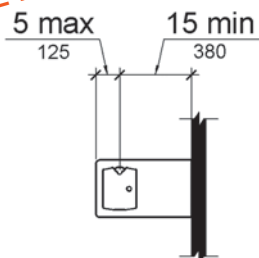


Figure 602.5
Drinking Fountain Spout Location

602.6 Water Flow. The spout shall provide a flow of water 4 inches (100 mm) high minimum and shall be located 5 inches (125 mm) maximum from the front of the unit. The angle of the water stream shall be measured horizontally relative to the front face of the unit. Where spouts are located less than 3 inches (75 mm) of the front of the unit, the angle of the water stream shall be 30 degrees maximum. Where spouts are located between 3 inches (75 mm) and 5 inches (125 mm) maximum from the front of the unit, the angle of the water stream shall be 15 degrees maximum.

Advisory 602.6 Water Flow. The purpose of requiring the drinking fountain spout to produce a flow of water 4 inches (100 mm) high minimum is so that a cup can be inserted under the flow of water to provide a drink of water for an individual who, because of a disability, would otherwise be incapable of using the drinking fountain.

602.7 Drinking Fountains for Standing Persons. Spout outlets of drinking fountains for standing persons shall be 38 inches (965 mm) minimum and 43 inches (1090 mm) maximum above the finish floor or ground.

603 Toilet and Bathing Rooms

603.1 General. Toilet and bathing rooms shall comply with 603.

603.2 Clearances. Clearances shall comply with 603.2.

603.2.1 Turning Space. Turning *space* complying with 304 shall be provided within the room.

603.2.2 Overlap. Required clear floor *spaces*, clearance at fixtures, and turning *space* shall be permitted to overlap.

603.2.3 Door Swing. Doors shall not swing into the clear floor *space* or clearance required for any fixture. Doors shall be permitted to swing into the required turning *space*.

EXCEPTIONS: 1. Doors to a toilet room or bathing room for a single occupant accessed only through a private office and not for *common use* or *public use* shall be permitted to swing into the clear floor *space* or clearance provided the swing of the door can be reversed to comply with 603.2.3.

2. Where the toilet room or bathing room is for individual use and a clear floor *space* complying with 305.3 is provided within the room beyond the arc of the door swing, doors shall be permitted to swing into the clear floor *space* or clearance required for any fixture.

Advisory 603.2.3 Door Swing Exception 1. At the time the door is installed, and if the door swing is reversed in the future, the door must meet all the requirements specified in 404. Additionally, the door swing cannot reduce the required width of an accessible route. Also, avoid violating other building or life safety codes when the door swing is reversed.

603.3 Mirrors. Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the finish floor or ground. Mirrors not located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 35 inches (890 mm) maximum above the finish floor or ground.

Advisory 603.3 Mirrors. A single full-length mirror can accommodate a greater number of people, including children. In order for mirrors to be usable by people who are ambulatory and people who use wheelchairs, the top edge of mirrors should be 74 inches (1880 mm) minimum from the floor or ground.

603.4 Coat Hooks and Shelves. Coat hooks shall be located within one of the reach ranges specified in 308. Shelves shall be located 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the finish floor.

604 Water Closets and Toilet Compartments

604.1 General. Water closets and toilet compartments shall comply with 604.2 through 604.8.

EXCEPTION: Water closets and toilet compartments for *children's use* shall be permitted to comply with 604.9.

604.2 Location. The water closet shall be positioned with a wall or partition to the rear and to one side. The centerline of the water closet shall be 16 inches (405 mm) minimum to 18 inches (455 mm) maximum from the side wall or partition, except that the water closet shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum from the side wall or partition in the ambulatory *accessible* toilet compartment specified in 604.8.2. Water closets shall be arranged for a left-hand or right-hand approach.

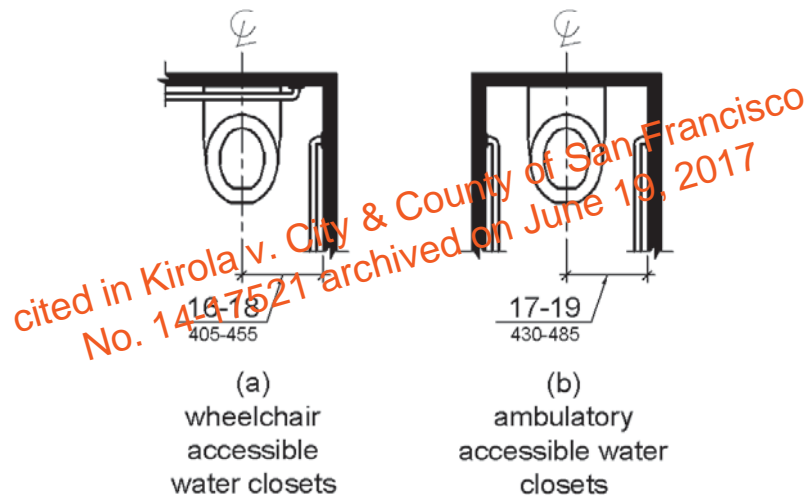


Figure 604.2
Water Closet Location

604.3 Clearance. Clearances around water closets and in toilet compartments shall comply with 604.3.

604.3.1 Size. Clearance around a water closet shall be 60 inches (1525 mm) minimum measured perpendicular from the side wall and 56 inches (1420 mm) minimum measured perpendicular from the rear wall.

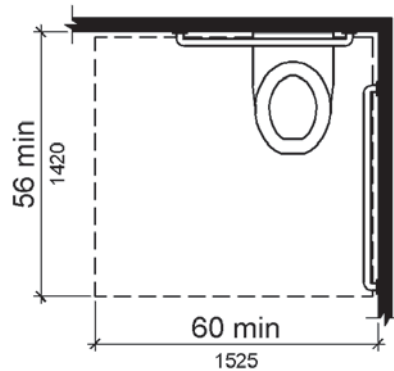


Figure 604.3.1
Size of Clearance at Water Closets

604.3.2 Overlap. The required clearance around the water closet shall be permitted to overlap the water closet, associated grab bars, dispensers, sanitary napkin disposal units, coat hooks, shelves, *accessible* routes, clear floor *space* and clearances required at other fixtures, and the turning *space*. No other fixtures or obstructions shall be located within the required water closet clearance.

EXCEPTION: In *residential dwelling units*, a lavatory complying with 606 shall be permitted on the rear wall 18 inches (455 mm) minimum from the water closet centerline where the clearance at the water closet is 66 inches (1675 mm) minimum measured perpendicular from the rear wall.

Advisory 604.3.2 Overlap. When the door to the toilet room is placed directly in front of the water closet, the water closet cannot overlap the required maneuvering clearance for the door inside the room.

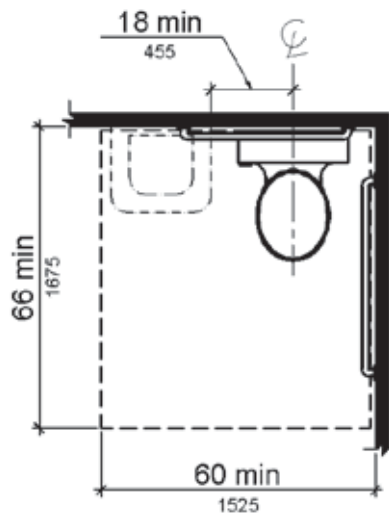


Figure 604.3.2 (Exception)
Overlap of Water Closet Clearance in Residential Dwelling Units

604.4 Seats. The seat height of a water closet above the finish floor shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum measured to the top of the seat. Seats shall not be sprung to return to a lifted position.

EXCEPTIONS: 1. A water closet in a toilet room for a single occupant accessed only through a private office and not for *common use* or *public use* shall not be required to comply with 604.4.

2. In *residential dwelling units*, the height of water closets shall be permitted to be 15 inches (380 mm) minimum and 19 inches (485 mm) maximum above the finish floor measured to the top of the seat.

604.5 Grab Bars. Grab bars for water closets shall comply with 609. Grab bars shall be provided on the side wall closest to the water closet and on the rear wall.

EXCEPTIONS: 1. Grab bars shall not be required to be installed in a toilet room for a single occupant accessed only through a private office and not for *common use* or *public use* provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with 604.5.

2. In *residential dwelling units*, grab bars shall not be required to be installed in toilet or bathrooms provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with 604.5.

3. In detention or correction *facilities*, grab bars shall not be required to be installed in housing or holding cells that are specially designed without protrusions for purposes of suicide prevention.

Advisory 604.5 Grab Bars Exception 2. Reinforcement must be sufficient to permit the installation of rear and side wall grab bars that fully meet all accessibility requirements including, but not limited to, required length, installation height, and structural strength.

604.5.1 Side Wall. The side wall grab bar shall be 42 inches (1065 mm) long minimum, located 12 inches (305 mm) maximum from the rear wall and extending 54 inches (1370 mm) minimum from the rear wall.

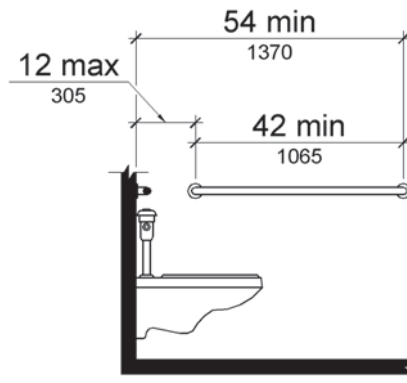


Figure 604.5.1
Side Wall Grab Bar at Water Closets

604.5.2 Rear Wall. The rear wall grab bar shall be 36 inches (915 mm) long minimum and extend from the centerline of the water closet 12 inches (305 mm) minimum on one side and 24 inches (610 mm) minimum on the other side.

EXCEPTIONS: 1. The rear grab bar shall be permitted to be 24 inches (610 mm) long minimum, centered on the water closet, where wall *space* does not permit a length of 36 inches (915 mm) minimum due to the location of a recessed fixture adjacent to the water closet.

2. Where an *administrative authority* requires flush controls for flush valves to be located in a position that conflicts with the location of the rear grab bar, then the rear grab bar shall be permitted to be split or shifted to the open side of the toilet area.

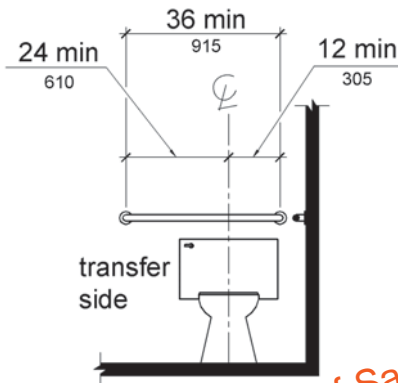


Figure 604.5.2
Rear Wall Grab Bar at Water Closets

604.6 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309. Flush controls shall be located on the open side of the water closet except in ambulatory *accessible* compartments complying with 604.8.2.

Advisory 604.6 Flush Controls. If plumbing valves are located directly behind the toilet seat, flush valves and related plumbing can cause injury or imbalance when a person leans back against them. To prevent causing injury or imbalance, the plumbing can be located behind walls or to the side of the toilet; or if approved by the local authority having jurisdiction, provide a toilet seat lid.

604.7 Dispensers. Toilet paper dispensers shall comply with 309.4 and shall be 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 15 inches (380 mm) minimum and 48 inches (1220 mm) maximum above the finish floor and shall not be located behind grab bars. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.

Advisory 604.7 Dispensers. If toilet paper dispensers are installed above the side wall grab bar, the outlet of the toilet paper dispenser must be 48 inches (1220 mm) maximum above the finish floor and the top of the gripping surface of the grab bar must be 33 inches (840 mm) minimum and 36 inches (915 mm) maximum above the finish floor.

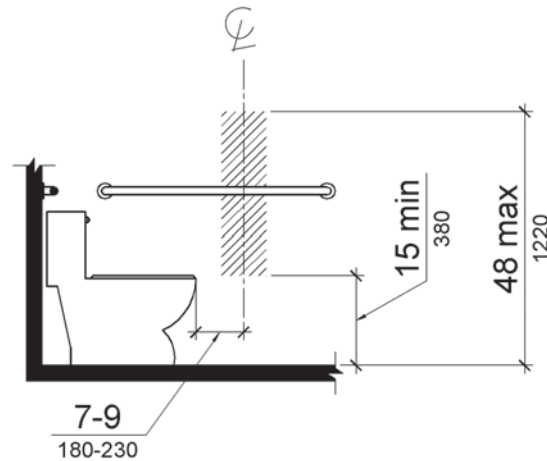


Figure 604.7
Dispenser Outlet Location

604.8 Toilet Compartments. Wheelchair *accessible* toilet compartments shall meet the requirements of 604.8.1 and 604.8.3. Compartments containing more than one plumbing fixture shall comply with 603. Ambulatory *accessible* compartments shall comply with 604.8.2 and 604.8.3.

604.8.1 Wheelchair Accessible Compartments. Wheelchair *accessible* compartments shall comply with 604.8.1.

604.8.1.1 Size. Wheelchair *accessible* compartments shall be 60 inches (1525 mm) wide minimum measured perpendicular to the side wall, and 56 inches (1420 mm) deep minimum for wall hung water closets and 59 inches (1500 mm) deep minimum for floor mounted water closets measured perpendicular to the rear wall. Wheelchair *accessible* compartments for *children's use* shall be 60 inches (1525 mm) wide minimum measured perpendicular to the side wall, and 59 inches (1500 mm) deep minimum for wall hung and floor mounted water closets measured perpendicular to the rear wall.

Advisory 604.8.1.1 Size. The minimum space required in toilet compartments is provided so that a person using a wheelchair can maneuver into position at the water closet. This space cannot be obstructed by baby changing tables or other fixtures or conveniences, except as specified at 604.3.2 (Overlap). If toilet compartments are to be used to house fixtures other than those associated with the water closet, they must be designed to exceed the minimum space requirements. Convenience fixtures such as baby changing tables must also be accessible to people with disabilities as well as to other users. Toilet compartments that are designed to meet, and not exceed, the minimum space requirements may not provide adequate space for maneuvering into position at a baby changing table.

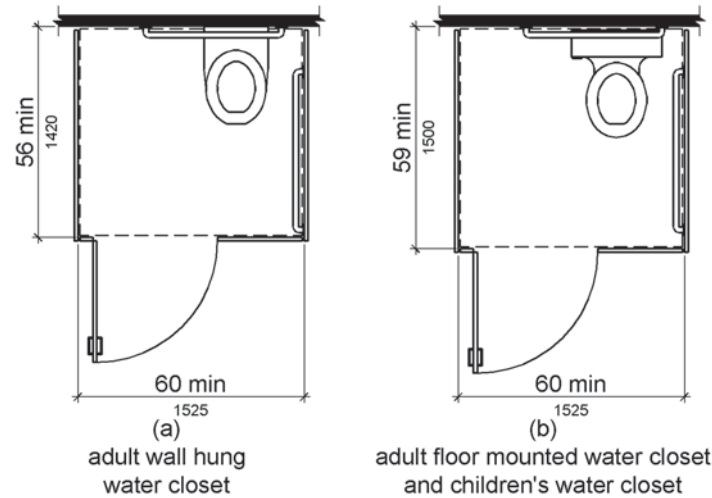


Figure 604.8.1.1
Size of Wheelchair Accessible Toilet Compartment

604.8.1.2 Doors. Toilet compartment doors, including door hardware shall comply with 404 except that if the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 42 inches (1065 mm) minimum. Doors shall be located in the front partition or in the side wall or partition farthest from the water closet. Where located in the front partition, the door opening shall be 4 inches (100 mm) maximum from the side wall or partition farthest from the water closet. Where located in the side wall or partition, the door opening shall be 4 inches (100 mm) maximum from the front partition. The door shall be self-closing. A door pull complying with 404.2.7 shall be placed on both sides of the door near the latch. Toilet compartment doors shall not swing into the minimum required compartment area.

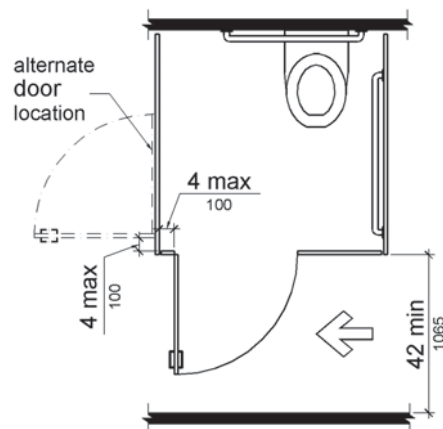


Figure 604.8.1.2
Wheelchair Accessible Toilet Compartment Doors

604.8.1.3 Approach. Compartments shall be arranged for left-hand or right-hand approach to the water closet.

604.8.1.4 Toe Clearance. The front partition and at least one side partition shall provide a toe clearance of 9 inches (230 mm) minimum above the finish floor and 6 inches (150 mm) deep minimum beyond the compartment-side face of the partition, exclusive of partition support members. Compartments for *children's use* shall provide a toe clearance of 12 inches (305 mm) minimum above the finish floor.

EXCEPTION: Toe clearance at the front partition is not required in a compartment greater than 62 inches (1575 mm) deep with a wall-hung water closet or 65 inches (1650 mm) deep with a floor-mounted water closet. Toe clearance at the side partition is not required in a compartment greater than 66 inches (1675 mm) wide. Toe clearance at the front partition is not required in a compartment for *children's use* that is greater than 65 inches (1650 mm) deep.

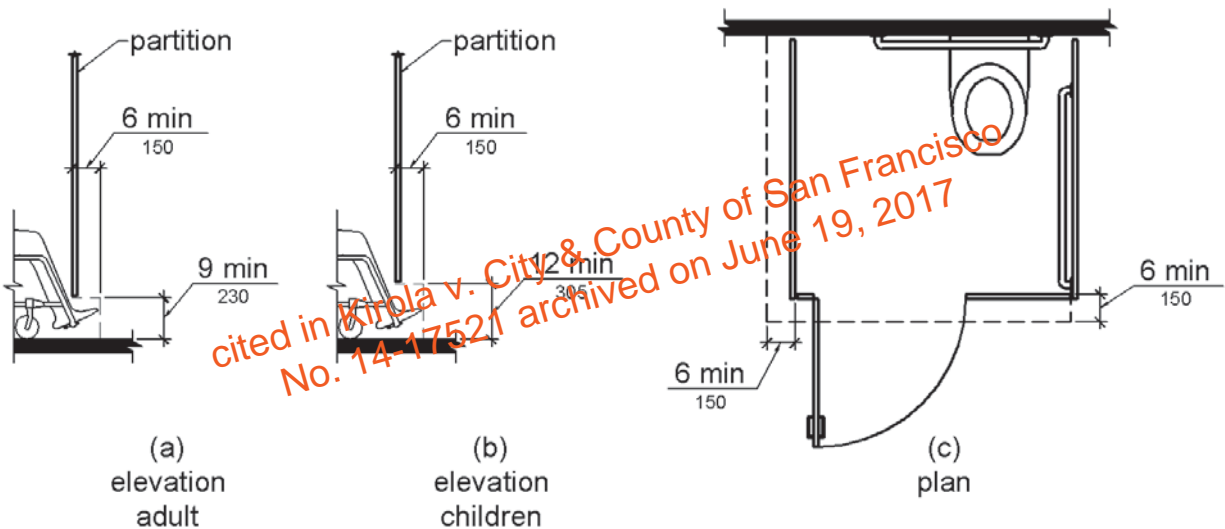


Figure 604.8.1.4
Wheelchair Accessible Toilet Compartment Toe Clearance

604.8.1.5 Grab Bars. Grab bars shall comply with 609. A side-wall grab bar complying with 604.5.1 shall be provided and shall be located on the wall closest to the water closet. In addition, a rear-wall grab bar complying with 604.5.2 shall be provided.

604.8.2 Ambulatory Accessible Compartments. Ambulatory *accessible* compartments shall comply with 604.8.2.

604.8.2.1 Size. Ambulatory *accessible* compartments shall have a depth of 60 inches (1525 mm) minimum and a width of 35 inches (890 mm) minimum and 37 inches (940 mm) maximum.

604.8.2.2 Doors. Toilet compartment doors, including door hardware, shall comply with 404, except that if the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 42 inches (1065 mm) minimum. The door shall be self-closing. A door pull complying with 404.2.7 shall be placed on both sides of the door near the latch. Toilet compartment doors shall not swing into the minimum required compartment area.

604.8.2.3 Grab Bars. Grab bars shall comply with 609. A side-wall grab bar complying with 604.5.1 shall be provided on both sides of the compartment.

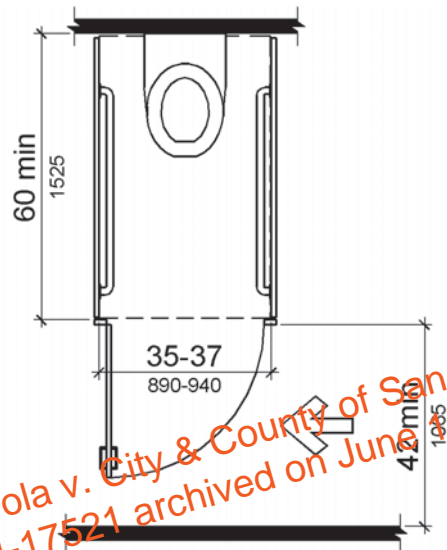


Figure 604.8.2
Ambulatory Accessible Toilet Compartment

604.8.3 Coat Hooks and Shelves. Coat hooks shall be located within one of the reach ranges specified in 308. Shelves shall be located 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the finish floor.

604.9 Water Closets and Toilet Compartments for Children's Use. Water closets and toilet compartments for *children's use* shall comply with 604.9.

Advisory 604.9 Water Closets and Toilet Compartments for Children's Use. The requirements in 604.9 are to be followed where the exception for children's water closets in 604.1 is used. The following table provides additional guidance in applying the specifications for water closets for children according to the age group served and reflects the differences in the size, stature, and reach ranges of children ages 3 through 12. The specifications chosen should correspond to the age of the primary user group. The specifications of one age group should be applied consistently in the installation of a water closet and related elements.

Advisory Specifications for Water Closets Serving Children Ages 3 through 12			
	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
Water Closet Centerline	12 inches (305 mm)	12 to 15 inches (305 to 380 mm)	15 to 18 inches (380 to 455 mm)
Toilet Seat Height	11 to 12 inches (280 to 305 mm)	12 to 15 inches (305 to 380 mm)	15 to 17 inches (380 to 430 mm)
Grab Bar Height	18 to 20 inches (455 to 510 mm)	20 to 25 inches (510 to 635 mm)	25 to 27 inches (635 to 685 mm)
Dispenser Height	14 inches (355 mm)	14 to 17 inches (355 to 430 mm)	17 to 19 inches (430 to 485 mm)

604.9.1 Location. The water closet shall be located with a wall or partition to the rear and to one side. The centerline of the water closet shall be 12 inches (305 mm) minimum and 18 inches (455 mm) maximum from the side wall or partition, except that the water closet shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum from the side wall or partition in the ambulatory *accessible* toilet compartment specified in 604.8.2. Compartments shall be arranged for left-hand or right-hand approach to the water closet.

604.9.2 Clearance. Clearance around a water closet shall comply with 604.3.

604.9.3 Height. The height of water closets shall be 11 inches (280 mm) minimum and 17 inches (430 mm) maximum measured to the top of the seat. Seats shall not be sprung to return to a lifted position.

604.9.4 Grab Bars. Grab bars for water closets shall comply with 604.5.

604.9.5 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309.2 and 309.4 and shall be installed 36 inches (915 mm) maximum above the finish floor. Flush controls shall be located on the open side of the water closet except in ambulatory *accessible* compartments complying with 604.8.2.

604.9.6 Dispensers. Toilet paper dispensers shall comply with 309.4 and shall be 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 14 inches (355 mm) minimum and 19 inches (485 mm) maximum above the finish floor. There shall be a clearance of 1½ inches (38 mm) minimum below the grab bar. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.

604.9.7 Toilet Compartments. Toilet compartments shall comply with 604.8.

605 Urinals

605.1 General. Urinals shall comply with 605.

Advisory 605.1 General. Stall-type urinals provide greater accessibility for a broader range of persons, including people of short stature.

605.2 Height and Depth. Urinals shall be the stall-type or the wall-hung type with the rim 17 inches (430 mm) maximum above the finish floor or ground. Urinals shall be 13½ inches (345 mm) deep minimum measured from the outer face of the urinal rim to the back of the fixture.

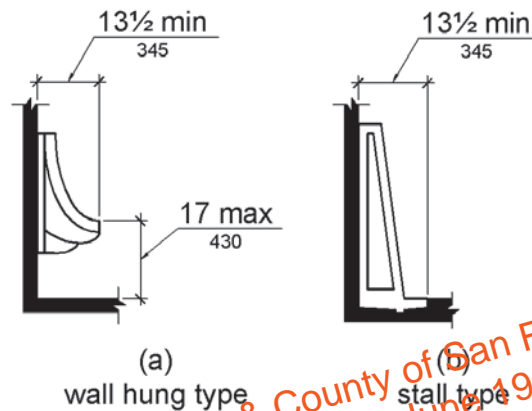


Figure 605.2
Height and Depth of Urinals

605.3 Clear Floor Space. A clear floor or ground space complying with 305 positioned for forward approach shall be provided.

605.4 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309.

606 Lavatories and Sinks

606.1 General. Lavatories and sinks shall comply with 606.

Advisory 606.1 General. If soap and towel dispensers are provided, they must be located within the reach ranges specified in 308. Locate soap and towel dispensers so that they are conveniently usable by a person at the accessible lavatory.

606.2 Clear Floor Space. A clear floor space complying with 305, positioned for a forward approach, and knee and toe clearance complying with 306 shall be provided.

EXCEPTIONS: 1. A parallel approach complying with 305 shall be permitted to a kitchen sink in a space where a cook top or conventional range is not provided and to wet bars.

2. A lavatory in a toilet room or bathing *facility* for a single occupant accessed only through a private office and not for *common use* or *public use* shall not be required to provide knee and toe clearance complying with 306.
3. In *residential dwelling units*, cabinetry shall be permitted under lavatories and kitchen sinks provided that all of the following conditions are met:
 - (a) the cabinetry can be removed without removal or replacement of the fixture;
 - (b) the finish floor extends under the cabinetry; and
 - (c) the walls behind and surrounding the cabinetry are finished.
4. A knee clearance of 24 inches (610 mm) minimum above the finish floor or ground shall be permitted at lavatories and sinks used primarily by children 6 through 12 years where the rim or counter surface is 31 inches (785 mm) maximum above the finish floor or ground.
5. A parallel approach complying with 305 shall be permitted to lavatories and sinks used primarily by children 5 years and younger.
6. The dip of the overflow shall not be considered in determining knee and toe clearances.
7. No more than one bowl of a multi-bowl sink shall be required to provide knee and toe clearance complying with 306.

606.3 Height. Lavatories and sinks shall be installed with the front of the higher of the rim or counter surface 34 inches (865 mm) maximum above the finish floor or ground.

EXCEPTIONS: 1. A lavatory in a toilet or bathing *facility* for a single occupant accessed only through a private office and not for *common use* or *public use* shall not be required to comply with 606.3.

2. In *residential dwelling unit* kitchens, sinks that are adjustable to variable heights, 29 inches (735 mm) minimum and 36 inches (915 mm) maximum, shall be permitted where rough-in plumbing permits connections of supply and drain pipes for sinks mounted at the height of 29 inches (735 mm).

606.4 Faucets. Controls for faucets shall comply with 309. Hand-operated metering faucets shall remain open for 10 seconds minimum.

606.5 Exposed Pipes and Surfaces. Water supply and drain pipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories and sinks.

607 Bathtubs

607.1 General. Bathtubs shall comply with 607.

607.2 Clearance. Clearance in front of bathtubs shall extend the length of the bathtub and shall be 30 inches (760 mm) wide minimum. A lavatory complying with 606 shall be permitted at the control end of the clearance. Where a permanent seat is provided at the head end of the bathtub, the clearance shall extend 12 inches (305 mm) minimum beyond the wall at the head end of the bathtub.

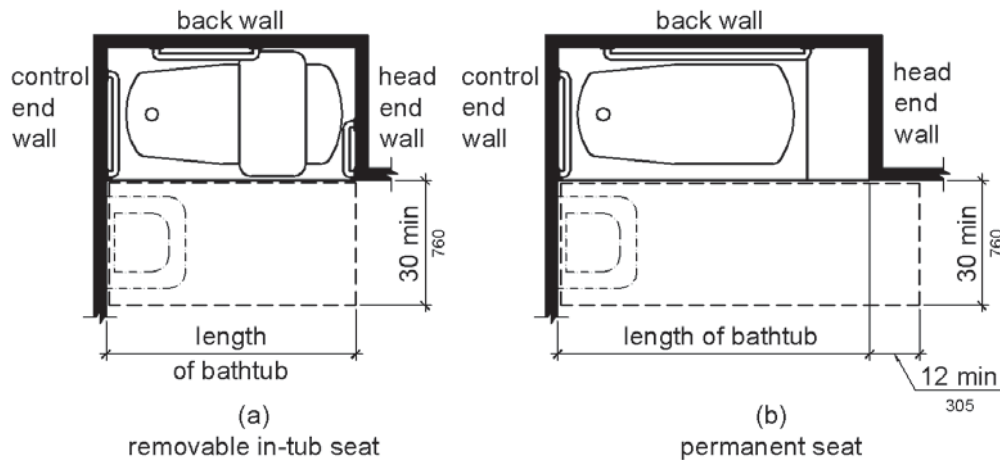


Figure 607.2
Clearance for Bathtubs

607.3 Seat. A permanent seat at the head end of the bathtub or a removable in-tub seat shall be provided. Seats shall comply with 610.

607.4 Grab Bars. Grab bars for bathtubs shall comply with 609 and shall be provided in accordance with 607.4.1 or 607.4.2.

EXCEPTIONS: 1. Grab bars shall not be required to be installed in a bathtub located in a bathing facility for a single occupant accessed only through a private office and not for *common use* or *public use* provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with 607.4.

2. In *residential dwelling units*, grab bars shall not be required to be installed in bathtubs located in bathing facilities provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with 607.4.

607.4.1 Bathtubs With Permanent Seats. For bathtubs with permanent seats, grab bars shall be provided in accordance with 607.4.1.

607.4.1.1 Back Wall. Two grab bars shall be installed on the back wall, one located in accordance with 609.4 and the other located 8 inches (205 mm) minimum and 10 inches (255 mm) maximum above the rim of the bathtub. Each grab bar shall be installed 15 inches (380 mm) maximum from the head end wall and 12 inches (305 mm) maximum from the control end wall.

607.4.1.2 Control End Wall. A grab bar 24 inches (610 mm) long minimum shall be installed on the control end wall at the front edge of the bathtub.

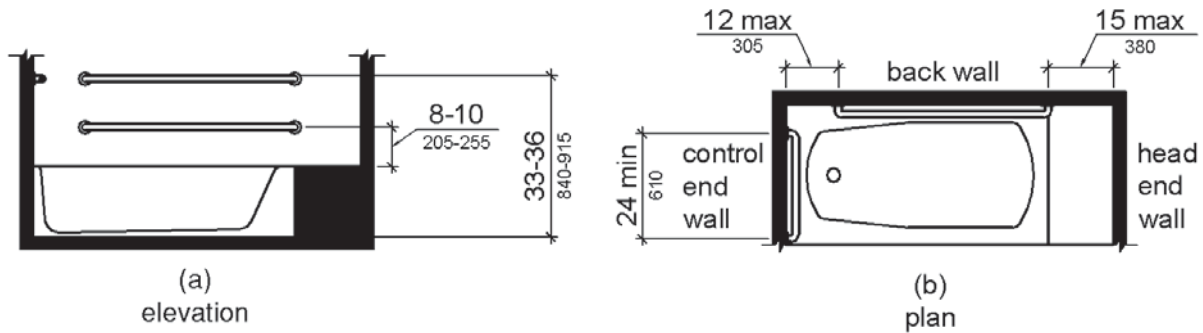


Figure 607.4.1
Grab Bars for Bathtubs with Permanent Seats

607.4.2 Bathtubs Without Permanent Seats. For bathtubs without permanent seats, grab bars shall comply with 607.4.2.

607.4.2.1 Back Wall. Two grab bars shall be installed on the back wall, one located in accordance with 609.4 and other located 8 inches (205 mm) minimum and 10 inches (255 mm) maximum above the rim of the bathtub. Each grab bar shall be 24 inches (610 mm) long minimum and shall be installed 24 inches (610 mm) maximum from the head end wall and 12 inches (305 mm) maximum from the control end wall.

607.4.2.2 Control End Wall. A grab bar 24 inches (610 mm) long minimum shall be installed on the control end wall at the front edge of the bathtub.

607.4.2.3 Head End Wall. A grab bar 12 inches (305 mm) long minimum shall be installed on the head end wall at the front edge of the bathtub.

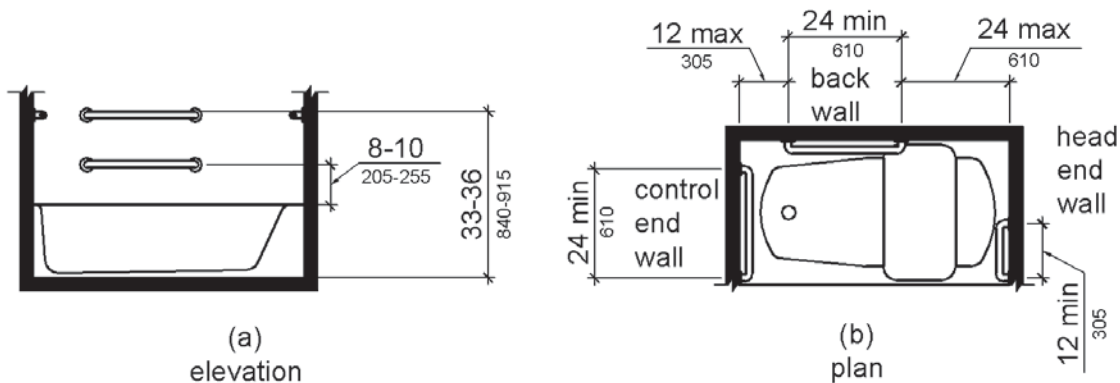


Figure 607.4.2
Grab Bars for Bathtubs with Removable In-Tub Seats

607.5 Controls. Controls, other than drain stoppers, shall be located on an end wall. Controls shall be between the bathtub rim and grab bar, and between the open side of the bathtub and the centerline of the width of the bathtub. Controls shall comply with 309.4.

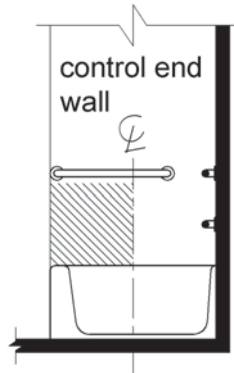


Figure 607.5
Bathtub Control Location

607.6 Shower Spray Unit and Water. A shower spray unit with a hose 59 inches (1500 mm) long minimum that can be used both as a fixed-position shower head and as a hand-held shower shall be provided. The shower spray unit shall have an on/off control with a non-positive shut-off. If an adjustable-height shower head on a vertical bar is used, the bar shall be installed so as not to obstruct the use of grab bars. Bathtub shower spray units shall deliver water that is 120°F (49°C) maximum.

Advisory 607.6 Shower Spray Unit and Water. Ensure that hand-held shower spray units are capable of delivering water pressure substantially equivalent to fixed shower heads.

607.7 Bathtub Enclosures. Enclosures for bathtubs shall not obstruct controls, faucets, shower and spray units or obstruct transfer from wheelchairs onto bathtub seats or into bathtubs. Enclosures on bathtubs shall not have tracks installed on the rim of the open face of the bathtub.

608 Shower Compartments

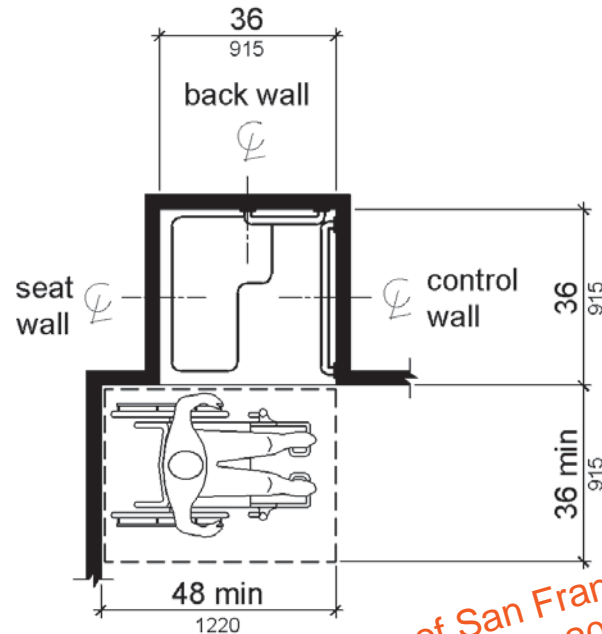
608.1 General. Shower compartments shall comply with 608.

Advisory 608.1 General. Shower stalls that are 60 inches (1525 mm) wide and have no curb may increase the usability of a bathroom because the shower area provides additional maneuvering space.

608.2 Size and Clearances for Shower Compartments. Shower compartments shall have sizes and clearances complying with 608.2.

608.2.1 Transfer Type Shower Compartments. Transfer type shower compartments shall be 36 inches (915 mm) by 36 inches (915 mm) clear inside dimensions measured at the center points of opposing sides and shall have a 36 inch (915 mm) wide minimum entry on the face of the shower

compartment. Clearance of 36 inches (915 mm) wide minimum by 48 inches (1220 mm) long minimum measured from the control wall shall be provided.



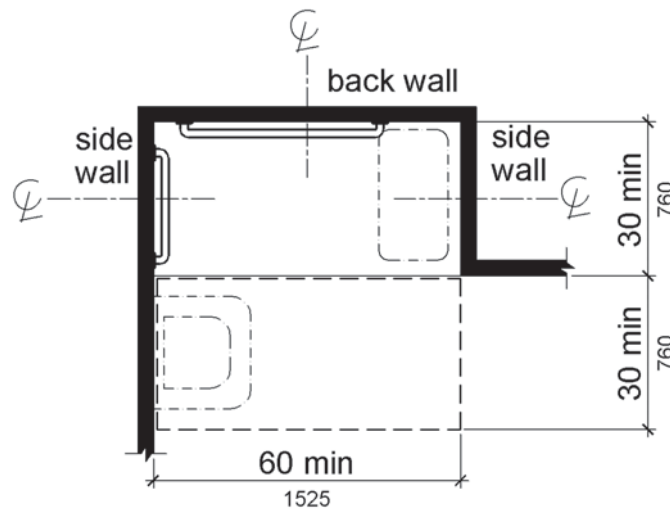
Note: inside finished dimensions measured at the center points of opposing sides

Figure 608.2.1
Transfer Type Shower Compartment Size and Clearance

608.2.2 Standard Roll-In Type Shower Compartments. Standard roll-in type shower compartments shall be 30 inches (760 mm) wide minimum by 60 inches (1525 mm) deep minimum clear inside dimensions measured at center points of opposing sides and shall have a 60 inches (1525 mm) wide minimum entry on the face of the shower compartment.

608.2.2.1 Clearance. A 30 inch (760 mm) wide minimum by 60 inch (1525 mm) long minimum clearance shall be provided adjacent to the open face of the shower compartment.

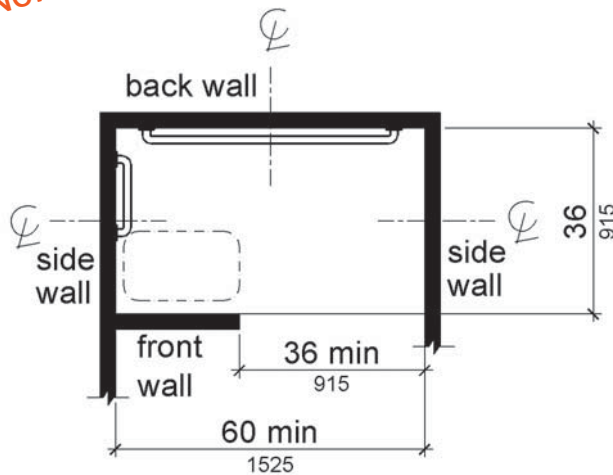
EXCEPTION: A lavatory complying with 606 shall be permitted on one 30 inch (760 mm) wide minimum side of the clearance provided that it is not on the side of the clearance adjacent to the controls or, where provided, not on the side of the clearance adjacent to the shower seat.



Note: inside finished dimensions measured at the center points of opposing sides

Figure 608.2.2
Standard Roll-In Type Shower Compartment Size and Clearance

608.2.3 Alternate Roll-In Type Shower Compartments. Alternate roll-in type shower compartments shall be 36 inches (915 mm) wide and 60 inches (1525 mm) deep minimum clear inside dimensions measured at center points of opposing sides. A 36 inch (915 mm) wide minimum entry shall be provided at one end of the long side of the compartment.



Note: inside finished dimensions measured at the center points of opposing sides

Figure 608.2.3
Alternate Roll-In Type Shower Compartment Size and Clearance

608.3 Grab Bars. Grab bars shall comply with 609 and shall be provided in accordance with 608.3. Where multiple grab bars are used, required horizontal grab bars shall be installed at the same height above the finish floor.

EXCEPTIONS: 1. Grab bars shall not be required to be installed in a shower located in a bathing facility for a single occupant accessed only through a private office, and not for *common use* or *public use* provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with 608.3.

2. In *residential dwelling units*, grab bars shall not be required to be installed in showers located in bathing facilities provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with 608.3.

608.3.1 Transfer Type Shower Compartments. In transfer type compartments, grab bars shall be provided across the control wall and back wall to a point 18 inches (455 mm) from the control wall.

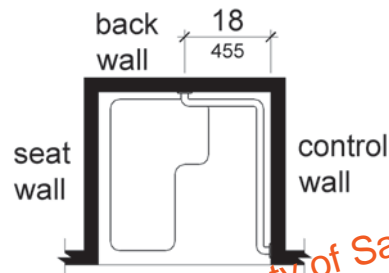


Figure 608.3.1
Grab Bars for Transfer Type Showers

608.3.2 Standard Roll-In Type Shower Compartments. Where a seat is provided in standard roll-in type shower compartments, grab bars shall be provided on the back wall and the side wall opposite the seat. Grab bars shall not be provided above the seat. Where a seat is not provided in standard roll-in type shower compartments, grab bars shall be provided on three walls. Grab bars shall be installed 6 inches (150 mm) maximum from adjacent walls.

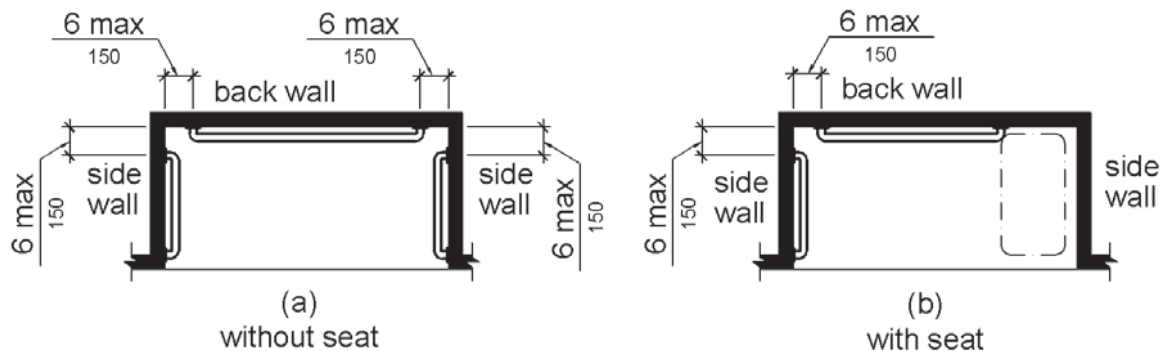


Figure 608.3.2
Grab Bars for Standard Roll-In Type Showers

608.3.3 Alternate Roll-In Type Shower Compartments. In alternate roll-in type shower compartments, grab bars shall be provided on the back wall and the side wall farthest from the compartment entry. Grab bars shall not be provided above the seat. Grab bars shall be installed 6 inches (150 mm) maximum from adjacent walls.

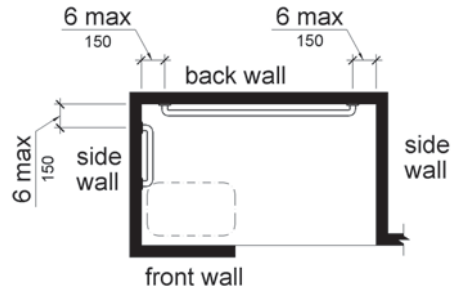


Figure 608.3.3
Grab Bars for Alternate Roll-In Type Showers

608.4 Seats. A folding or non-folding seat shall be provided in transfer type shower compartments. A folding seat shall be provided in roll-in type showers required in *transient lodging* guest rooms with mobility features complying with 806.2. Seats shall comply with 610.

EXCEPTION: In *residential dwelling units*, seats shall not be required in transfer type shower compartments provided that reinforcement has been installed in walls so as to permit the installation of seats complying with 608.4.

608.5 Controls. Controls, faucets, and shower spray units shall comply with 309.4.

608.5.1 Transfer Type Shower Compartments. In transfer type shower compartments, the controls, faucets, and shower spray unit shall be installed on the side wall opposite the seat 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor and shall be located on the control wall 15 inches (380 mm) maximum from the centerline of the seat toward the shower opening.

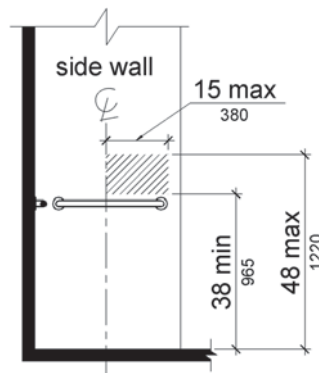


Figure 608.5.1
Transfer Type Shower Compartment Control Location

608.5.2 Standard Roll-In Type Shower Compartments. In standard roll-in type shower compartments, the controls, faucets, and shower spray unit shall be located above the grab bar, but no higher than 48 inches (1220 mm) above the shower floor. Where a seat is provided, the controls, faucets, and shower spray unit shall be installed on the back wall adjacent to the seat wall and shall be located 27 inches (685 mm) maximum from the seat wall.

Advisory 608.5.2 Standard Roll-in Type Shower Compartments. In standard roll-in type showers without seats, the shower head and operable parts can be located on any of the three walls of the shower without adversely affecting accessibility.

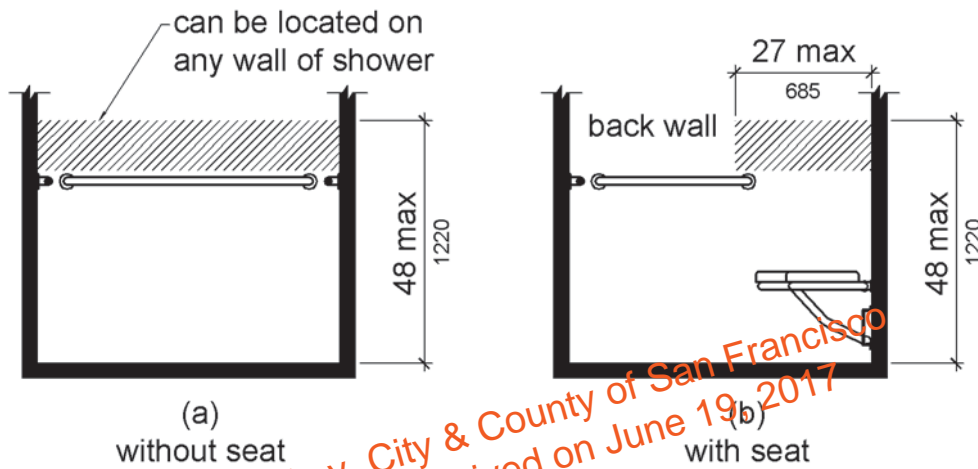


Figure 608.5.2
Standard Roll-In Type Shower Compartment Control Location

608.5.3 Alternate Roll-In Type Shower Compartments. In alternate roll-in type shower compartments, the controls, faucets, and shower spray unit shall be located above the grab bar, but no higher than 48 inches (1220 mm) above the shower floor. Where a seat is provided, the controls, faucets, and shower spray unit shall be located on the side wall adjacent to the seat 27 inches (685 mm) maximum from the side wall behind the seat or shall be located on the back wall opposite the seat 15 inches (380 mm) maximum, left or right, of the centerline of the seat. Where a seat is not provided, the controls, faucets, and shower spray unit shall be installed on the side wall farthest from the compartment entry.

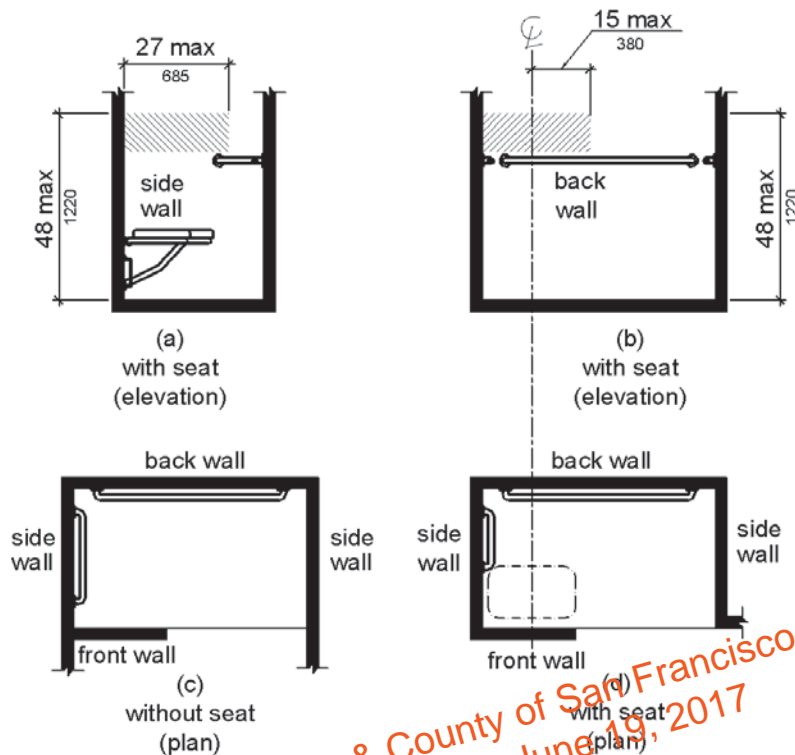


Figure 608.5.3

Alternate Roll-In Type Shower Compartment Control Location

608.6 Shower Spray Unit and Water. A shower spray unit with a hose 59 inches (1500 mm) long minimum that can be used both as a fixed-position shower head and as a hand-held shower shall be provided. The shower spray unit shall have an on/off control with a non-positive shut-off. If an adjustable-height shower head on a vertical bar is used, the bar shall be installed so as not to obstruct the use of grab bars. Shower spray units shall deliver water that is 120°F (49°C) maximum.

EXCEPTION: A fixed shower head located at 48 inches (1220 mm) maximum above the shower finish floor shall be permitted instead of a hand-held spray unit in *facilities* that are not medical care *facilities*, long-term care *facilities*, *transient lodging* guest rooms, or *residential dwelling units*.

Advisory 608.6 Shower Spray Unit and Water. Ensure that hand-held shower spray units are capable of delivering water pressure substantially equivalent to fixed shower heads.

608.7 Thresholds. Thresholds in roll-in type shower compartments shall be ½ inch (13 mm) high maximum in accordance with 303. In transfer type shower compartments, thresholds ½ inch (13 mm) high maximum shall be beveled, rounded, or vertical.

EXCEPTION: A threshold 2 inches (51 mm) high maximum shall be permitted in transfer type shower compartments in existing *facilities* where provision of a ½ inch (13 mm) high threshold would disturb the structural reinforcement of the floor slab.

608.8 Shower Enclosures. Enclosures for shower compartments shall not obstruct controls, faucets, and shower spray units or obstruct transfer from wheelchairs onto shower seats.

609 Grab Bars

609.1 General. Grab bars in toilet *facilities* and bathing *facilities* shall comply with 609.

609.2 Cross Section. Grab bars shall have a cross section complying with 609.2.1 or 609.2.2.

609.2.1 Circular Cross Section. Grab bars with circular cross sections shall have an outside diameter of 1¼ inches (32 mm) minimum and 2 inches (51 mm) maximum.

609.2.2 Non-Circular Cross Section. Grab bars with non-circular cross sections shall have a cross-section dimension of 2 inches (51 mm) maximum and a perimeter dimension of 4 inches (100 mm) minimum and 4.8 inches (120 mm) maximum.

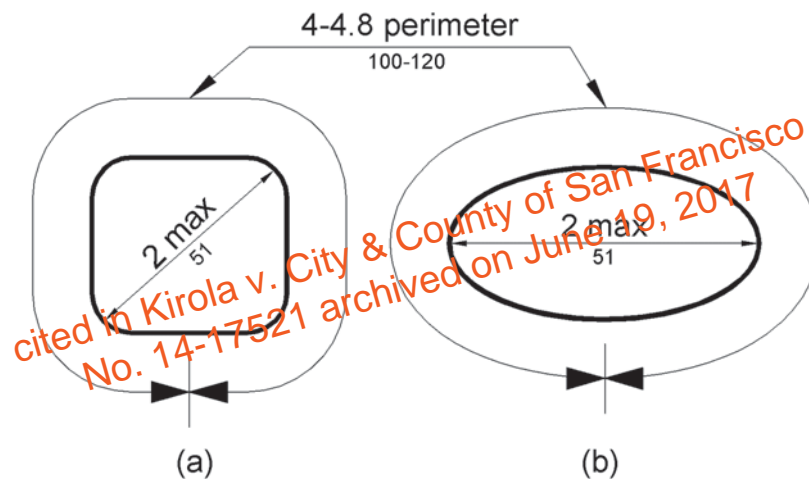


Figure 609.2.2
Grab Bar Non-Circular Cross Section

609.3 Spacing. The *space* between the wall and the grab bar shall be 1½ inches (38 mm). The *space* between the grab bar and projecting objects below and at the ends shall be 1½ inches (38 mm) minimum. The *space* between the grab bar and projecting objects above shall be 12 inches (305 mm) minimum.

EXCEPTION: The *space* between the grab bars and shower controls, shower fittings, and other grab bars above shall be permitted to be 1½ inches (38 mm) minimum.

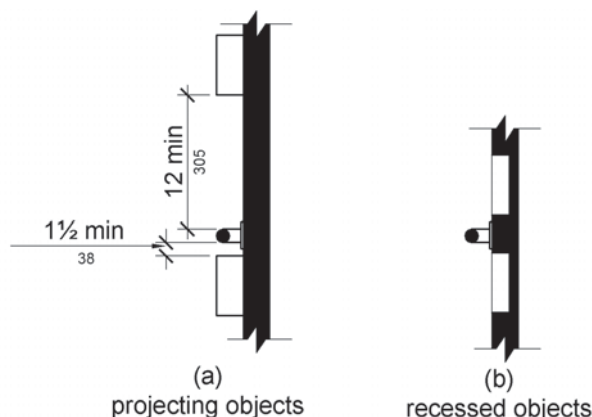


Figure 609.3
Spacing of Grab Bars

609.4 Position of Grab Bars. Grab bars shall be installed in a horizontal position, 33 inches (840 mm) minimum and 36 inches (915 mm) maximum above the finish floor measured to the top of the gripping surface, except that at water closets for *children's use* complying with 604.9, grab bars shall be installed in a horizontal position 18 inches (455 mm) minimum and 27 inches (685 mm) maximum above the finish floor measured to the top of the gripping surface. The height of the lower grab bar on the back wall of a bathtub shall comply with 607.4.1.1 or 607.4.2.1.

609.5 Surface Hazards. Grab bars and any wall or other surfaces adjacent to grab bars shall be free of sharp or abrasive elements and shall have rounded edges.

609.6 Fittings. Grab bars shall not rotate within their fittings.

609.7 Installation. Grab bars shall be installed in any manner that provides a gripping surface at the specified locations and that does not obstruct the required clear floor space.

609.8 Structural Strength. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds (1112 N) is applied at any point on the grab bar, fastener, mounting device, or supporting structure.

610 Seats

610.1 General. Seats in bathtubs and shower compartments shall comply with 610.

610.2 Bathtub Seats. The top of bathtub seats shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the bathroom finish floor. The depth of a removable in-tub seat shall be 15 inches (380 mm) minimum and 16 inches (405 mm) maximum. The seat shall be capable of secure placement. Permanent seats at the head end of the bathtub shall be 15 inches (380 mm) deep minimum and shall extend from the back wall to or beyond the outer edge of the bathtub.

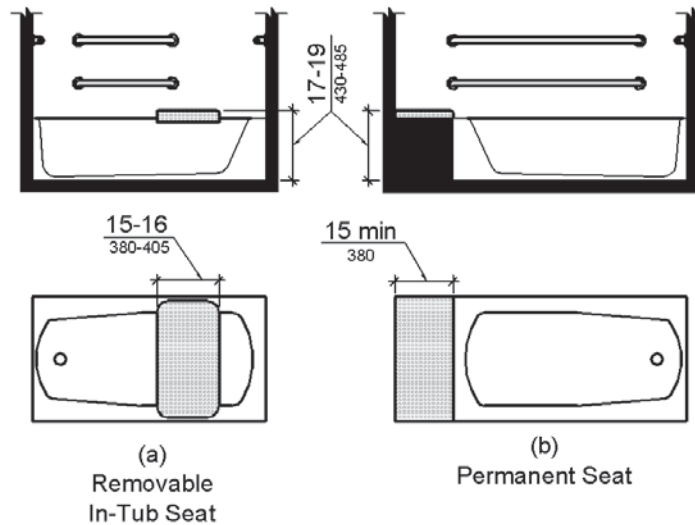


Figure 610.2
Bathtub Seats

610.3 Shower Compartment Seats. Where a seat is provided in a standard roll-in shower compartment, it shall be a folding type, shall be installed on the side wall adjacent to the controls, and shall extend from the back wall to a point within 3 inches (75 mm) of the compartment entry. Where a seat is provided in an alternate roll-in type shower compartment, it shall be a folding type, shall be installed on the front wall opposite the back wall, and shall extend from the adjacent side wall to a point within 3 inches (75 mm) of the compartment entry. In transfer-type showers, the seat shall extend from the back wall to a point within 3 inches (75 mm) of the compartment entry. The top of the seat shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the bathroom finish floor. Seats shall comply with 610.3.1 or 610.3.2.

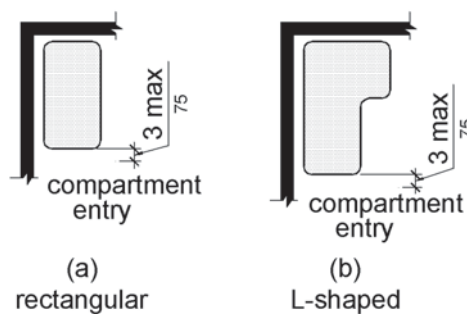


Figure 610.3
Extent of Seat

610.3.1 Rectangular Seats. The rear edge of a rectangular seat shall be 2½ inches (64 mm) maximum and the front edge 15 inches (380 mm) minimum and 16 inches (405 mm) maximum from

the seat wall. The side edge of the seat shall be $1\frac{1}{2}$ inches (38 mm) maximum from the adjacent wall.

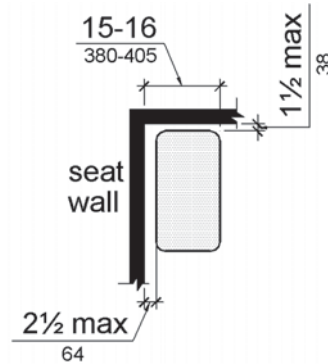


Figure 610.3.1
Rectangular Shower Seat

610.3.2 L-Shaped Seats. The rear edge of an L-shaped seat shall be $2\frac{1}{2}$ inches (64 mm) maximum and the front edge 15 inches (380 mm) minimum and 16 inches (405 mm) maximum from the seat wall. The rear edge of the "L" portion of the seat shall be $1\frac{1}{2}$ inches (38 mm) maximum from the wall and the front edge shall be 14 inches (355 mm) minimum and 15 inches (380 mm) maximum from the wall. The end of the "L" shall be 22 inches (560 mm) minimum and 23 inches maximum (585 mm) from the main seat wall.

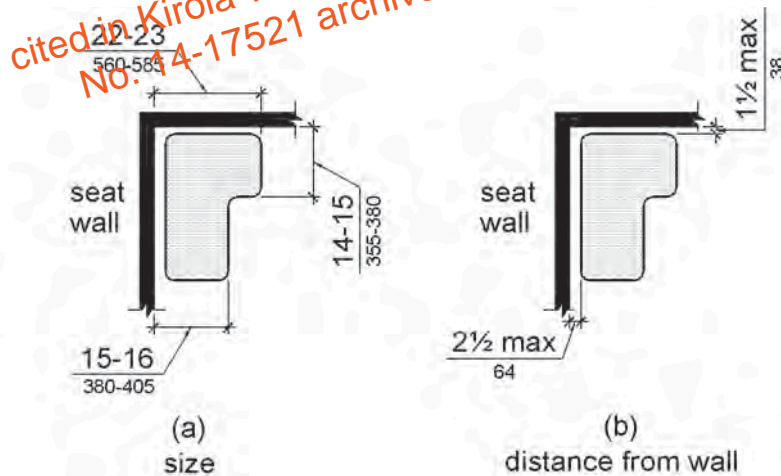


Figure 610.3.2
L-Shaped Shower Seat

610.4 Structural Strength. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds (1112 N) is applied at any point on the seat, fastener, mounting device, or supporting structure.

611 Washing Machines and Clothes Dryers

611.1 General. Washing machines and clothes dryers shall comply with 611.

611.2 Clear Floor Space. A clear floor or ground *space* complying with 305 positioned for parallel approach shall be provided. The clear floor or ground *space* shall be centered on the appliance.

611.3 Operable Parts. *Operable parts*, including doors, lint screens, and detergent and bleach compartments shall comply with 309.

611.4 Height. Top loading machines shall have the door to the laundry compartment located 36 inches (915 mm) maximum above the finish floor. Front loading machines shall have the bottom of the opening to the laundry compartment located 15 inches (380 mm) minimum and 36 inches (915 mm) maximum above the finish floor.

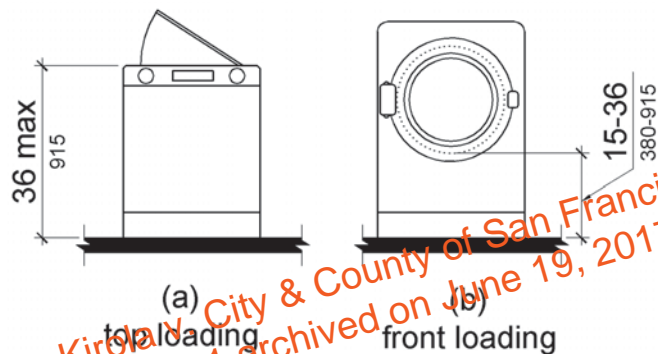


Figure 611.4
Height of Laundry Compartment Opening

612 Saunas and Steam Rooms

612.1 General. Saunas and steam rooms shall comply with 612.

612.2 Bench. Where seating is provided in saunas and steam rooms, at least one bench shall comply with 903. Doors shall not swing into the clear floor *space* required by 903.2.

EXCEPTION: A readily removable bench shall be permitted to obstruct the turning *space* required by 612.3 and the clear floor or ground *space* required by 903.2.

612.3 Turning Space. A turning *space* complying with 304 shall be provided within saunas and steam rooms.

CHAPTER 7: COMMUNICATION ELEMENTS AND FEATURES

701 General

701.1 Scope. The provisions of Chapter 7 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

702 Fire Alarm Systems

702.1 General. Fire alarm systems shall have permanently installed audible and visible alarms complying with NFPA 72 (1999 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1), except that the maximum allowable sound level of audible notification appliances complying with section 4-3.2.1 of NFPA 72 (1999 edition) shall have a sound level no more than 110 dB at the minimum hearing distance from the audible appliance. In addition, alarms in guest rooms required to provide communication features shall comply with sections 4-3 and 4-4 of NFPA 72 (1999 edition) or sections 7.4 and 7.5 of NFPA 72 (2002 edition).

EXCEPTION: Fire alarm systems in medical care *facilities* shall be permitted to be provided in accordance with industry practice.

703 Signs

703.1 General. Signs shall comply with 703. Where both visual and *tactile characters* are required, either one sign with both visual and *tactile characters*, or two separate signs, one with visual, and one with *tactile characters*, shall be provided.

703.2 Raised Characters. Raised *characters* shall comply with 703.2 and shall be duplicated in braille complying with 703.3. Raised *characters* shall be installed in accordance with 703.4.

Advisory 703.2 Raised Characters. Signs that are designed to be read by touch should not have sharp or abrasive edges.

703.2.1 Depth. Raised *characters* shall be 1/32 inch (0.8 mm) minimum above their background.

703.2.2 Case. *Characters* shall be uppercase.

703.2.3 Style. *Characters* shall be sans serif. *Characters* shall not be italic, oblique, script, highly decorative, or of other unusual forms.

703.2.4 Character Proportions. *Characters* shall be selected from fonts where the width of the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "I".

703.2.5 Character Height. *Character* height measured vertically from the baseline of the *character* shall be 5/8 inch (16 mm) minimum and 2 inches (51 mm) maximum based on the height of the uppercase letter "I".

EXCEPTION: Where separate raised and visual *characters* with the same information are provided, raised *character* height shall be permitted to be ½ inch (13 mm) minimum.

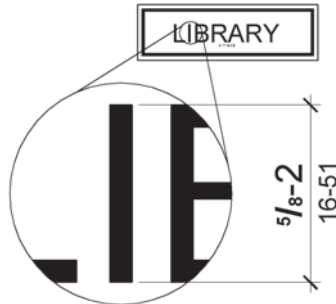


Figure 703.2.5
Height of Raised Characters

703.2.6 Stroke Thickness. Stroke thickness of the uppercase letter "I" shall be 15 percent maximum of the height of the *character*.

703.2.7 Character Spacing. *Character* spacing shall be measured between the two closest points of adjacent raised *characters* within a message, excluding word spaces. Where *characters* have rectangular cross sections, spacing between individual raised *characters* shall be 1/8 inch (3.2 mm) minimum and 4 times the raised *character* stroke width maximum. Where *characters* have other cross sections, spacing between individual raised *characters* shall be 1/16 inch (1.6 mm) minimum and 4 times the raised *character* stroke width maximum at the base of the cross sections, and 1/8 inch (3.2 mm) minimum and 4 times the raised *character* stroke width maximum at the top of the cross sections. *Characters* shall be separated from raised borders and decorative *elements* 3/8 inch (9.5 mm) minimum.

703.2.8 Line Spacing. Spacing between the baselines of separate lines of raised *characters* within a message shall be 135 percent minimum and 170 percent maximum of the raised *character* height.

703.3 Braille. Braille shall be contracted (Grade 2) and shall comply with 703.3 and 703.4.

703.3.1 Dimensions and Capitalization. Braille dots shall have a domed or rounded shape and shall comply with Table 703.3.1. The indication of an uppercase letter or letters shall only be used before the first word of sentences, proper nouns and names, individual letters of the alphabet, initials, and acronyms.

Table 703.3.1 Braille Dimensions

Measurement Range	Minimum in Inches Maximum in Inches
Dot base diameter	0.059 (1.5 mm) to 0.063 (1.6 mm)
Distance between two dots in the same cell ¹	0.090 (2.3 mm) to 0.100 (2.5 mm)
Distance between corresponding dots in adjacent cells ¹	0.241 (6.1 mm) to 0.300 (7.6 mm)
Dot height	0.025 (0.6 mm) to 0.037 (0.9 mm)
Distance between corresponding dots from one cell directly below ¹	0.395 (10 mm) to 0.400 (10.2 mm)

1. Measured center to center.

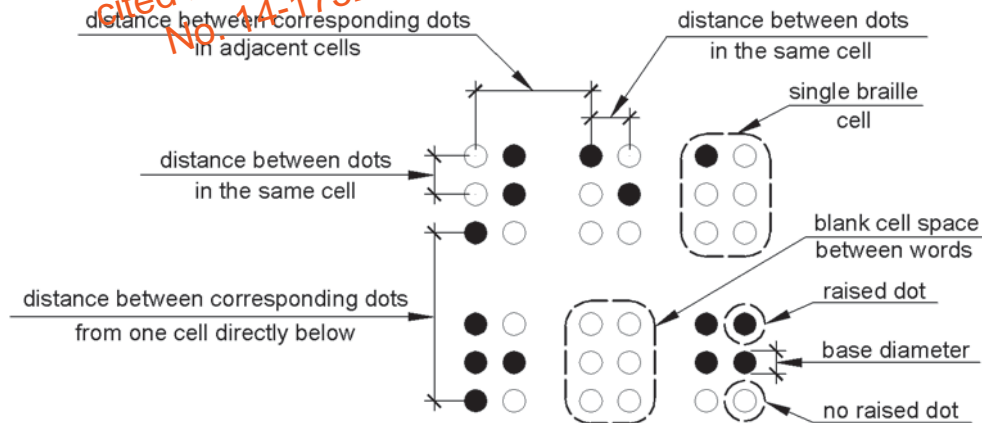


Figure 703.3.1
Braille Measurement

703.3.2 Position. Braille shall be positioned below the corresponding text. If text is multi-lined, braille shall be placed below the entire text. Braille shall be separated 3/8 inch (9.5 mm) minimum from any other *tactile characters* and 3/8 inch (9.5 mm) minimum from raised borders and decorative *elements*.

EXCEPTION: Braille provided on elevator car controls shall be separated 3/16 inch (4.8 mm) minimum and shall be located either directly below or adjacent to the corresponding raised *characters* or symbols.

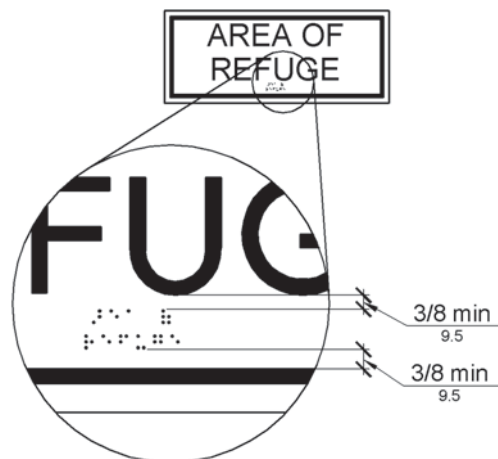


Figure 703.3.2
Position of Braille

703.4 Installation Height and Location. Signs with *tactile characters* shall comply with 703.4.

703.4.1 Height Above Finish Floor or Ground. *Tactile characters* on signs shall be located 48 inches (1220 mm) minimum above the finish floor or ground surface, measured from the baseline of the lowest *tactile character* and 60 inches (1525 mm) maximum above the finish floor or ground surface, measured from the baseline of the highest *tactile character*.

EXCEPTION: *Tactile characters* for elevator car controls shall not be required to comply with 703.4.1.

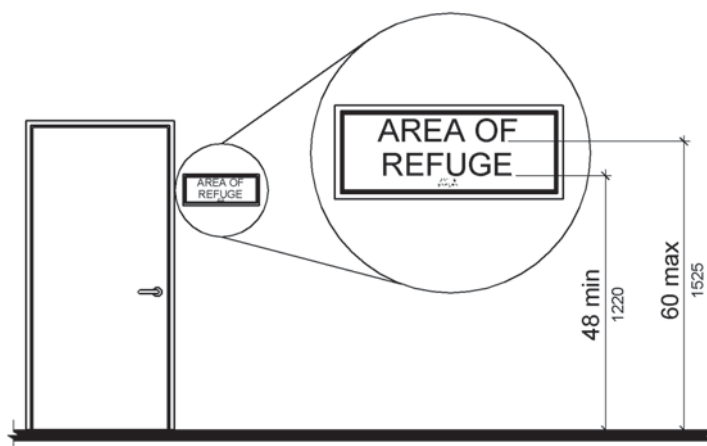


Figure 703.4.1
Height of Tactile Characters Above Finish Floor or Ground

703.4.2 Location. Where a *tactile* sign is provided at a door, the sign shall be located alongside the door at the latch side. Where a *tactile* sign is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a *tactile* sign is provided at double doors with two active leaves, the sign shall be located to the right of the right hand door. Where there is no wall *space* at the latch side of a single door or at the right side of double doors, signs shall be located on the nearest adjacent wall. Signs containing *tactile characters* shall be located so that a clear floor *space* of 18 inches (455 mm) minimum by 18 inches (455 mm) minimum, centered on the *tactile characters*, is provided beyond the arc of any door swing between the closed position and 45 degree open position.

EXCEPTION: Signs with *tactile characters* shall be permitted on the push side of doors with closers and without hold-open devices.

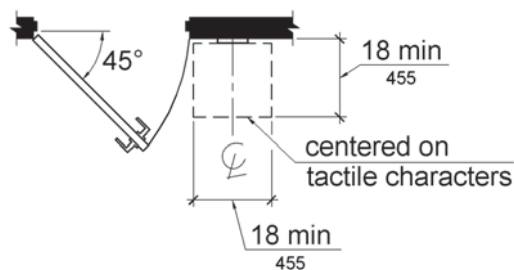


Figure 703.4.2
Location of Tactile Signs at Doors

703.5 Visual Characters. Visual characters shall comply with 703.5.

EXCEPTION: Where visual characters comply with 703.2 and are accompanied by braille complying with 703.3, they shall not be required to comply with 703.5.2 through 703.5.9.

703.5.1 Finish and Contrast. *Characters* and their background shall have a non-glare finish. *Characters* shall contrast with their background with either light *characters* on a dark background or dark *characters* on a light background.

Advisory 703.5.1 Finish and Contrast. Signs are more legible for persons with low vision when characters contrast as much as possible with their background. Additional factors affecting the ease with which the text can be distinguished from its background include shadows cast by lighting sources, surface glare, and the uniformity of the text and its background colors and textures.

703.5.2 Case. *Characters* shall be uppercase or lowercase or a combination of both.

703.5.3 Style. *Characters* shall be conventional in form. *Characters* shall not be italic, oblique, script, highly decorative, or of other unusual forms.

703.5.4 Character Proportions. *Characters* shall be selected from fonts where the width of the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "I".

703.5.5 Character Height. Minimum *character* height shall comply with Table 703.5.5. Viewing distance shall be measured as the horizontal distance between the *character* and an obstruction preventing further approach towards the sign. *Character* height shall be based on the uppercase letter "I".

Table 703.5.5 Visual Character Height

Height to Finish Floor or Ground From Baseline of Character	Horizontal Viewing Distance	Minimum Character Height
40 inches (1015 mm) to less than or equal to 70 inches (1780 mm)	less than 72 inches (1830 mm)	5/8 inch (16 mm)
	72 inches (1830 mm) and greater	5/8 inch (16 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 72 inches (1830 mm)
Greater than 70 inches (1780 mm) to less than or equal to 120 inches (3050 mm)	less than 180 inches (4570 mm)	2 inches (51 mm)
	180 inches (4570 mm) and greater	2 inches (51 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 180 inches (4570 mm)
greater than 120 inches (3050 mm)	less than 21 feet (6400 mm)	3 inches (75 mm)
	21 feet (6400 mm) and greater	3 inches (75 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 21 feet (6400 mm)

703.5.6 Height From Finish Floor or Ground. Visual *characters* shall be 40 inches (1015 mm) minimum above the finish floor or ground.

EXCEPTION: Visual *characters* indicating elevator car controls shall not be required to comply with 703.5.6.

703.5.7 Stroke Thickness. Stroke thickness of the uppercase letter "I" shall be 10 percent minimum and 30 percent maximum of the height of the *character*.

703.5.8 Character Spacing. *Character* spacing shall be measured between the two closest points of adjacent *characters*, excluding word *spaces*. Spacing between individual *characters* shall be 10 percent minimum and 35 percent maximum of *character* height.

703.5.9 Line Spacing. Spacing between the baselines of separate lines of *characters* within a message shall be 135 percent minimum and 170 percent maximum of the *character* height.

703.6 Pictograms. *Pictograms* shall comply with 703.6.

703.6.1 Pictogram Field. *Pictograms* shall have a field height of 6 inches (150 mm) minimum. *Characters* and braille shall not be located in the *pictogram* field.

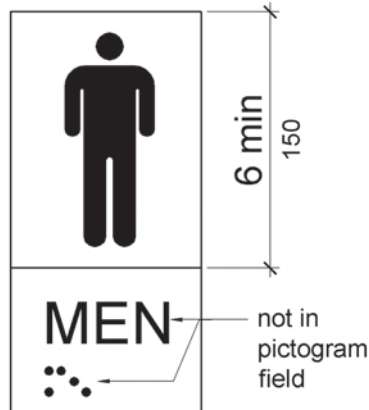


Figure 703.6.1
Pictogram Field

703.6.2 Finish and Contrast. *Pictograms* and their field shall have a non-glare finish. *Pictograms* shall contrast with their field with either a light *pictogram* on a dark field or a dark *pictogram* on a light field.

Advisory 703.6.2 Finish and Contrast. Signs are more legible for persons with low vision when characters contrast as much as possible with their background. Additional factors affecting the ease with which the text can be distinguished from its background include shadows cast by lighting sources, surface glare, and the uniformity of the text and background colors and textures.

703.6.3 Text Descriptors. *Pictograms* shall have text descriptors located directly below the *pictogram* field. Text descriptors shall comply with 703.2, 703.3 and 703.4.

703.7 Symbols of Accessibility. Symbols of *accessibility* shall comply with 703.7.

703.7.1 Finish and Contrast. Symbols of *accessibility* and their background shall have a non-glare finish. Symbols of *accessibility* shall contrast with their background with either a light symbol on a dark background or a dark symbol on a light background.

Advisory 703.7.1 Finish and Contrast. Signs are more legible for persons with low vision when characters contrast as much as possible with their background. Additional factors affecting the ease with which the text can be distinguished from its background include shadows cast by lighting sources, surface glare, and the uniformity of the text and background colors and textures.

703.7.2 Symbols.

703.7.2.1 International Symbol of Accessibility. The International Symbol of *Accessibility* shall comply with Figure 703.7.2.1.



Figure 703.7.2.1
International Symbol of Accessibility

703.7.2.2 International Symbol of TTY. The International Symbol of *TTY* shall comply with Figure 703.7.2.2.



Figure 703.7.2.2
International Symbol of TTY

703.7.2.3 Volume Control Telephones. Telephones with a volume control shall be identified by a *pictogram* of a telephone handset with radiating sound waves on a square field such as shown in Figure 703.7.2.3.



Figure 703.7.2.3
Volume Control Telephone

703.7.2.4 Assistive Listening Systems. *Assistive listening systems* shall be identified by the International Symbol of Access for Hearing Loss complying with Figure 703.7.2.4.



Figure 703.7.2.4
International Symbol of Access for Hearing Loss

704 Telephones

704.1 General. Public telephones shall comply with 704.

704.2 Wheelchair Accessible Telephones. Wheelchair *accessible* telephones shall comply with 704.2.

704.2.1 Clear Floor or Ground Space. A clear floor or ground space complying with 305 shall be provided. The clear floor or ground space shall not be obstructed by bases, enclosures, or seats.

Advisory 704.2.1 Clear Floor or Ground Space. Because clear floor and ground space is required to be unobstructed, telephones, enclosures and related telephone book storage cannot encroach on the required clear floor or ground space and must comply with the provisions for protruding objects. (See Section 307).

704.2.1.1 Parallel Approach. Where a parallel approach is provided, the distance from the edge of the telephone enclosure to the face of the telephone unit shall be 10 inches (255 mm) maximum.

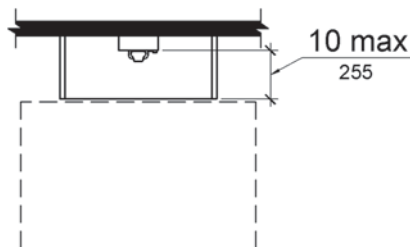


Figure 704.2.1.1
Parallel Approach to Telephone

704.2.1.2 Forward Approach. Where a forward approach is provided, the distance from the front edge of a counter within the telephone enclosure to the face of the telephone unit shall be 20 inches (510 mm) maximum.

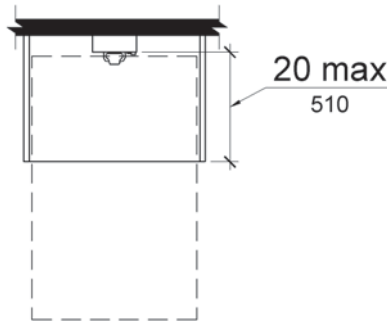


Figure 704.2.1.2
Forward Approach to Telephone

704.2.2 Operable Parts. *Operable parts* shall comply with 309. Telephones shall have push-button controls where such service is available.

704.2.3 Telephone Directories. Telephone directories, where provided, shall be located in accordance with 309.

704.2.4 Cord Length. The cord from the telephone to the handset shall be 29 inches (735 mm) long minimum.

704.3 Volume Control Telephones. Public telephones required to have volume controls shall be equipped with a receive volume control that provides a gain adjustable up to 20 dB minimum. For incremental volume control, provide at least one intermediate step of 12 dB of gain minimum. An automatic reset shall be provided.

Advisory 704.3 Volume Control Telephones. Amplifiers on pay phones are located in the base or the handset or are built into the telephone. Most are operated by pressing a button or key. If the microphone in the handset is not being used, a mute button that temporarily turns off the microphone can also reduce the amount of background noise which the person hears in the earpiece. If a volume adjustment is provided that allows the user to set the level anywhere from the base volume to the upper requirement of 20 dB, there is no need to specify a lower limit. If a stepped volume control is provided, one of the intermediate levels must provide 12 dB of gain. Consider compatibility issues when matching an amplified handset with a phone or phone system. Amplified handsets that can be switched with pay telephone handsets are available. Portable and in-line amplifiers can be used with some phones but are not practical at most public phones covered by these requirements.

704.4 TTYs. *TTYs* required at a public pay telephone shall be permanently affixed within, or adjacent to, the telephone enclosure. Where an acoustic coupler is used, the telephone cord shall be sufficiently long to allow connection of the *TTY* and the telephone receiver.

Advisory 704.4 TTYs. Ensure that sufficient electrical service is available where *TTYs* are to be installed.

704.4.1 Height. When in use, the touch surface of *TTY* keypads shall be 34 inches (865 mm) minimum above the finish floor.

EXCEPTION: Where seats are provided, *TTYs* shall not be required to comply with 704.4.1.

Advisory 704.4.1 Height. A telephone with a *TTY* installed underneath cannot also be a wheelchair accessible telephone because the required 34 inches (865 mm) minimum keypad height can cause the highest operable part of the telephone, usually the coin slot, to exceed the maximum permitted side and forward reach ranges. (See Section 308).

Advisory 704.4.1 Height Exception. While seats are not required at *TTYs*, reading and typing at a *TTY* is more suited to sitting than standing. Facilities that often provide seats at *TTYs* include, but are not limited to, airports and other passenger terminals or stations, courts, art galleries, and convention centers.

704.5 TTY Shelf. Public pay telephones required to accommodate portable *TTYs* shall be equipped with a shelf and an electrical outlet within or adjacent to the telephone enclosure. The telephone handset shall be capable of being placed flush on the surface of the shelf. The shelf shall be capable of accommodating a *TTY* and shall have 6 inches (150 mm) minimum vertical clearance above the area where the *TTY* is to be placed.

705 Detectable Warnings

705.1 General. *Detectable warnings* shall consist of a surface of truncated domes and shall comply with 705.

705.1.1 Dome Size. Truncated domes in a *detectable warning* surface shall have a base diameter of 0.9 inch (23 mm) minimum and 1.4 inches (36 mm) maximum, a top diameter of 50 percent of the base diameter minimum to 65 percent of the base diameter maximum, and a height of 0.2 inch (5.1 mm).

705.1.2 Dome Spacing. Truncated domes in a *detectable warning* surface shall have a center-to-center spacing of 1.6 inches (41 mm) minimum and 2.4 inches (61 mm) maximum, and a base-to-base spacing of 0.65 inch (17 mm) minimum, measured between the most adjacent domes on a square grid.

705.1.3 Contrast. *Detectable warning* surfaces shall contrast visually with adjacent walking surfaces either light-on-dark, or dark-on-light.

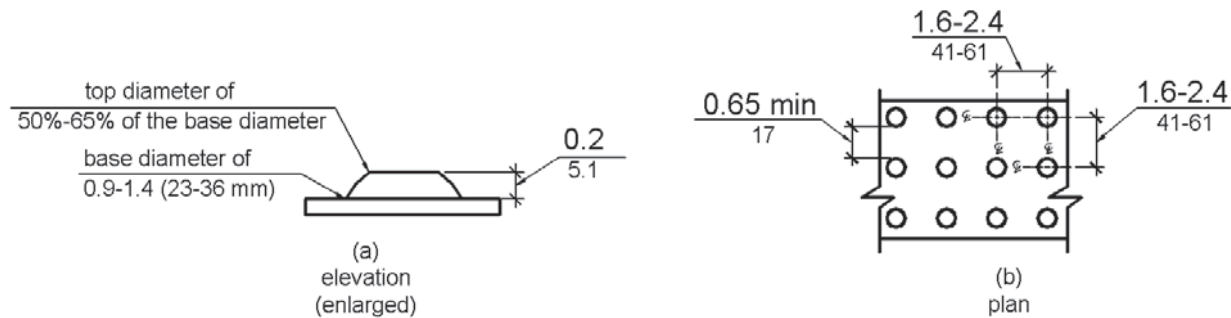


Figure 705.1
Size and Spacing of Truncated Domes

705.2 Platform Edges. *Detectable warning* surfaces at platform boarding edges shall be 24 inches (610 mm) wide and shall extend the full length of the *public use* areas of the platform.

706 Assistive Listening Systems

706.1 General. *Assistive listening systems* required in *assembly areas* shall comply with 706.

Advisory 706.1 General. Assistive listening systems are generally categorized by their mode of transmission. There are hard-wired systems and three types of wireless systems: induction loop, infrared, and FM radio transmission. Each has different advantages and disadvantages that can help determine which system is best for a given application. For example, an FM system may be better than an infrared system in some open-air assemblies since infrared signals are less effective in sunlight. On the other hand, an infrared system is typically a better choice than an FM system where confidential transmission is important because it will be contained within a given space.

The technical standards for assistive listening systems describe minimum performance levels for volume, interference, and distortion. Sound pressure levels (SPL), expressed in decibels, measure output sound volume. Signal-to-noise ratio (SNR or S/N), also expressed in decibels, represents the relationship between the loudness of a desired sound (the signal) and the background noise in a space or piece of equipment. The higher the SNR, the more intelligible the signal. The peak clipping level limits the distortion in signal output produced when high-volume sound waves are manipulated to serve assistive listening devices.

Selecting or specifying an effective assistive listening system for a large or complex venue requires assistance from a professional sound engineer. The Access Board has published technical assistance on assistive listening devices and systems.

706.2 Receiver Jacks. Receivers required for use with an *assistive listening system* shall include a 1/8 inch (3.2 mm) standard mono jack.

706.3 Receiver Hearing-Aid Compatibility. Receivers required to be hearing-aid compatible shall interface with telecoils in hearing aids through the provision of neckloops.

Advisory 706.3 Receiver Hearing-Aid Compatibility. Neckloops and headsets that can be worn as neckloops are compatible with hearing aids. Receivers that are not compatible include earbuds, which may require removal of hearing aids, earphones, and headsets that must be worn over the ear, which can create disruptive interference in the transmission and can be uncomfortable for people wearing hearing aids.

706.4 Sound Pressure Level. *Assistive listening systems* shall be capable of providing a sound pressure level of 110 dB minimum and 118 dB maximum with a dynamic range on the volume control of 50 dB.

706.5 Signal-to-Noise Ratio. The signal-to-noise ratio for internally generated noise in *assistive listening systems* shall be 18 dB minimum.

706.6 Peak Clipping Level. Peak clipping shall not exceed 18 dB of clipping relative to the peaks of speech.

707 Automatic Teller Machines and Fare Machines

Advisory 707 Automatic Teller Machines and Fare Machines. Interactive transaction machines (ITMs), other than ATMs, are not covered by Section 707. However, for entities covered by the ADA, the Department of Justice regulations that implement the ADA provide additional guidance regarding the relationship between these requirements and elements that are not directly addressed by these requirements. Federal procurement law requires that ITMs purchased by the Federal government comply with standards issued by the Access Board under Section 508 of the Rehabilitation Act of 1973, as amended. This law covers a variety of products, including computer hardware and software, websites, phone systems, fax machines, copiers, and similar technologies. For more information on Section 508 consult the Access Board's website at www.access-board.gov.

707.1 General. Automatic teller machines and fare machines shall comply with 707.

Advisory 707.1 General. If farecards have one tactually distinctive corner they can be inserted with greater accuracy. Token collection devices that are designed to accommodate tokens which are perforated can allow a person to distinguish more readily between tokens and common coins. Place accessible gates and fare vending machines in close proximity to other accessible elements when feasible so the facility is easier to use.

707.2 Clear Floor or Ground Space. A clear floor or ground *space* complying with 305 shall be provided.

EXCEPTION: Clear floor or ground *space* shall not be required at drive-up only automatic teller machines and fare machines.

707.3 Operable Parts. *Operable parts* shall comply with 309. Unless a clear or correct key is provided, each *operable part* shall be able to be differentiated by sound or touch, without activation.

EXCEPTION: Drive-up only automatic teller machines and fare machines shall not be required to comply with 309.2 and 309.3.

707.4 Privacy. Automatic teller machines shall provide the opportunity for the same degree of privacy of input and output available to all individuals.

Advisory 707.4 Privacy. In addition to people who are blind or visually impaired, people with limited reach who use wheelchairs or have short stature, who cannot effectively block the ATM screen with their bodies, may prefer to use speech output. Speech output users can benefit from an option to render the visible screen blank, thereby affording them greater personal security and privacy.

707.5 Speech Output. Machines shall be speech enabled. Operating instructions and orientation, visible transaction prompts, user input verification, error messages, and all displayed information for full use shall be *accessible* to and independently usable by individuals with vision impairments. Speech shall be delivered through a mechanism that is readily available to all users, including but not limited to, an industry standard connector or a telephone handset. Speech shall be recorded or digitized human, or synthesized.

EXCEPTIONS: 1. Audible tones shall be permitted instead of speech for visible output that is not displayed for security purposes, including but not limited to, asterisks representing personal identification numbers.

2. Advertisements and other similar information shall not be required to be audible unless they convey information that can be used in the transaction being conducted.

3. Where speech synthesis cannot be supported, dynamic alphabetic output shall not be required to be audible.

Advisory 707.5 Speech Output. If an ATM provides additional functions such as dispensing coupons, selling theater tickets, or providing copies of monthly statements, all such functions must be available to customers using speech output. To avoid confusion at the ATM, the method of initiating the speech mode should be easily discoverable and should not require specialized training. For example, if a telephone handset is provided, lifting the handset can initiate the speech mode.

707.5.1 User Control. Speech shall be capable of being repeated or interrupted. Volume control shall be provided for the speech function.

EXCEPTION: Speech output for any single function shall be permitted to be automatically interrupted when a transaction is selected.

707.5.2 Receipts. Where receipts are provided, speech output devices shall provide audible balance inquiry information, error messages, and all other information on the printed receipt necessary to complete or verify the transaction.

EXCEPTIONS: 1. Machine location, date and time of transaction, customer account number, and the machine identifier shall not be required to be audible.

2. Information on printed receipts that duplicates information available on-screen shall not be required to be presented in the form of an audible receipt.
3. Printed copies of bank statements and checks shall not be required to be audible.

707.6 Input. Input devices shall comply with 707.6.

707.6.1 Input Controls. At least one *tactilely* discernible input control shall be provided for each function. Where provided, key surfaces not on active areas of display screens, shall be raised above surrounding surfaces. Where membrane keys are the only method of input, each shall be *tactilely* discernible from surrounding surfaces and adjacent keys.

707.6.2 Numeric Keys. Numeric keys shall be arranged in a 12-key ascending or descending telephone keypad layout. The number five key shall be *tactilely* distinct from the other keys.

Advisory 707.6.2 Numeric Keys. Telephone keypads and computer keyboards differ in one significant feature, ascending versus descending numerical order. Both types of keypads are acceptable, provided the computer-style keypad is organized similarly to the number pad located at the right on most computer keyboards, and does not resemble the line of numbers located above the computer keys.

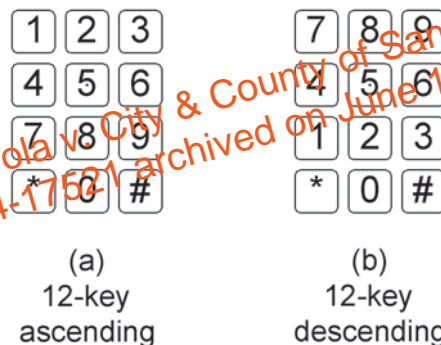


Figure 707.6.2
Numeric Key Layout

707.6.3 Function Keys. Function keys shall comply with 707.6.3.

707.6.3.1 Contrast. Function keys shall contrast visually from background surfaces. *Characters* and symbols on key surfaces shall contrast visually from key surfaces. Visual contrast shall be either light-on-dark or dark-on-light.

EXCEPTION: *Tactile* symbols required by 707.6.3.2 shall not be required to comply with 707.6.3.1.

707.6.3.2 Tactile Symbols. Function key surfaces shall have *tactile* symbols as follows: Enter or Proceed key: raised circle; Clear or Correct key: raised left arrow; Cancel key: raised letter ex; Add Value key: raised plus sign; Decrease Value key: raised minus sign.

707.7 Display Screen. The display screen shall comply with 707.7.

EXCEPTION: Drive-up only automatic teller machines and fare machines shall not be required to comply with 707.7.1.

707.7.1 Visibility. The display screen shall be visible from a point located 40 inches (1015 mm) above the center of the clear floor *space* in front of the machine.

707.7.2 Characters. *Characters* displayed on the screen shall be in a sans serif font. *Characters* shall be 3/16 inch (4.8 mm) high minimum based on the uppercase letter "I". *Characters* shall contrast with their background with either light *characters* on a dark background or dark *characters* on a light background.

707.8 Braille Instructions. Braille instructions for initiating the speech mode shall be provided. Braille shall comply with 703.3.

708 Two-Way Communication Systems

708.1 General. Two-way communication systems shall comply with 708.

Advisory 708.1 General. Devices that do not require handsets are easier to use by people who have a limited reach.

708.2 Audible and Visual Indicators. The system shall provide both audible and visual signals.

Advisory 708.2 Audible and Visual Indicators. A light can be used to indicate visually that assistance is on the way. Signs indicating the meaning of visual signals should be provided.

708.3 Handsets. Handset cords, if provided, shall be 29 inches (735 mm) long minimum.

708.4 Residential Dwelling Unit Communication Systems. Communications systems between a *residential dwelling unit* and a *site, building, or floor entrance* shall comply with 708.4.

708.4.1 Common Use or Public Use System Interface. The *common use* or *public use* system interface shall include the capability of supporting voice and *TTY* communication with the *residential dwelling unit* interface.

708.4.2 Residential Dwelling Unit Interface. The *residential dwelling unit* system interface shall include a telephone jack capable of supporting voice and *TTY* communication with the *common use* or *public use* system interface.

CHAPTER 8: SPECIAL ROOMS, SPACES, AND ELEMENTS

801 General

801.1 Scope. The provisions of Chapter 8 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

Advisory 801.1 Scope. Facilities covered by these requirements are also subject to the requirements of the other chapters. For example, 806 addresses guest rooms in transient lodging facilities while 902 contains the technical specifications for dining surfaces. If a transient lodging facility contains a restaurant, the restaurant must comply with requirements in other chapters such as those applicable to certain dining surfaces.

802 Wheelchair Spaces, Companion Seats, and Designated Aisle Seats

802.1 Wheelchair Spaces. *Wheelchair spaces* shall comply with 802.1.

802.1.1 Floor or Ground Surface. The floor or ground surface of *wheelchair spaces* shall comply with 302. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

802.1.2 Width. A single *wheelchair space* shall be 36 inches (915 mm) wide minimum. Where two adjacent *wheelchair spaces* are provided, each *wheelchair space* shall be 33 inches (840 mm) wide minimum.

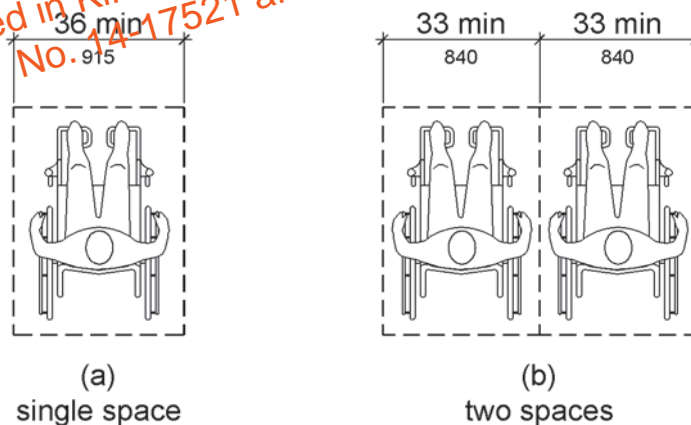


Figure 802.1.2
Width of Wheelchair Spaces

802.1.3 Depth. Where a *wheelchair space* can be entered from the front or rear, the *wheelchair space* shall be 48 inches (1220 mm) deep minimum. Where a *wheelchair space* can be entered only from the side, the *wheelchair space* shall be 60 inches (1525 mm) deep minimum.

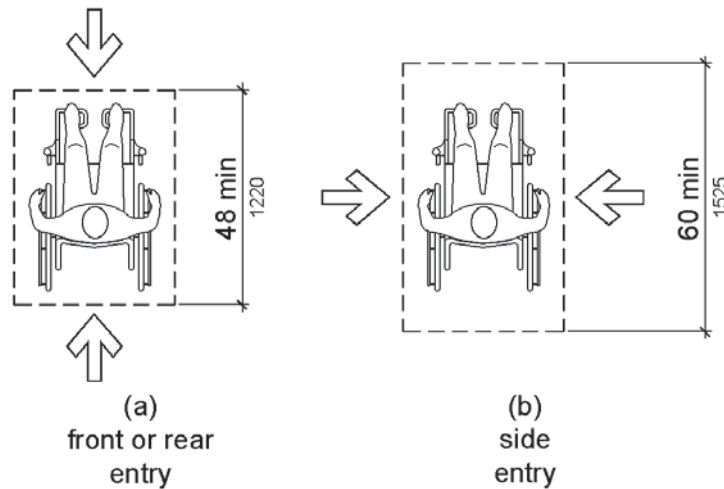


Figure 802.1.3
Depth of Wheelchair Spaces

802.1.4 Approach. *Wheelchair spaces* shall adjoin *accessible routes*. *Accessible routes* shall not overlap *wheelchair spaces*.

Advisory 802.1.4 Approach. Because accessible routes serving wheelchair spaces are not permitted to overlap the clear floor space at wheelchair spaces, access to any wheelchair space cannot be through another wheelchair space.

802.1.5 Overlap. *Wheelchair spaces* shall not overlap *circulation paths*.

Advisory 802.1.5 Overlap. The term "circulation paths" used in Section 802.1.5 means aisle width required by applicable building or life safety codes for the specific assembly occupancy. Where the circulation path provided is wider than the required aisle width, the wheelchair space may intrude into that portion of the circulation path that is provided in excess of the required aisle width.

802.2 Lines of Sight. Lines of sight to the screen, performance area, or playing field for spectators in *wheelchair spaces* shall comply with 802.2.

802.2.1 Lines of Sight Over Seated Spectators. Where spectators are expected to remain seated during events, spectators in *wheelchair spaces* shall be afforded lines of sight complying with 802.2.1.

802.2.1.1 Lines of Sight Over Heads. Where spectators are provided lines of sight over the heads of spectators seated in the first row in front of their seats, spectators seated in *wheelchair spaces* shall be afforded lines of sight over the heads of seated spectators in the first row in front of *wheelchair spaces*.

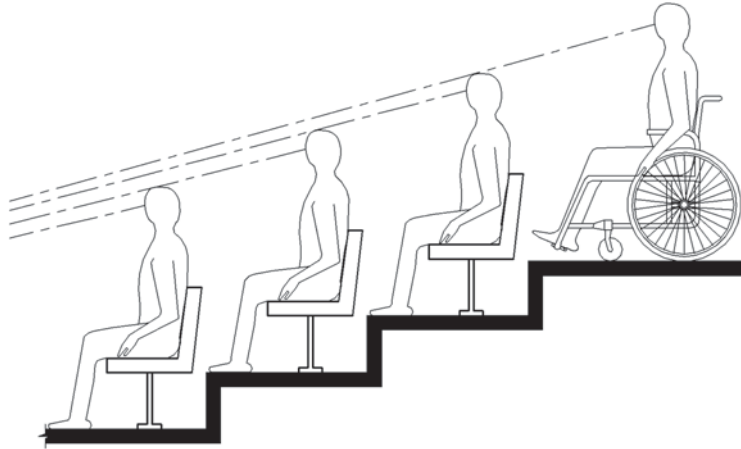


Figure 802.2.1.1
Lines of Sight Over the Heads of Seated Spectators

802.2.1.2 Lines of Sight Between Heads. Where spectators are provided lines of sight over the shoulders and between the heads of spectators seated in the first row in front of their seats, spectators seated in *wheelchair spaces* shall be afforded lines of sight over the shoulders and between the heads of seated spectators in the first row in front of *wheelchair spaces*.



Figure 802.2.1.2
Lines of Sight Between the Heads of Seated Spectators

802.2.2 Lines of Sight Over Standing Spectators. Where spectators are expected to stand during events, spectators in *wheelchair spaces* shall be afforded lines of sight complying with 802.2.2.

802.2.2.1 Lines of Sight Over Heads. Where standing spectators are provided lines of sight over the heads of spectators standing in the first row in front of their seats, spectators seated in

wheelchair spaces shall be afforded lines of sight over the heads of standing spectators in the first row in front of *wheelchair spaces*.

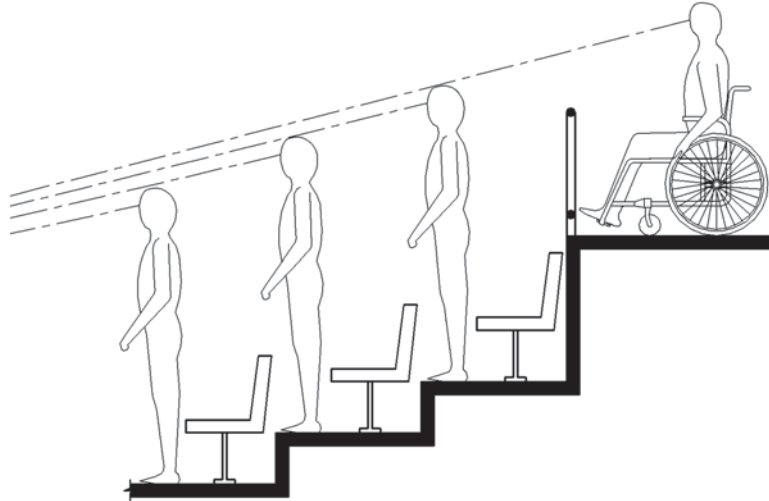


Figure 802.2.2.1
Lines of Sight Over the Heads of Standing Spectators

802.2.2.2 Lines of Sight Between Heads. Where standing spectators are provided lines of sight over the shoulders and between the heads of spectators standing in the first row in front of their seats, spectators seated in *wheelchair spaces* shall be afforded lines of sight over the shoulders and between the heads of standing spectators in the first row in front of *wheelchair spaces*.

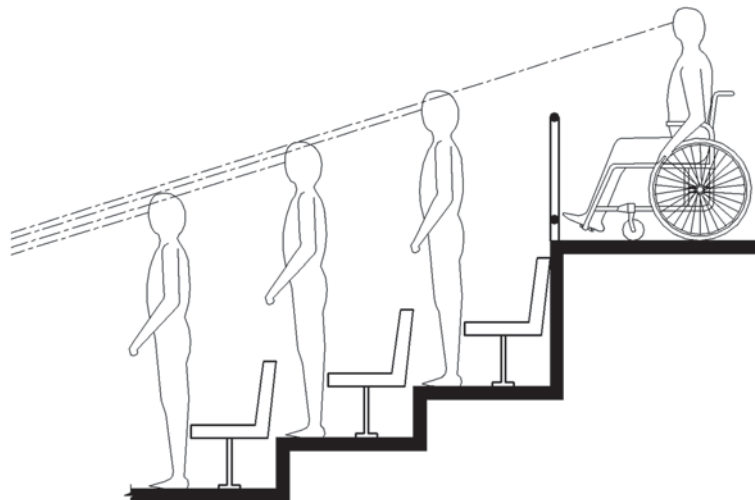


Figure 802.2.2.2
Lines of Sight Between the Heads of Standing Spectators

802.3 Companion Seats. Companion seats shall comply with 802.3.

802.3.1 Alignment. In row seating, companion seats shall be located to provide shoulder alignment with adjacent *wheelchair spaces*. The shoulder alignment point of the *wheelchair space* shall be measured 36 inches (915 mm) from the front of the *wheelchair space*. The floor surface of the companion seat shall be at the same elevation as the floor surface of the *wheelchair space*.

802.3.2 Type. Companion seats shall be equivalent in size, quality, comfort, and amenities to the seating in the immediate area. Companion seats shall be permitted to be movable.

802.4 Designated Aisle Seats. Designated aisle seats shall comply with 802.4.

802.4.1 Armrests. Where armrests are provided on the seating in the immediate area, folding or retractable armrests shall be provided on the aisle side of the seat.

802.4.2 Identification. Each designated aisle seat shall be identified by a sign or marker.

Advisory 802.4.2 Identification. Seats with folding or retractable armrests are intended for use by individuals who have difficulty walking. Consider identifying such seats with signs that contrast (light-on-dark or dark-on-light) and that are also photo luminescent.

803 Dressing, Fitting, and Locker Rooms

803.1 General. Dressing, fitting, and locker rooms shall comply with 803.

Advisory 803.1 General. Partitions and doors should be designed to ensure people using accessible dressing and fitting rooms privacy equivalent to that afforded other users of the facility. Section 903.5 requires dressing room bench seats to be installed so that they are at the same height as a typical wheelchair seat, 17 inches (430 mm) to 19 inches (485 mm). However, wheelchair seats can be lower than dressing room benches for people of short stature or children using wheelchairs.

803.2 Turning Space. Turning *space* complying with 304 shall be provided within the room.

803.3 Door Swing. Doors shall not swing into the room unless a clear floor or ground *space* complying with 305.3 is provided beyond the arc of the door swing.

803.4 Benches. A bench complying with 903 shall be provided within the room.

803.5 Coat Hooks and Shelves. Coat hooks provided within the room shall be located within one of the reach ranges specified in 308. Shelves shall be 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the finish floor or ground.

804 Kitchens and Kitchenettes

804.1 General. Kitchens and kitchenettes shall comply with 804.

804.2 Clearance. Where a pass through kitchen is provided, clearances shall comply with 804.2.1. Where a U-shaped kitchen is provided, clearances shall comply with 804.2.2.

EXCEPTION: Spaces that do not provide a cooktop or conventional range shall not be required to comply with 804.2.

Advisory 804.2 Clearance. Clearances are measured from the furthest projecting face of all opposing base cabinets, counter tops, appliances, or walls, excluding hardware.

804.2.1 Pass Through Kitchen. In pass through kitchens where counters, appliances or cabinets are on two opposing sides, or where counters, appliances or cabinets are opposite a parallel wall, clearance between all opposing base cabinets, counter tops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum. Pass through kitchens shall have two entries.

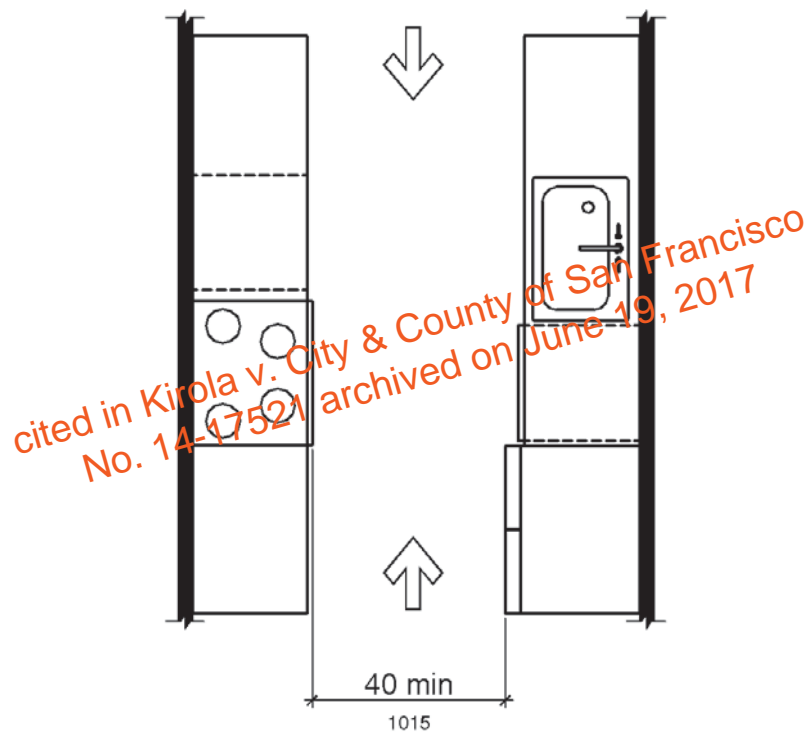


Figure 804.2.1
Pass Through Kitchens

804.2.2 U-Shaped. In U-shaped kitchens enclosed on three contiguous sides, clearance between all opposing base cabinets, counter tops, appliances, or walls within kitchen work areas shall be 60 inches (1525 mm) minimum.

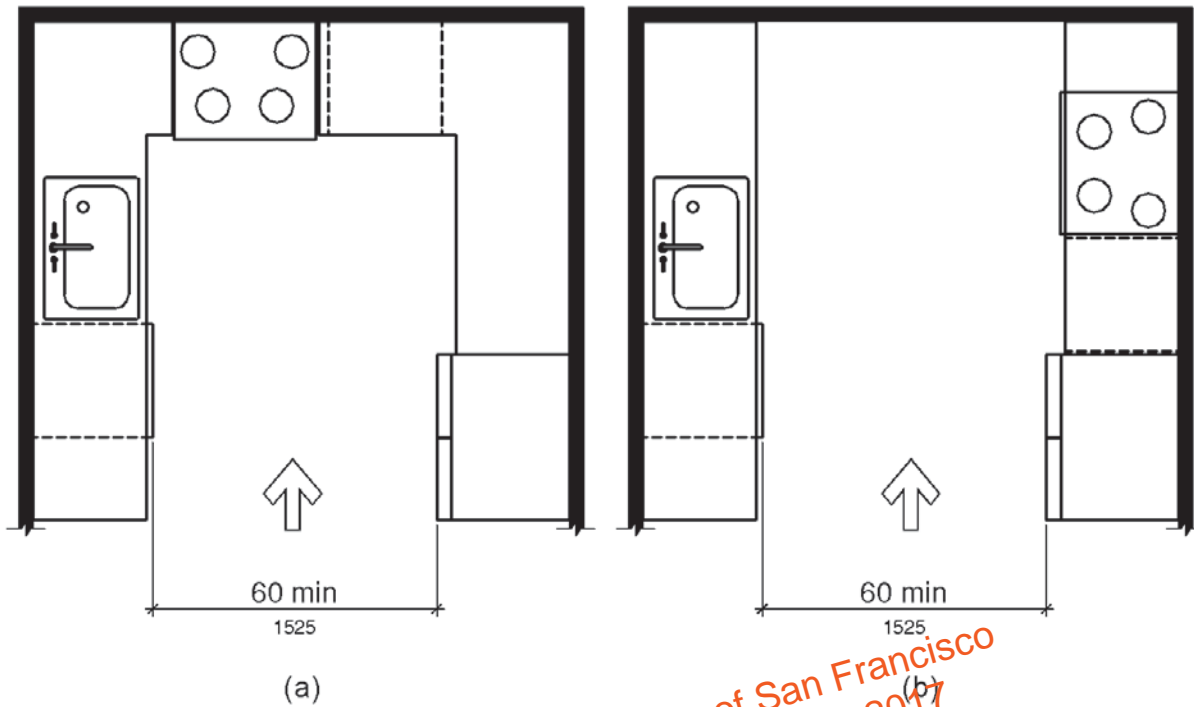


Figure 804.2.2
U-Shaped Kitchens

804.3 Kitchen Work Surface. In residential dwelling units required to comply with 809, at least one 30 inches (760 mm) wide minimum section of counter shall provide a kitchen work surface that complies with 804.3.

804.3.1 Clear Floor or Ground Space. A clear floor space complying with 305 positioned for a forward approach shall be provided. The clear floor or ground space shall be centered on the kitchen work surface and shall provide knee and toe clearance complying with 306.

EXCEPTION: Cabinetry shall be permitted under the kitchen work surface provided that all of the following conditions are met:

- (a) the cabinetry can be removed without removal or replacement of the kitchen work surface;
- (b) the finish floor extends under the cabinetry; and
- (c) the walls behind and surrounding the cabinetry are finished.

804.3.2 Height. The kitchen work surface shall be 34 inches (865 mm) maximum above the finish floor or ground.

EXCEPTION: A counter that is adjustable to provide a kitchen work surface at variable heights, 29 inches (735 mm) minimum and 36 inches (915 mm) maximum, shall be permitted.

804.3.3 Exposed Surfaces. There shall be no sharp or abrasive surfaces under the work surface counters.

804.4 Sinks. Sinks shall comply with 606.

804.5 Storage. At least 50 percent of shelf *space* in storage *facilities* shall comply with 811.

804.6 Appliances. Where provided, kitchen appliances shall comply with 804.6.

804.6.1 Clear Floor or Ground Space. A clear floor or ground *space* complying with 305 shall be provided at each kitchen appliance. Clear floor or ground *spaces* shall be permitted to overlap.

804.6.2 Operable Parts. All appliance controls shall comply with 309.

- EXCEPTIONS:**
1. Appliance doors and door latching devices shall not be required to comply with 309.4.
 2. Bottom-hinged appliance doors, when in the open position, shall not be required to comply with 309.3.

804.6.3 Dishwasher. Clear floor or ground *space* shall be positioned adjacent to the dishwasher door. The dishwasher door, in the open position, shall not obstruct the clear floor or ground *space* for the dishwasher or the sink.

804.6.4 Range or Cooktop. Where a forward approach is provided, the clear floor or ground *space* shall provide knee and toe clearance complying with 306. Where knee and toe *space* is provided, the underside of the range or cooktop shall be insulated or otherwise configured to prevent burns, abrasions, or electrical shock. The location of controls shall not require reaching across burners.

804.6.5 Oven. Ovens shall comply with 804.6.5.

804.6.5.1 Side-Hinged Door Ovens. Side-hinged door ovens shall have the work surface required by 804.3 positioned adjacent to the latch side of the oven door.

804.6.5.2 Bottom-Hinged Door Ovens. Bottom-hinged door ovens shall have the work surface required by 804.3 positioned adjacent to one side of the door.

804.6.5.3 Controls. Ovens shall have controls on front panels.

804.6.6 Refrigerator/Freezer. Combination refrigerators and freezers shall have at least 50 percent of the freezer *space* 54 inches (1370 mm) maximum above the finish floor or ground. The clear floor or ground *space* shall be positioned for a parallel approach to the *space* dedicated to a refrigerator/freezer with the centerline of the clear floor or ground *space* offset 24 inches (610 mm) maximum from the centerline of the dedicated *space*.

805 Medical Care and Long-Term Care Facilities

805.1 General. Medical care *facility* and long-term care *facility* patient or resident sleeping rooms required to provide mobility features shall comply with 805.

805.2 Turning Space. Turning *space* complying with 304 shall be provided within the room.

805.3 Clear Floor or Ground Space. A clear floor *space* complying with 305 shall be provided on each side of the bed. The clear floor *space* shall be positioned for parallel approach to the side of the bed.

805.4 Toilet and Bathing Rooms. Toilet and bathing rooms that are provided as part of a patient or resident sleeping room shall comply with 603. Where provided, no fewer than one water closet, one lavatory, and one bathtub or shower shall comply with the applicable requirements of 603 through 610.

806 Transient Lodging Guest Rooms

806.1 General. *Transient lodging* guest rooms shall comply with 806. Guest rooms required to provide mobility features shall comply with 806.2. Guest rooms required to provide communication features shall comply with 806.3.

806.2 Guest Rooms with Mobility Features. Guest rooms required to provide mobility features shall comply with 806.2.

Advisory 806.2 Guest Rooms. The requirements in Section 806.2 do not include requirements that are common to all accessible spaces. For example, closets in guest rooms must comply with the applicable provisions for storage specified in scoping.

806.2.1 Living and Dining Areas. Living and dining areas shall be *accessible*.

806.2.2 Exterior Spaces. Exterior *spaces*, including patios, terraces and balconies, that serve the guest room shall be *accessible*.

806.2.3 Sleeping Areas. At least one sleeping area shall provide a clear floor *space* complying with 305 on both sides of a bed. The clear floor *space* shall be positioned for parallel approach to the side of the bed.

EXCEPTION: Where a single clear floor *space* complying with 305 positioned for parallel approach is provided between two beds, a clear floor or ground *space* shall not be required on both sides of a bed.

806.2.4 Toilet and Bathing Facilities. At least one bathroom that is provided as part of a guest room shall comply with 603. No fewer than one water closet, one lavatory, and one bathtub or shower shall comply with applicable requirements of 603 through 610. In addition, required roll-in shower compartments shall comply with 608.2.2 or 608.2.3. Toilet and bathing fixtures required to comply with 603 through 610 shall be permitted to be located in more than one toilet or bathing area, provided that travel between fixtures does not require travel between other parts of the guest room.

806.2.4.1 Vanity Counter Top Space. If vanity counter top *space* is provided in non-accessible guest toilet or bathing rooms, comparable vanity counter top *space*, in terms of size and proximity to the lavatory, shall also be provided in *accessible* guest toilet or bathing rooms.

Advisory 806.2.4.1 Vanity Counter Top Space. This provision is intended to ensure that accessible guest rooms are provided with comparable vanity counter top space.

806.2.5 Kitchens and Kitchenettes. Kitchens and kitchenettes shall comply with 804.

806.2.6 Turning Space. Turning *space* complying with 304 shall be provided within the guest room.

806.3 Guest Rooms with Communication Features. Guest rooms required to provide communication features shall comply with 806.3.

Advisory 806.3 Guest Rooms with Communication Features. In guest rooms required to have accessible communication features, consider ensuring compatibility with adaptive equipment used by people with hearing impairments. To ensure communication within the facility, as well as on commercial lines, provide telephone interface jacks that are compatible with both digital and analog signal use. If an audio headphone jack is provided on a speaker phone, a cutoff switch can be included in the jack so that insertion of the jack cuts off the speaker. If a telephone-like handset is used, the external speakers can be turned off when the handset is removed from the cradle. For headset or external amplification system compatibility, a standard subminiature jack installed in the telephone will provide the most flexibility.

806.3.1 Alarms. Where emergency warning systems are provided, alarms complying with 702 shall be provided.

806.3.2 Notification Devices. Visible notification devices shall be provided to alert room occupants of incoming telephone calls and a door knock or bell. Notification devices shall not be connected to visible alarm signal appliances. Telephones shall have volume controls compatible with the telephone system and shall comply with 704.3. Telephones shall be served by an electrical outlet complying with 309 located within 48 inches (1220 mm) of the telephone to facilitate the use of a TTY.

807 Holding Cells and Housing Cells

807.1 General. Holding cells and housing cells shall comply with 807.

807.2 Cells with Mobility Features. Cells required to provide mobility features shall comply with 807.2.

807.2.1 Turning Space. Turning *space* complying with 304 shall be provided within the cell.

807.2.2 Benches. Where benches are provided, at least one bench shall comply with 903.

807.2.3 Beds. Where beds are provided, clear floor *space* complying with 305 shall be provided on at least one side of the bed. The clear floor *space* shall be positioned for parallel approach to the side of the bed.

807.2.4 Toilet and Bathing Facilities. Toilet *facilities* or bathing *facilities* that are provided as part of a cell shall comply with 603. Where provided, no fewer than one water closet, one lavatory, and one bathtub or shower shall comply with the applicable requirements of 603 through 610.

Advisory 807.2.4 Toilet and Bathing Facilities. In holding cells, housing cells, or rooms required to be accessible, these requirements do not require a separate toilet room.

807.3 Cells with Communication Features. Cells required to provide communication features shall comply with 807.3.

807.3.1 Alarms. Where audible emergency alarm systems are provided to serve the occupants of cells, visible alarms complying with 702 shall be provided.

EXCEPTION: Visible alarms shall not be required where inmates or detainees are not allowed independent means of egress.

807.3.2 Telephones. Telephones, where provided within cells, shall have volume controls complying with 704.3.

808 Courtrooms

808.1 General. Courtrooms shall comply with 808.

808.2 Turning Space. Where provided, areas that are raised or depressed and accessed by *ramps* or platform lifts with entry *ramps* shall provide unobstructed turning *space* complying with 304.

808.3 Clear Floor Space. Each jury box and witness stand shall have, within its defined area, clear floor *space* complying with 305.

EXCEPTION: In *alterations*, *wheelchair spaces* are not required to be located within the defined area of raised jury boxes or witness stands and shall be permitted to be located outside these *spaces* where *ramp* or platform lift access poses a hazard by restricting or projecting into a means of egress required by the appropriate *administrative authority*.

808.4 Judges' Benches and Courtroom Stations. Judges' benches, clerks' stations, bailiffs' stations, deputy clerks' stations, court reporters' stations and litigants' and counsel stations shall comply with 902.

809 Residential Dwelling Units

809.1 General. *Residential dwelling units* shall comply with 809. *Residential dwelling units* required to provide mobility features shall comply with 809.2 through 809.4. *Residential dwelling units* required to provide communication features shall comply with 809.5.

809.2 Accessible Routes. *Accessible* routes complying with Chapter 4 shall be provided within *residential dwelling units* in accordance with 809.2.

EXCEPTION: *Accessible* routes shall not be required to or within unfinished attics or unfinished basements.

809.2.1 Location. At least one *accessible* route shall connect all *spaces* and *elements* which are a part of the *residential dwelling unit*. Where only one *accessible* route is provided, it shall not pass through bathrooms, closets, or similar *spaces*.

809.2.2 Turning Space. All rooms served by an *accessible* route shall provide a turning *space* complying with 304.

EXCEPTION: Turning *space* shall not be required in exterior *spaces* 30 inches (760 mm) maximum in depth or width.

Advisory 809.2.2 Turning Space. It is generally acceptable to use required clearances to provide wheelchair turning space. For example, in kitchens, 804.3.1 requires at least one work surface with clear floor space complying with 306 to be centered beneath. If designers elect to provide clear floor space that is at least 36 inches (915 mm) wide, as opposed to the required 30 inches (760 mm) wide, that clearance can be part of a T-turn, thereby maximizing efficient use of the kitchen area. However, the overlap of turning space must be limited to one segment of the T-turn so that back-up maneuvering is not restricted. It would, therefore, be unacceptable to use both the clearances under the work surface and the sink as part of a T-turn. See Section 304.3.2 regarding T-turns.

809.3 Kitchen. Where a kitchen is provided, it shall comply with 804.

809.4 Toilet Facilities and Bathing Facilities. At least one bathroom shall comply with 603. No fewer than one of each type of fixture provided shall comply with applicable requirements of 603 through 610. Toilet and bathing fixtures required to comply with 603 through 610 shall be located in the same toilet and bathing area, such that travel between fixtures does not require travel between other parts of the *residential dwelling unit*.

Advisory 809.4 Toilet Facilities and Bathing Facilities. In an effort to promote space efficiency, vanity counter top space in accessible residential dwelling units is often omitted. This omission does not promote equal access or equal enjoyment of the unit. Where comparable units have vanity counter tops, accessible units should also have vanity counter tops located as close as possible to the lavatory for convenient access to toiletries.

809.5 Residential Dwelling Units with Communication Features. *Residential dwelling units* required to provide communication features shall comply with 809.5.

809.5.1 Building Fire Alarm System. Where a *building* fire alarm system is provided, the system wiring shall be extended to a point within the *residential dwelling unit* in the vicinity of the *residential dwelling unit* smoke detection system.

809.5.1.1 Alarm Appliances. Where alarm appliances are provided within a *residential dwelling unit* as part of the *building* fire alarm system, they shall comply with 702.

809.5.1.2 Activation. All visible alarm appliances provided within the *residential dwelling unit* for *building* fire alarm notification shall be activated upon activation of the *building* fire alarm in the portion of the *building* containing the *residential dwelling unit*.

809.5.2 Residential Dwelling Unit Smoke Detection System. *Residential dwelling unit* smoke detection systems shall comply with NFPA 72 (1999 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1).

809.5.2.1 Activation. All visible alarm appliances provided within the *residential dwelling unit* for smoke detection notification shall be activated upon smoke detection.

809.5.3 Interconnection. The same visible alarm appliances shall be permitted to provide notification of *residential dwelling unit* smoke detection and *building* fire alarm activation.

809.5.4 Prohibited Use. Visible alarm appliances used to indicate *residential dwelling unit* smoke detection or *building* fire alarm activation shall not be used for any other purpose within the *residential dwelling unit*.

809.5.5 Residential Dwelling Unit Primary Entrance. Communication features shall be provided at the *residential dwelling unit* primary entrance complying with 809.5.5.

809.5.5.1 Notification. A hard-wired electric doorbell shall be provided. A button or switch shall be provided outside the *residential dwelling unit* primary entrance. Activation of the button or switch shall initiate an audible tone and visible signal within the *residential dwelling unit*. Where visible doorbell signals are located in sleeping areas, they shall have controls to deactivate the signal.

809.5.5.2 Identification. A means for visually identifying a visitor without opening the *residential dwelling unit* entry door shall be provided and shall allow for a minimum 180 degree range of view.

Advisory 809.5.5.2 Identification. In doors, peepholes that include prisms clarify the image and should offer a wide-angle view of the hallway or exterior for both standing persons and wheelchair users. Such peepholes can be placed at a standard height and permit a view from several feet from the door.

809.5.6 Site, Building, or Floor Entrance. Where a system, including a closed-circuit system, permitting voice communication between a visitor and the occupant of the *residential dwelling unit* is provided, the system shall comply with 708.4.

810 Transportation Facilities

810.1 General. Transportation facilities shall comply with 810.

810.2 Bus Boarding and Alighting Areas. Bus boarding and alighting areas shall comply with 810.2.

Advisory 810.2 Bus Boarding and Alighting Areas. At bus stops where a shelter is provided, the bus stop pad can be located either within or outside of the shelter.

810.2.1 Surface. Bus stop boarding and alighting areas shall have a firm, stable surface.

810.2.2 Dimensions. Bus stop boarding and alighting areas shall provide a clear length of 96 inches (2440 mm) minimum, measured perpendicular to the curb or vehicle roadway edge, and a clear width of 60 inches (1525 mm) minimum, measured parallel to the vehicle roadway.

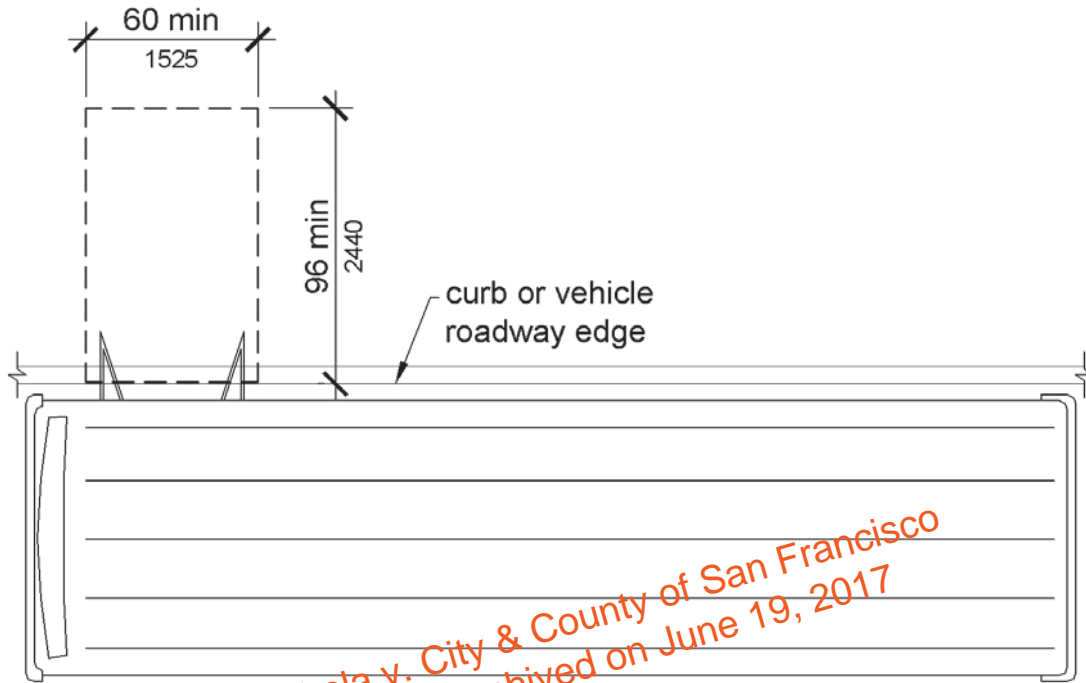


Figure 810.2.2
Dimensions of Bus Boarding and Alighting Areas

810.2.3 Connection. Bus stop boarding and alighting areas shall be connected to streets, sidewalks, or pedestrian paths by an *accessible* route complying with 402.

810.2.4 Slope. Parallel to the roadway, the slope of the bus stop boarding and alighting area shall be the same as the roadway, to the maximum extent practicable. Perpendicular to the roadway, the slope of the bus stop boarding and alighting area shall not be steeper than 1:48.

810.3 Bus Shelters. Bus shelters shall provide a minimum clear floor or ground *space* complying with 305 entirely within the shelter. Bus shelters shall be connected by an *accessible* route complying with 402 to a boarding and alighting area complying with 810.2.

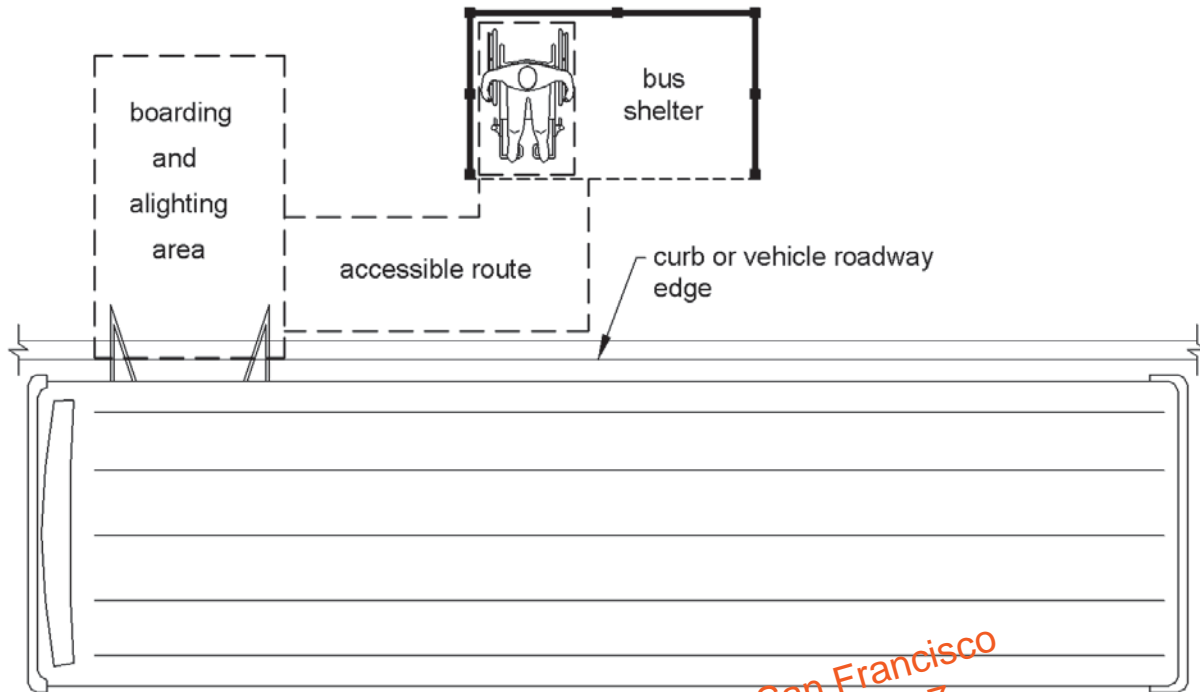


Figure 810.3
Bus Shelters

810.4 Bus Signs. Bus route identification signs shall comply with 703.5.1 through 703.5.4, and 703.5.7 and 703.5.8. In addition, to the maximum extent practicable, bus route identification signs shall comply with 703.5.5.

EXCEPTION: Bus schedules, timetables and maps that are posted at the bus stop or bus bay shall not be required to comply.

810.5 Rail Platforms. Rail platforms shall comply with 810.5.

810.5.1 Slope. Rail platforms shall not exceed a slope of 1:48 in all directions.

EXCEPTION: Where platforms serve vehicles operating on existing track or track laid in existing roadway, the slope of the platform parallel to the track shall be permitted to be equal to the slope (grade) of the roadway or existing track.

810.5.2 Detectable Warnings. Platform boarding edges not protected by platform screens or guards shall have *detectable warnings* complying with 705 along the full length of the *public use* area of the platform.

810.5.3 Platform and Vehicle Floor Coordination. Station platforms shall be positioned to coordinate with vehicles in accordance with the applicable requirements of 36 CFR Part 1192. Low-level platforms shall be 8 inches (205 mm) minimum above top of rail.

EXCEPTION: Where vehicles are boarded from sidewalks or street-level, low-level platforms shall be permitted to be less than 8 inches (205 mm).

Advisory 810.5.3 Platform and Vehicle Floor Coordination. The height and position of a platform must be coordinated with the floor of the vehicles it serves to minimize the vertical and horizontal gaps, in accordance with the ADA Accessibility Guidelines for Transportation Vehicles (36 CFR Part 1192). The vehicle guidelines, divided by bus, van, light rail, rapid rail, commuter rail, intercity rail, are available at www.access-board.gov. The preferred alignment is a high platform, level with the vehicle floor. In some cases, the vehicle guidelines permit use of a low platform in conjunction with a lift or ramp. Most such low platforms must have a minimum height of eight inches above the top of the rail. Some vehicles are designed to be boarded from a street or the sidewalk along the street and the exception permits such boarding areas to be less than eight inches high.

810.6 Rail Station Signs. Rail station signs shall comply with 810.6.

EXCEPTION. Signs shall not be required to comply with 810.6.1 and 810.6.2 where audible signs are remotely transmitted to hand-held receivers, or are user- or proximity-actuated.

Advisory 810.6 Rail Station Signs Exception. Emerging technologies such as an audible sign systems using infrared transmitters and receivers may provide greater accessibility in the transit environment than traditional Braille and raised letter signs. The transmitters are placed on or next to print signs and transmit their information to an infrared receiver that is held by a person. By scanning an area, the person will hear the sign. This means that signs can be placed well out of reach of Braille readers, even on parapet walls and on walls beyond barriers. Additionally, such signs can be used to provide wayfinding information that cannot be efficiently conveyed on Braille signs.

810.6.1 Entrances. Where signs identify a station or its *entrance*, at least one sign at each *entrance* shall comply with 703.2 and shall be placed in uniform locations to the maximum extent practicable. Where signs identify a station that has no defined *entrance*, at least one sign shall comply with 703.2 and shall be placed in a central location.

810.6.2 Routes and Destinations. Lists of stations, routes and destinations served by the station which are located on boarding areas, platforms, or *mezzanines* shall comply with 703.5. At least one *tactile* sign identifying the specific station and complying with 703.2 shall be provided on each platform or boarding area. Signs covered by this requirement shall, to the maximum extent practicable, be placed in uniform locations within the system.

EXCEPTION: Where sign *space* is limited, *characters* shall not be required to exceed 3 inches (75 mm).

Advisory 810.6.2 Routes and Destinations. Route maps are not required to comply with the informational sign requirements in this document.

810.6.3 Station Names. Stations covered by this section shall have identification signs complying with 703.5. Signs shall be clearly visible and within the sight lines of standing and sitting passengers from within the vehicle on both sides when not obstructed by another vehicle.

Advisory 810.6.3 Station Names. It is also important to place signs at intervals in the station where passengers in the vehicle will be able to see a sign when the vehicle is either stopped at the station or about to come to a stop in the station. The number of signs necessary may be directly related to the size of the lettering displayed on the sign.

810.7 Public Address Systems. Where public address systems convey audible information to the public, the same or equivalent information shall be provided in a visual format.

810.8 Clocks. Where clocks are provided for use by the public, the clock face shall be uncluttered so that its *elements* are clearly visible. Hands, numerals and digits shall contrast with the background either light-on-dark or dark-on-light. Where clocks are installed overhead, numerals and digits shall comply with 703.5.

810.9 Escalators. Where provided, escalators shall comply with the sections 6.1.3.5.6 and 6.1.3.6.5 of ASME A17.1 (incorporated by reference, see "Referenced Standards" in Chapter 1) and shall have a clear width of 32 inches (815 mm) minimum.

EXCEPTION: Existing escalators in *key stations* shall not be required to comply with 810.9.

810.10 Track Crossings. Where a *circulation path* serving boarding platforms crosses tracks, it shall comply with 402.

EXCEPTION: Openings for wheel flanges shall be permitted to be 2½ inches (64 mm) maximum.



Figure 810.10 (Exception)
Track Crossings

811 Storage

811.1 General. Storage shall comply with 811.

811.2 Clear Floor or Ground Space. A clear floor or ground *space* complying with 305 shall be provided.

811.3 Height. Storage *elements* shall comply with at least one of the reach ranges specified in 308.

811.4 Operable Parts. *Operable parts* shall comply with 309.

CHAPTER 9: BUILT-IN ELEMENTS

901 General

901.1 Scope. The provisions of Chapter 9 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

902 Dining Surfaces and Work Surfaces

902.1 General. Dining surfaces and work surfaces shall comply with 902.2 and 902.3.

EXCEPTION: Dining surfaces and work surfaces for *children's use* shall be permitted to comply with 902.4.

Advisory 902.1 General. Dining surfaces include, but are not limited to, bars, tables, lunch counters, and booths. Examples of work surfaces include writing surfaces, study carrels, student laboratory stations, baby changing and other tables or fixtures for personal grooming, coupon counters, and where covered by the ABA scoping provisions, employee work stations.

902.2 Clear Floor or Ground Space. A clear floor *space* complying with 305 positioned for a forward approach shall be provided. Knee and toe clearance complying with 306 shall be provided.

902.3 Height. The tops of dining surfaces and work surfaces shall be 28 inches (710 mm) minimum and 34 inches (865 mm) maximum above the finish floor or ground.

902.4 Dining Surfaces and Work Surfaces for Children's Use. *Accessible* dining surfaces and work surfaces for *children's use* shall comply with 902.4.

EXCEPTION: Dining surfaces and work surfaces that are used primarily by children 5 years and younger shall not be required to comply with 902.4 where a clear floor or ground *space* complying with 305 positioned for a parallel approach is provided.

902.4.1 Clear Floor or Ground Space. A clear floor *space* complying with 305 positioned for forward approach shall be provided. Knee and toe clearance complying with 306 shall be provided, except that knee clearance 24 inches (610 mm) minimum above the finish floor or ground shall be permitted.

902.4.2 Height. The tops of tables and counters shall be 26 inches (660 mm) minimum and 30 inches (760 mm) maximum above the finish floor or ground.

903 Benches

903.1 General. Benches shall comply with 903.

903.2 Clear Floor or Ground Space. Clear floor or ground *space* complying with 305 shall be provided and shall be positioned at the end of the bench seat and parallel to the short axis of the bench.

903.3 Size. Benches shall have seats that are 42 inches (1065 mm) long minimum and 20 inches (510 mm) deep minimum and 24 inches (610 mm) deep maximum.

903.4 Back Support. The bench shall provide for back support or shall be affixed to a wall. Back support shall be 42 inches (1065 mm) long minimum and shall extend from a point 2 inches (51 mm) maximum above the seat surface to a point 18 inches (455 mm) minimum above the seat surface. Back support shall be 2½ inches (64 mm) maximum from the rear edge of the seat measured horizontally.

Advisory 903.4 Back Support. To assist in transferring to the bench, consider providing grab bars on a wall adjacent to the bench, but not on the seat back. If provided, grab bars cannot obstruct transfer to the bench.

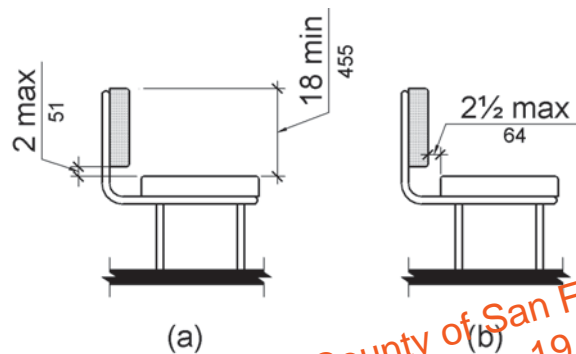


Figure 903.4
Bench Back Support

903.5 Height. The top of the bench seat surface shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the finish floor or ground.

903.6 Structural Strength. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds (1112 N) is applied at any point on the seat, fastener, mounting device, or supporting structure.

903.7 Wet Locations. Where installed in wet locations, the surface of the seat shall be slip resistant and shall not accumulate water.

904 Check-Out Aisles and Sales and Service Counters

904.1 General. Check-out aisles and sales and service counters shall comply with the applicable requirements of 904.

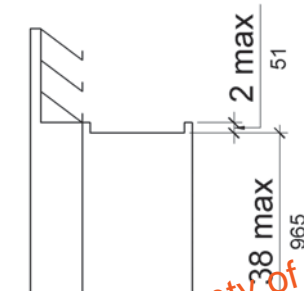
904.2 Approach. All portions of counters required to comply with 904 shall be located adjacent to a walking surface complying with 403.

Advisory 904.2 Approach. If a cash register is provided at the sales or service counter, locate the accessible counter close to the cash register so that a person using a wheelchair is visible to sales or service personnel and to minimize the reach for a person with a disability.

904.3 Check-Out Aisles. Check-out aisles shall comply with 904.3.

904.3.1 Aisle. Aisles shall comply with 403.

904.3.2 Counter. The counter surface height shall be 38 inches (965 mm) maximum above the finish floor or ground. The top of the counter edge protection shall be 2 inches (51 mm) maximum above the top of the counter surface on the aisle side of the check-out counter.



cited in *Kirola v. City & County of San Francisco*
No. 14-17521 archived on June 19, 2017
Figure 904.3.2
Check-Out Aisle Counters

904.3.3 Check Writing Surfaces. Where provided, check writing surfaces shall comply with 902.3.

904.4 Sales and Service Counters. Sales counters and service counters shall comply with 904.4.1 or 904.4.2. The *accessible* portion of the counter top shall extend the same depth as the sales or service counter top.

EXCEPTION: In *alterations*, when the provision of a counter complying with 904.4 would result in a reduction of the number of existing counters at work stations or a reduction of the number of existing *mail boxes*, the counter shall be permitted to have a portion which is 24 inches (610 mm) long minimum complying with 904.4.1 provided that the required clear floor or ground *space* is centered on the *accessible* length of the counter.

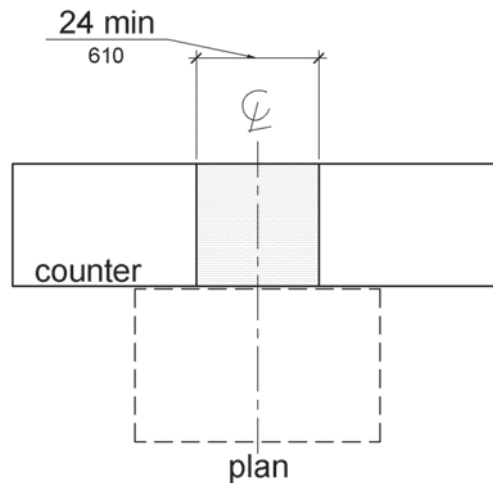


Figure 904.4 (Exception)
Alteration of Sales and Service Counters

904.4.1 Parallel Approach. A portion of the counter surface that is 36 inches (915 mm) long minimum and 36 inches (915 mm) high maximum above the finish floor shall be provided. A clear floor or ground *space* complying with 305 shall be positioned for a parallel approach adjacent to the 36 inch (915 mm) minimum length of counter.

EXCEPTION: Where the provided counter surface is less than 36 inches (915 mm) long, the entire counter surface shall be 36 inches (915 mm) high maximum above the finish floor.

904.4.2 Forward Approach. A portion of the counter surface that is 30 inches (760 mm) long minimum and 36 inches (915 mm) high maximum shall be provided. Knee and toe *space* complying with 306 shall be provided under the counter. A clear floor or ground *space* complying with 305 shall be positioned for a forward approach to the counter.

904.5 Food Service Lines. Counters in food service lines shall comply with 904.5.

904.5.1 Self-Service Shelves and Dispensing Devices. Self-service shelves and dispensing devices for tableware, dishware, condiments, food and beverages shall comply with 308.

904.5.2 Tray Slides. The tops of tray slides shall be 28 inches (710 mm) minimum and 34 inches (865 mm) maximum above the finish floor or ground.

904.6 Security Glazing. Where counters or teller windows have security glazing to separate personnel from the public, a method to facilitate voice communication shall be provided. Telephone handset devices, if provided, shall comply with 704.3.

Advisory 904.6 Security Glazing. Assistive listening devices complying with 706 can facilitate voice communication at counters or teller windows where there is security glazing which promotes distortion in audible information. Where assistive listening devices are installed, place signs complying with 703.7.2.4 to identify those facilities which are so equipped. Other voice communication methods include, but are not limited to, grilles, slats, talk-through baffles, intercoms, or telephone handset devices.

*cited in Kirola v. City & County of San Francisco
No. 14-17521 archived on June 19, 2017*

CHAPTER 10: RECREATION FACILITIES

1001 General

1001.1 Scope. The provisions of Chapter 10 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

Advisory 1001.1 Scope. Unless otherwise modified or specifically addressed in Chapter 10, all other ADAAG provisions apply to the design and construction of recreation facilities and elements. The provisions in Section 1001.1 apply wherever these elements are provided. For example, office buildings may contain a room with exercise equipment to which these sections would apply.

1002 Amusement Rides

1002.1 General. *Amusement rides* shall comply with 1002.

1002.2 Accessible Routes. *Accessible* routes serving *amusement rides* shall comply with Chapter 4.

EXCEPTIONS: 1. In load or unload areas and on *amusement rides*, where compliance with 405.2 is not structurally or operationally feasible, *ramp* slope shall be permitted to be 1:8 maximum.

2. In load or unload areas and on *amusement rides*, handrails provided along walking surfaces complying with 403 and required on *ramps* complying with 405 shall not be required to comply with 505 where compliance is not structurally or operationally feasible.

Advisory 1002.2 Accessible Routes Exception 1. Steeper slopes are permitted on accessible routes connecting the amusement ride in the load and unload position where it is "structurally or operationally infeasible." In most cases, this will be limited to areas where the accessible route leads directly to the amusement ride and where there are space limitations on the ride, not the queue line. Where possible, the least possible slope should be used on the accessible route that serves the amusement ride.

1002.3 Load and Unload Areas. A turning *space* complying with 304.2 and 304.3 shall be provided in load and unload areas.

1002.4 Wheelchair Spaces in Amusement Rides. *Wheelchair spaces* in *amusement rides* shall comply with 1002.4.

1002.4.1 Floor or Ground Surface. The floor or ground surface of *wheelchair spaces* shall be stable and firm.

1002.4.2 Slope. The floor or ground surface of *wheelchair spaces* shall have a slope not steeper than 1:48 when in the load and unload position.

1002.4.3 Gaps. Floors of *amusement rides* with *wheelchair spaces* and floors of load and unload areas shall be coordinated so that, when *amusement rides* are at rest in the load and unload

position, the vertical difference between the floors shall be within plus or minus 5/8 inches (16 mm) and the horizontal gap shall be 3 inches (75 mm) maximum under normal passenger load conditions.

EXCEPTION: Where compliance is not operationally or structurally feasible, *ramps*, bridge plates, or similar devices complying with the applicable requirements of 36 CFR 1192.83(c) shall be provided.

Advisory 1002.4.3 Gaps Exception. 36 CFR 1192.83(c) ADA Accessibility Guidelines for Transportation Vehicles - Light Rail Vehicles and Systems - Mobility Aid Accessibility is available at www.access-board.gov. It includes provisions for bridge plates and ramps that can be used at gaps between wheelchair spaces and floors of load and unload areas.

1002.4.4 Clearances. Clearances for *wheelchair spaces* shall comply with 1002.4.4.

EXCEPTIONS: 1. Where provided, securement devices shall be permitted to overlap required clearances.

2. *Wheelchair spaces* shall be permitted to be mechanically or manually repositioned.
3. *Wheelchair spaces* shall not be required to comply with 307.4.

Advisory 1002.4.4 Clearances Exception 3. This exception for protruding objects applies to the ride devices, not to circulation areas or accessible routes in the queue lines or the load and unload areas.

1002.4.4.1 Width and Length. *Wheelchair spaces* shall provide a clear width of 30 inches (760 mm) minimum and a clear length of 48 inches (1220 mm) minimum measured to 9 inches (230 mm) minimum above the floor surface.

1002.4.4.2 Side Entry. Where *wheelchair spaces* are entered only from the side, *amusement rides* shall be designed to permit sufficient maneuvering clearance for individuals using a wheelchair or mobility aid to enter and exit the ride.

Advisory 1002.4.4.2 Side Entry. The amount of clear space needed within the ride, and the size and position of the opening are interrelated. A 32 inch (815 mm) clear opening will not provide sufficient width when entered through a turn into an amusement ride. Additional space for maneuvering and a wider door will be needed where a side opening is centered on the ride. For example, where a 42 inch (1065 mm) opening is provided, a minimum clear space of 60 inches (1525 mm) in length and 36 inches (915mm) in depth is needed to ensure adequate space for maneuvering.

1002.4.4.3 Permitted Protrusions in Wheelchair Spaces. Objects are permitted to protrude a distance of 6 inches (150 mm) maximum along the front of the *wheelchair space*, where located 9 inches (230 mm) minimum and 27 inches (685 mm) maximum above the floor or ground surface of the *wheelchair space*. Objects are permitted to protrude a distance of 25 inches (635 mm) maximum along the front of the *wheelchair space*, where located more than 27 inches (685 mm) above the floor or ground surface of the *wheelchair space*.

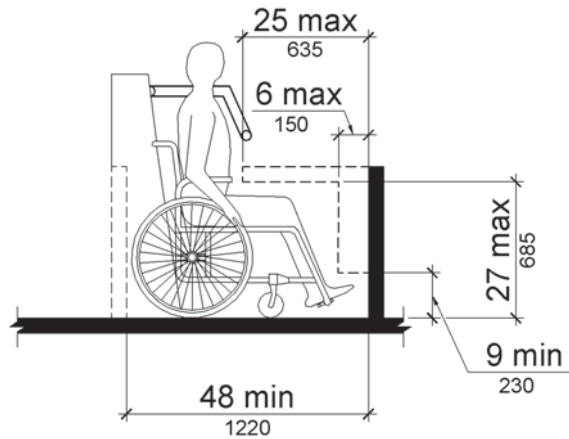


Figure 1002.4.4.3
Protrusions in Wheelchair Spaces in Amusement Rides

1002.4.5 Ride Entry. Openings providing entry to *wheelchair spaces* on *amusement rides* shall be 32 inches (815 mm) minimum clear.

1002.4.6 Approach. One side of the *wheelchair space* shall adjoin an *accessible* route when in the load and unload position.

1002.4.7 Companion Seats. Where the interior width of the *amusement ride* is greater than 53 inches (1345 mm), seating is provided for more than one rider, and the wheelchair is not required to be centered within the *amusement ride*, a companion seat shall be provided for each *wheelchair space*.

1002.4.7.1 Shoulder-to-Shoulder Seating. Where an *amusement ride* provides shoulder-to-shoulder seating, companion seats shall be shoulder-to-shoulder with the adjacent *wheelchair space*.

EXCEPTION: Where shoulder-to-shoulder companion seating is not operationally or structurally feasible, compliance with this requirement shall be required to the maximum extent practicable.

1002.5 Amusement Ride Seats Designed for Transfer. *Amusement ride seats* designed for transfer shall comply with 1002.5 when positioned for loading and unloading.

Advisory 1002.5 Amusement Ride Seats Designed for Transfer. The proximity of the clear floor or ground space next to an element and the height of the element one is transferring to are both critical for a safe and independent transfer. Providing additional clear floor or ground space both in front of and diagonal to the element will provide flexibility and will increase usability for a more diverse population of individuals with disabilities. Ride seats designed for transfer should involve only one transfer. Where possible, designers are encouraged to locate the ride seat no higher than 17 to 19 inches (430 to 485 mm) above the load and unload surface. Where greater distances are required for transfers, providing gripping surfaces, seat padding, and avoiding sharp objects in the path of transfer will facilitate the transfer.

1002.5.1 Clear Floor or Ground Space. A clear floor or ground *space* complying with 305 shall be provided in the load and unload area adjacent to the *amusement ride seats* designed for transfer.

1002.5.2 Transfer Height. The height of *amusement ride seats* designed for transfer shall be 14 inches (355 mm) minimum and 24 inches (610 mm) maximum measured from the surface of the load and unload area.

1002.5.3 Transfer Entry. Where openings are provided for transfer to *amusement ride seats*, the openings shall provide clearance for transfer from a wheelchair or mobility aid to the *amusement ride seat*.

1002.5.4 Wheelchair Storage Space. Wheelchair storage spaces complying with 305 shall be provided in or adjacent to unload areas for each required *amusement ride seat* designed for transfer and shall not overlap any required means of egress or *accessible* route.

1002.6 Transfer Devices for Use with Amusement Rides. *Transfer devices* for use with *amusement rides* shall comply with 1002.6 when positioned for loading and unloading.

Advisory 1002.6 Transfer Devices for Use with Amusement Rides. Transfer devices for use with amusement rides should permit individuals to make independent transfers to and from their wheelchairs or mobility devices. There are a variety of transfer devices available that could be adapted to provide access onto an amusement ride. Examples of devices that may provide for transfers include, but are not limited to, transfer systems, lifts, mechanized seats, and custom designed systems. Operators and designers have flexibility in developing designs that will facilitate individuals to transfer onto amusement rides. These systems or devices should be designed to be reliable and sturdy.

Designs that limit the number of transfers required from a wheelchair or mobility device to the ride seat are encouraged. When using a transfer device to access an amusement ride, the least number of transfers and the shortest distance is most usable. Where possible, designers are encouraged to locate the transfer device seat no higher than 17 to 19 inches (430 to 485 mm) above the load and unload surface. Where greater distances are required for transfers, providing gripping surfaces, seat padding, and avoiding sharp objects in the path of transfer will facilitate the transfer. Where a series of transfers are required to reach the amusement ride seat, each vertical transfer should not exceed 8 inches (205 mm).

1002.6.1 Clear Floor or Ground Space. A clear floor or ground *space* complying with 305 shall be provided in the load and unload area adjacent to the *transfer device*.

1002.6.2 Transfer Height. The height of *transfer device* seats shall be 14 inches (355 mm) minimum and 24 inches (610 mm) maximum measured from the load and unload surface.

1002.6.3 Wheelchair Storage Space. Wheelchair storage *spaces* complying with 305 shall be provided in or adjacent to unload areas for each required *transfer device* and shall not overlap any required means of egress or *accessible* route.

1003 Recreational Boating Facilities

1003.1 General. Recreational boating *facilities* shall comply with 1003.

1003.2 Accessible Routes. *Accessible* routes serving recreational boating *facilities*, including *gangways* and floating piers, shall comply with Chapter 4 except as modified by the exceptions in 1003.2.

1003.2.1 Boat Slips. *Accessible* routes serving *boat slips* shall be permitted to use the exceptions in 1003.2.1.

EXCEPTIONS: 1. Where an existing *gangway* or series of *gangways* is replaced or *altered*, an increase in the length of the *gangway* shall not be required to comply with 1003.2 unless required by 202.4.

2. *Gangways* shall not be required to comply with the maximum rise specified in 405.6.

3. Where the total length of a *gangway* or series of *gangways* serving as part of a required *accessible* route is 80 feet (24 m) minimum, *gangways* shall not be required to comply with 405.2.

4. Where *facilities* contain fewer than 25 *boat slips* and the total length of the *gangway* or series of *gangways* serving as part of a required *accessible* route is 30 feet (9145 mm) minimum, *gangways* shall not be required to comply with 405.2.

5. Where *gangways* connect to *transition plates*, landings specified by 405.7 shall not be required.

6. Where *gangways* and *transition plates* connect and are required to have handrails, handrail extensions shall not be required. Where handrail extensions are provided on *gangways* or *transition plates*, the handrail extensions shall not be required to be parallel with the ground or floor surface.

7. The *cross slope* specified in 403.3 and 405.3 for *gangways*, *transition plates*, and floating piers that are part of *accessible* routes shall be measured in the static position.

8. Changes in level complying with 303.3 and 303.4 shall be permitted on the surfaces of *gangways* and *boat launch ramps*.

Advisory 1003.2.1 Boat Slips Exception 3. The following example shows how exception 3 would be applied: A gangway is provided to a floating pier which is required to be on an accessible route. The vertical distance is 10 feet (3050 mm) between the elevation where the gangway departs the landside connection and the elevation of the pier surface at the lowest water level. Exception 3 permits the gangway to be 80 feet (24 m) long. Another design solution would be to have two 40 foot (12 m) plus continuous gangways joined together at a float, where the float (as the water level falls) will stop dropping at an elevation five feet below the landside connection. The length of transition plates would not be included in determining if the gangway(s) meet the requirements of the exception.

1003.2.2 Boarding Piers at Boat Launch Ramps. Accessible routes serving *boarding piers* at *boat launch ramps* shall be permitted to use the exceptions in 1003.2.2.

EXCEPTIONS: 1. Accessible routes serving floating *boarding piers* shall be permitted to use Exceptions 1, 2, 5, 6, 7 and 8 in 1003.2.1.

2. Where the total length of the *gangway* or series of *gangways* serving as part of a required accessible route is 30 feet (9145 mm) minimum, *gangways* shall not be required to comply with 405.2.

3. Where the accessible route serving a floating *boarding pier* or skid pier is located within a *boat launch ramp*, the portion of the accessible route located within the *boat launch ramp* shall not be required to comply with 405.

1003.3 Clearances. Clearances at *boat slips* and on *boarding piers* at *boat launch ramps* shall comply with 1003.3.

Advisory 1003.3 Clearances. Although the minimum width of the clear pier space is 60 inches (1525 mm), it is recommended that piers be wider than 60 inches (1525 mm) to improve the safety for persons with disabilities, particularly on floating piers.

1003.3.1 Boat Slip Clearance. *Boat slips* shall provide clear pier *space* 60 inches (1525 mm) wide minimum and at least as long as the *boat slips*. Each 10 feet (3050 mm) maximum of linear pier edge serving *boat slips* shall contain at least one continuous clear opening 60 inches (1525 mm) wide minimum.

EXCEPTIONS: 1. Clear pier *space* shall be permitted to be 36 inches (915 mm) wide minimum for a length of 24 inches (610 mm) maximum, provided that multiple 36 inch (915 mm) wide segments are separated by segments that are 60 inches (1525 mm) wide minimum and 60 inches (1525 mm) long minimum.

2. Edge protection shall be permitted at the continuous clear openings, provided that it is 4 inches (100 mm) high maximum and 2 inches (51 mm) wide maximum.

3. In existing piers, clear pier *space* shall be permitted to be located perpendicular to the *boat slip* and shall extend the width of the *boat slip*, where the *facility* has at least one *boat slip* complying with 1003.3, and further compliance with 1003.3 would result in a reduction in the number of *boat slips* available or result in a reduction of the widths of existing slips.

Advisory 1003.3.1 Boat Slip Clearance Exception 3. Where the conditions in exception 3 are satisfied, existing facilities are only required to have one accessible boat slip with a pier clearance which runs the length of the slip. All other accessible slips are allowed to have the required pier clearance at the head of the slip. Under this exception, at piers with perpendicular boat slips, the width of most "finger piers" will remain unchanged. However, where mooring systems for floating piers are replaced as part of pier alteration projects, an opportunity may exist for increasing accessibility. Piers may be reconfigured to allow an increase in the number of wider finger piers, and serve as accessible boat slips.

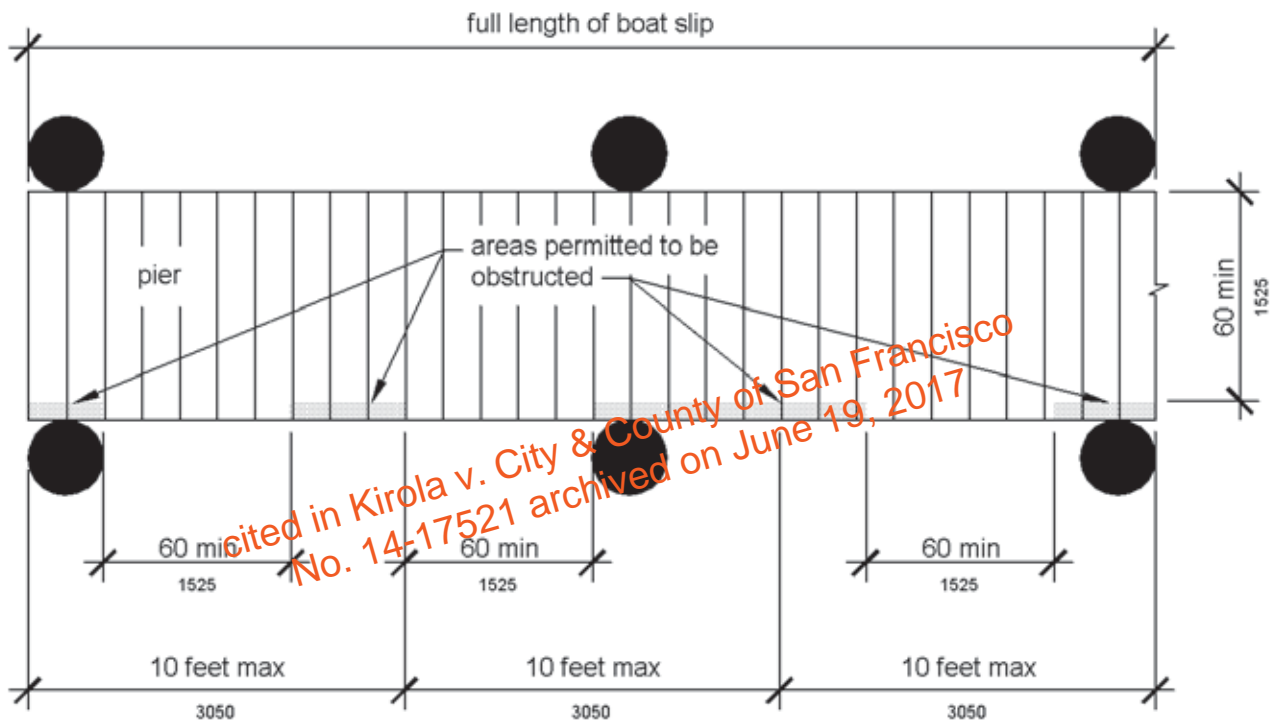


Figure 1003.3.1
Boat Slip Clearance

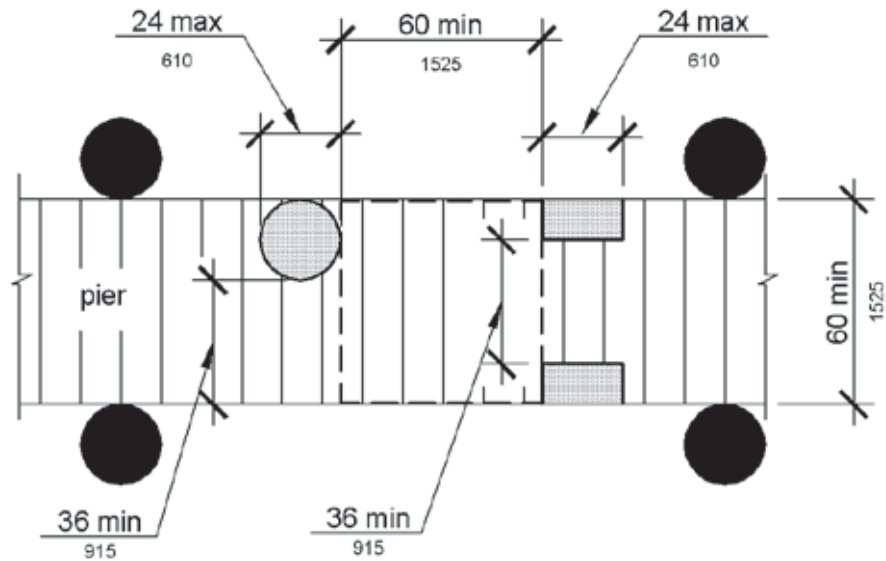


Figure 1003.3.1 (Exception 1)
Clear Pier Space Reduction at Boat Slips

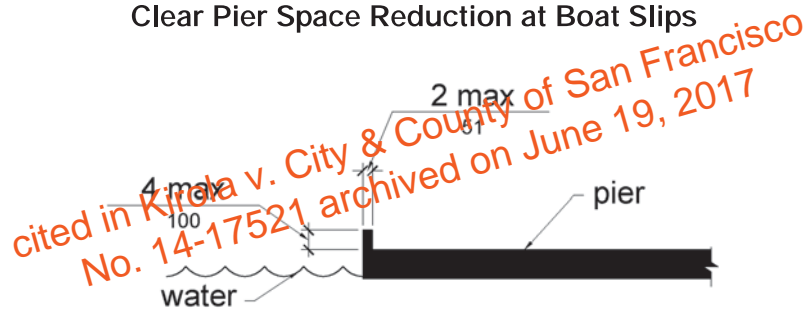


Figure 1003.3.1 (Exception 2)
Edge Protection at Boat Slips

1003.3.2 Boarding Pier Clearances. *Boarding piers at boat launch ramps shall provide clear pier space 60 inches (1525 mm) wide minimum and shall extend the full length of the boarding pier. Every 10 feet (3050 mm) maximum of linear pier edge shall contain at least one continuous clear opening 60 inches (1525 mm) wide minimum.*

EXCEPTIONS: 1. The clear pier *space* shall be permitted to be 36 inches (915 mm) wide minimum for a length of 24 inches (610 mm) maximum provided that multiple 36 inch (915 mm) wide segments are separated by segments that are 60 inches (1525 mm) wide minimum and 60 inches (1525 mm) long minimum.

2. Edge protection shall be permitted at the continuous clear openings provided that it is 4 inches (100 mm) high maximum and 2 inches (51 mm) wide maximum.

Advisory 1003.3.2 Boarding Pier Clearances. These requirements do not establish a minimum length for accessible boarding piers at boat launch ramps. The accessible boarding pier should have a length at least equal to that of other boarding piers provided at the facility. If no other boarding pier is provided, the pier would have a length equal to what would have been provided if no access requirements applied. The entire length of accessible boarding piers would be required to comply with the same technical provisions that apply to accessible boat slips. For example, at a launch ramp, if a 20 foot (6100 mm) long accessible boarding pier is provided, the entire 20 feet (6100 mm) must comply with the pier clearance requirements in 1003.3. Likewise, if a 60 foot (18 m) long accessible boarding pier is provided, the pier clearance requirements in 1003.3 would apply to the entire 60 feet (18 m).

The following example applies to a boat launch ramp boarding pier: A chain of floats is provided on a launch ramp to be used as a boarding pier which is required to be accessible by 1003.3.2. At high water, the entire chain is floating and a transition plate connects the first float to the surface of the launch ramp. As the water level decreases, segments of the chain end up resting on the launch ramp surface, matching the slope of the launch ramp.

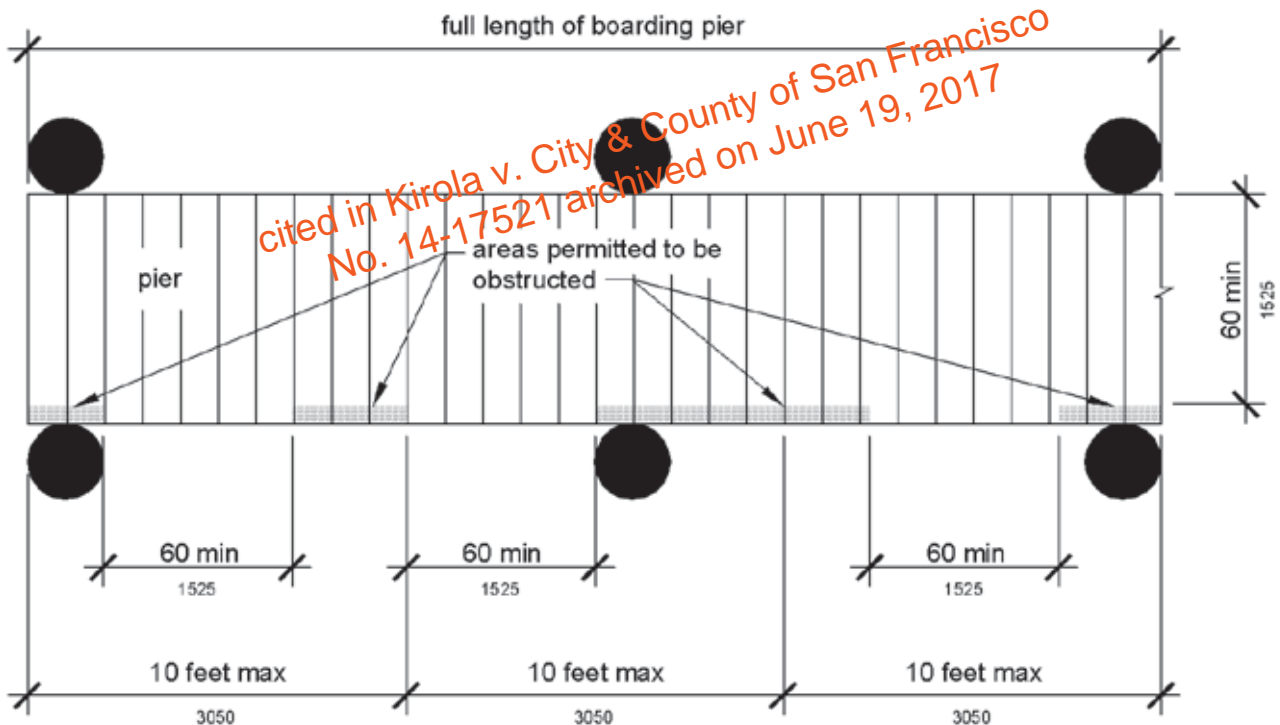


Figure 1003.3.2
Boarding Pier Clearance

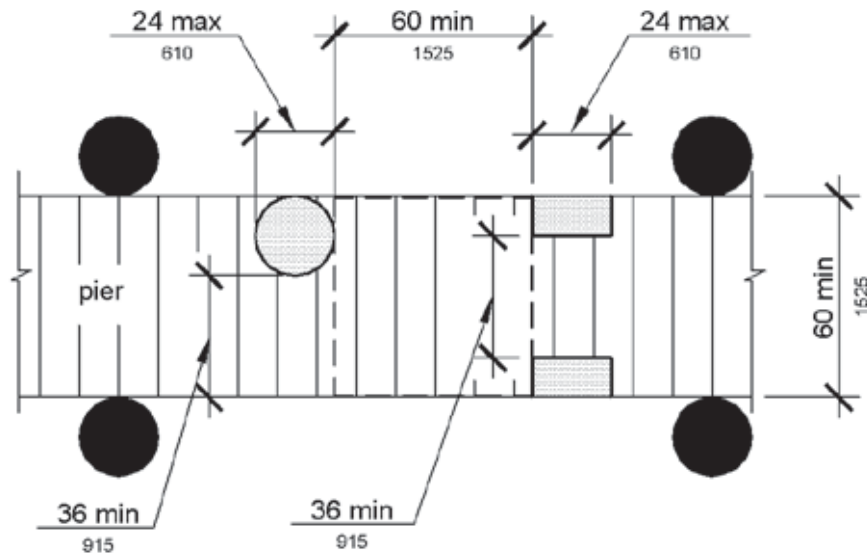


Figure 1003.3.2 (Exception 1)
Clear Pier Space Reduction at Boarding Piers.

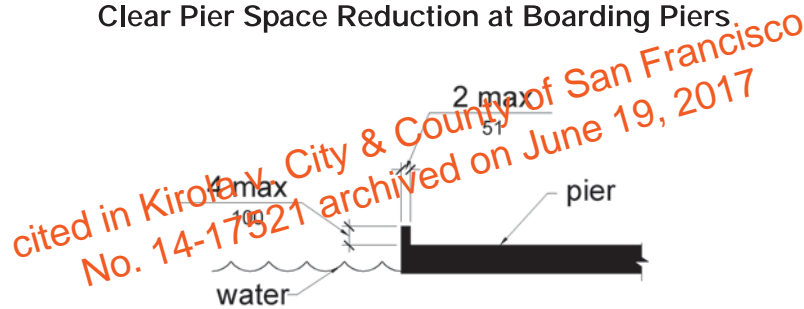


Figure 1003.3.2 (Exception 2)
Edge Protection at Boarding Piers

1004 Exercise Machines and Equipment

1004.1 Clear Floor Space. Exercise machines and equipment shall have a clear floor *space* complying with 305 positioned for transfer or for use by an individual seated in a wheelchair. Clear floor or ground *spaces* required at exercise machines and equipment shall be permitted to overlap.

Advisory 1004.1 Clear Floor Space. One clear floor or ground space is permitted to be shared between two pieces of exercise equipment. To optimize space use, designers should carefully consider layout options such as connecting ends of the row and center aisle spaces. The position of the clear floor space may vary greatly depending on the use of the equipment or machine. For example, to provide access to a shoulder press machine, clear floor space next to the seat would be appropriate to allow for transfer. Clear floor space for a bench press machine designed for use by an individual seated in a wheelchair, however, will most likely be centered on the operating mechanisms.

1005 Fishing Piers and Platforms

1005.1 Accessible Routes. *Accessible* routes serving fishing piers and platforms, including *gangways* and floating piers, shall comply with Chapter 4.

EXCEPTIONS: 1. *Accessible* routes serving floating fishing piers and platforms shall be permitted to use Exceptions 1, 2, 5, 6, 7 and 8 in 1003.2.1.

2. Where the total length of the *gangway* or series of *gangways* serving as part of a required *accessible* route is 30 feet (9145 mm) minimum, *gangways* shall not be required to comply with 405.2.

1005.2 Railings. Where provided, railings, guards, or handrails shall comply with 1005.2.

1005.2.1 Height. At least 25 percent of the railings, guards, or handrails shall be 34 inches (865 mm) maximum above the ground or deck surface.

EXCEPTION: Where a guard complying with sections 1003.2.12.1 and 1003.2.12.2 of the International Building Code (2000 edition) or sections 1012.2 and 1012.3 of the International Building Code (2003 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1) is provided, the guard shall not be required to comply with 1005.2.1.

1005.2.1.1 Dispersion. Railings, guards, or handrails required to comply with 1005.2.1 shall be dispersed throughout the fishing pier or platform.

Advisory 1005.2.1.1 Dispersion. Portions of the railings that are lowered to provide fishing opportunities for persons with disabilities must be located in a variety of locations on the fishing pier or platform to give people a variety of locations to fish. Different fishing locations may provide varying water depths, shade (at certain times of the day), vegetation, and proximity to the shoreline or bank.

1005.3 Edge Protection. Where railings, guards, or handrails complying with 1005.2 are provided, edge protection complying with 1005.3.1 or 1005.3.2 shall be provided.

Advisory 1005.3 Edge Protection. Edge protection is required only where railings, guards, or handrails are provided on a fishing pier or platform. Edge protection will prevent wheelchairs or other mobility devices from slipping off the fishing pier or platform. Extending the deck of the fishing pier or platform 12 inches (305 mm) where the 34 inch (865 mm) high railing is provided is an alternative design, permitting individuals using wheelchairs or other mobility devices to pull into a clear space and move beyond the face of the railing. In such a design, curbs or barriers are not required.

1005.3.1 Curb or Barrier. Curbs or barriers shall extend 2 inches (51 mm) minimum above the surface of the fishing pier or platform.

1005.3.2 Extended Ground or Deck Surface. The ground or deck surface shall extend 12 inches (305 mm) minimum beyond the inside face of the railing. Toe clearance shall be provided and shall

be 30 inches (760 mm) wide minimum and 9 inches (230 mm) minimum above the ground or deck surface beyond the railing.

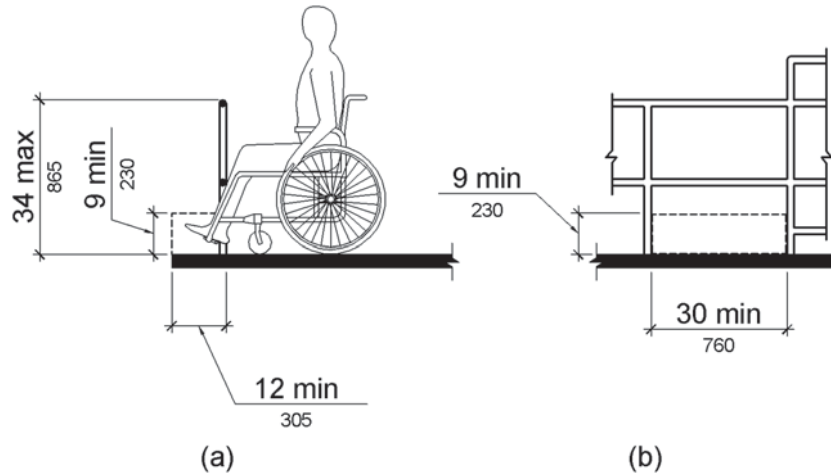


Figure 1005.3.2
Extended Ground or Deck Surface at Fishing Piers and Platforms

1005.4 Clear Floor or Ground Space. At each location where there are railings, guards, or handrails complying with 1005.2.1, a clear floor or ground space complying with 305 shall be provided. Where there are no railings, guards, or handrails, at least one clear floor or ground space complying with 305 shall be provided on the fishing pier or platform.

1005.5 Turning Space. At least one turning space complying with 304.3 shall be provided on fishing piers and platforms.

1006 Golf Facilities

1006.1 General. Golf facilities shall comply with 1006.

1006.2 Accessible Routes. Accessible routes serving teeing grounds, practice teeing grounds, putting greens, practice putting greens, teeing stations at driving ranges, course weather shelters, golf car rental areas, bag drop areas, and course toilet rooms shall comply with Chapter 4 and shall be 48 inches (1220 mm) wide minimum. Where handrails are provided, accessible routes shall be 60 inches (1525 mm) wide minimum.

EXCEPTION: Handrails shall not be required on golf courses. Where handrails are provided on golf courses, the handrails shall not be required to comply with 505.

Advisory 1006.2 Accessible Routes. The 48 inch (1220 mm) minimum width for the accessible route is necessary to ensure passage of a golf car on either the accessible route or the golf car passage. This is important where the accessible route is used to connect the golf car rental area, bag drop areas, practice putting greens, practice teeing grounds, course toilet rooms, and course weather shelters. These are areas outside the boundary of the golf course, but are areas where an individual using an adapted golf car may travel. A golf car passage may not be substituted for other accessible routes to be located outside the boundary of the course. For example, an accessible route connecting an accessible parking space to the entrance of a golf course clubhouse is not covered by this provision.

Providing a golf car passage will permit a person that uses a golf car to practice driving a golf ball from the same position and stance used when playing the game. Additionally, the space required for a person using a golf car to enter and maneuver within the teeing stations required to be accessible should be considered.

1006.3 Golf Car Passages. *Golf car passages* shall comply with 1006.3.

1006.3.1 Clear Width. The clear width of *golf car passages* shall be 48 inches (1220 mm) minimum.

1006.3.2 Barriers. Where curbs or other constructed barriers prevent golf cars from entering a fairway, openings 60 inches (1525 mm) wide minimum shall be provided at intervals not to exceed 75 yards (69 m).

1006.4 Weather Shelters. A clear floor or ground space 60 inches (1525 mm) minimum by 96 inches (2440 mm) minimum shall be provided within weather shelters.

1007 Miniature Golf Facilities

1007.1 General. Miniature golf *facilities* shall comply with 1007.

1007.2 Accessible Routes. *Accessible* routes serving holes on miniature golf courses shall comply with Chapter 4. *Accessible* routes located on playing surfaces of miniature golf holes shall be permitted to use the exceptions in 1007.2.

EXCEPTIONS: 1. Playing surfaces shall not be required to comply with 302.2.

2. Where *accessible* routes intersect playing surfaces of holes, a 1 inch (25 mm) maximum curb shall be permitted for a width of 32 inches (815 mm) minimum.

3. A slope not steeper than 1:4 for a 4 inch (100 mm) maximum rise shall be permitted.

4. *Ramp* landing slopes specified by 405.7.1 shall be permitted to be 1:20 maximum.

5. *Ramp* landing length specified by 405.7.3 shall be permitted to be 48 inches (1220 mm) long minimum.

6. *Ramp* landing size specified by 405.7.4 shall be permitted to be 48 inches (1220 mm) minimum by 60 inches (1525 mm) minimum.

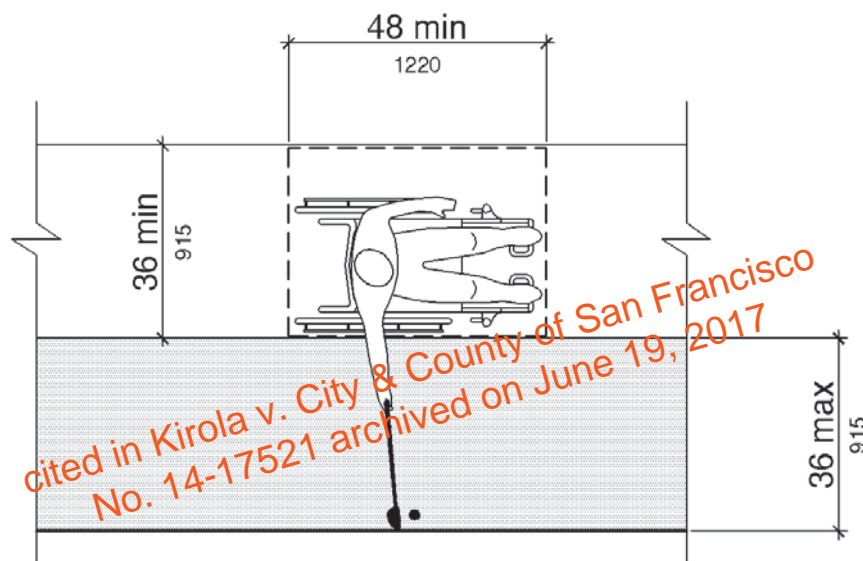
7. Handrails shall not be required on holes. Where handrails are provided on holes, the handrails shall not be required to comply with 505.

1007.3 Miniature Golf Holes. Miniature golf holes shall comply with 1007.3.

1007.3.1 Start of Play. A clear floor or ground *space* 48 inches (1220 mm) minimum by 60 inches (1525 mm) minimum with slopes not steeper than 1:48 shall be provided at the start of play.

1007.3.2 Golf Club Reach Range Area. All areas within holes where golf balls rest shall be within 36 inches (915 mm) maximum of a clear floor or ground *space* 36 inches (915 mm) wide minimum and 48 inches (1220 mm) long minimum having a *running slope* not steeper than 1:20. The clear floor or ground *space* shall be served by an *accessible* route.

Advisory 1007.3.2 Golf Club Reach Range Area. The golf club reach range applies to all holes required to be accessible. This includes accessible routes provided adjacent to or, where provided, on the playing surface of the hole.



Note: Running Slope of Clear Floor or Ground Space Not Steeper Than 1:20

Figure 1007.3.2
Golf Club Reach Range Area

1008 Play Areas

1008.1 General. *Play areas* shall comply with 1008.

1008.2 Accessible Routes. *Accessible* routes serving *play areas* shall comply with Chapter 4 and 1008.2 and shall be permitted to use the exceptions in 1008.2.1 through 1008.2.3. Where *accessible* routes serve *ground level play components*, the vertical clearance shall be 80 inches high (2030 mm) minimum.

1008.2.1 Ground Level and Elevated Play Components. *Accessible* routes serving *ground level play components* and *elevated play components* shall be permitted to use the exceptions in 1008.2.1.

EXCEPTIONS: 1. Transfer systems complying with 1008.3 shall be permitted to connect *elevated play components* except where 20 or more *elevated play components* are provided no more than 25 percent of the *elevated play components* shall be permitted to be connected by transfer systems.

2. Where transfer systems are provided, an *elevated play component* shall be permitted to connect to another *elevated play component* as part of an *accessible* route.

1008.2.2 Soft Contained Play Structures. *Accessible* routes serving *soft contained play structures* shall be permitted to use the exception in 1008.2.2.

EXCEPTION: Transfer systems complying with 1008.3 shall be permitted to be used as part of an *accessible* route.

1008.2.3 Water Play Components. *Accessible* routes serving water *play components* shall be permitted to use the exceptions in 1008.2.3.

EXCEPTIONS: 1. Where the surface of the *accessible* route, clear floor or ground spaces, or turning spaces serving water *play components* is submerged, compliance with 302, 403.3, 405.2, 405.3, and 1008.2.6 shall not be required.

2. Transfer systems complying with 1008.3 shall be permitted to connect *elevated play components* in water.

Advisory 1008.2.3 Water Play Components. Personal wheelchairs and mobility devices may not be appropriate for submerging in water when using play components in water. Some may have batteries, motors, and electrical systems that when submerged in water may cause damage to the personal mobility device or wheelchair or may contaminate the water. Providing an aquatic wheelchair made of non-corrosive materials and designed for access into the water will protect the water from contamination and avoid damage to personal wheelchairs.

1008.2.4 Clear Width. *Accessible* routes connecting *play components* shall provide a clear width complying with 1008.2.4.

1008.2.4.1 Ground Level. At ground level, the clear width of *accessible* routes shall be 60 inches (1525 mm) minimum.

EXCEPTIONS: 1. In *play areas* less than 1000 square feet (93 m²), the clear width of *accessible* routes shall be permitted to be 44 inches (1120 mm) minimum, if at least one turning *space* complying with 304.3 is provided where the restricted *accessible* route exceeds 30 feet (9145 mm) in length.

2. The clear width of *accessible* routes shall be permitted to be 36 inches (915 mm) minimum for a distance of 60 inches (1525 mm) maximum provided that multiple reduced width segments are separated by segments that are 60 inches (1525 mm) wide minimum and 60 inches (1525 mm) long minimum.

1008.2.4.2 Elevated. The clear width of *accessible* routes connecting *elevated play components* shall be 36 inches (915 mm) minimum.

EXCEPTIONS: 1. The clear width of *accessible* routes connecting *elevated play components* shall be permitted to be reduced to 32 inches (815 mm) minimum for a distance of 24 inches (610 mm) maximum provided that reduced width segments are separated by segments that are 48 inches (1220 mm) long minimum and 36 inches (915 mm) wide minimum.

2. The clear width of transfer systems connecting *elevated play components* shall be permitted to be 24 inches (610 mm) minimum.

1008.2.5 Ramps. Within *play areas*, *ramps* connecting *ground level play components* and *ramps* connecting *elevated play components* shall comply with 1008.2.5.

1008.2.5.1 Ground Level. *Ramp* runs connecting *ground level play components* shall have a *running slope* not steeper than 1:16.

1008.2.5.2 Elevated. The rise for any *ramp* run connecting *elevated play components* shall be 12 inches (305 mm) maximum.

1008.2.5.3 Handrails. Where required on *ramps* serving *play components*, the handrails shall comply with 505 except as modified by 1008.2.5.3.

EXCEPTIONS: 1. Handrails shall not be required on *ramps* located within *ground level use zones*.

2. Handrail extensions shall not be required.

1008.2.5.3.1 Handrail Gripping Surfaces. Handrail gripping surfaces with a circular cross section shall have an outside diameter of 0.95 inch (24 mm) minimum and 1.55 inches (39 mm) maximum. Where the shape of the gripping surface is non-circular, the handrail shall provide an equivalent gripping surface.

1008.2.5.3.2 Handrail Height. The top of handrail gripping surfaces shall be 20 inches (510 mm) minimum and 28 inches (710 mm) maximum above the *ramp* surface.

1008.2.6 Ground Surfaces. Ground surfaces on *accessible* routes, clear floor or ground *spaces*, and turning *spaces* shall comply with 1008.2.6.

Advisory 1008.2.6 Ground Surfaces. Ground surfaces must be inspected and maintained regularly to ensure continued compliance with the ASTM F 1951 standard. The type of surface material selected and play area use levels will determine the frequency of inspection and maintenance activities.

1008.2.6.1 Accessibility. Ground surfaces shall comply with ASTM F 1951 (incorporated by reference, see "Referenced Standards" in Chapter 1). Ground surfaces shall be inspected and maintained regularly and frequently to ensure continued compliance with ASTM F 1951.

1008.2.6.2 Use Zones. Ground surfaces located within *use zones* shall comply with ASTM F 1292 (1999 edition or 2004 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1).

1008.3 Transfer Systems. Where transfer systems are provided to connect to *elevated play components*, transfer systems shall comply with 1008.3.

Advisory 1008.3 Transfer Systems. Where transfer systems are provided, consideration should be given to the distance between the transfer system and the elevated play components. Moving between a transfer platform and a series of transfer steps requires extensive exertion for some children. Designers should minimize the distance between the points where a child transfers from a wheelchair or mobility device and where the elevated play components are located. Where elevated play components are used to connect to another elevated play component instead of an accessible route, careful consideration should be used in the selection of the play components used for this purpose.

1008.3.1 Transfer Platforms. Transfer platforms shall be provided where transfer is intended from wheelchairs or other mobility aids. Transfer platforms shall comply with 1008.3.1.

1008.3.1.1 Size. Transfer platforms shall have level surfaces 14 inches (355 mm) deep minimum and 24 inches (610 mm) wide minimum.

1008.3.1.2 Height. The height of transfer platforms shall be 11 inches (280 mm) minimum and 18 inches (455 mm) maximum measured to the top of the surface from the ground or floor surface.

1008.3.1.3 Transfer Space. A transfer space complying with 305.2 and 305.3 shall be provided adjacent to the transfer platform. The 48 inch (1220 mm) long minimum dimension of the transfer space shall be centered on and parallel to the 24 inch (610 mm) long minimum side of the transfer platform. The side of the transfer platform serving the transfer space shall be unobstructed.

1008.3.1.4 Transfer Supports. At least one means of support for transferring shall be provided.

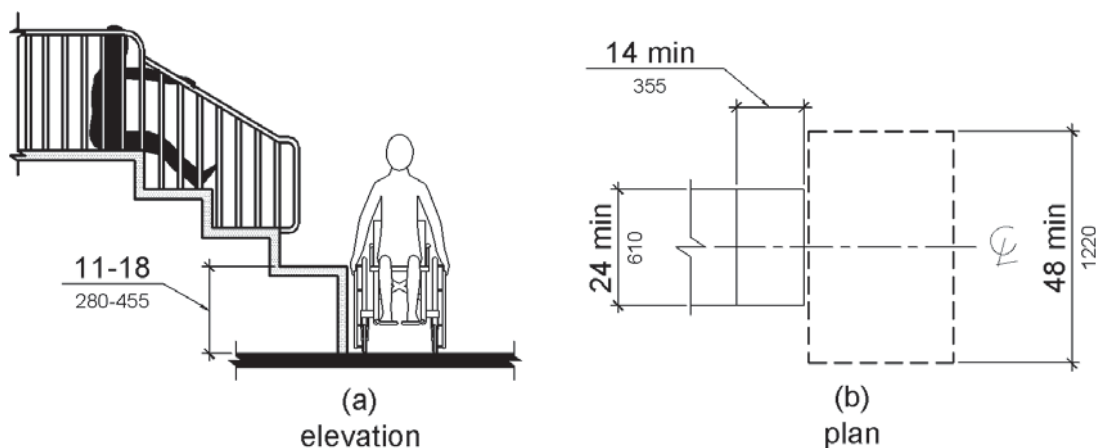


Figure 1008.3.1
Transfer Platforms

1008.3.2 Transfer Steps. Transfer steps shall be provided where movement is intended from transfer platforms to levels with *elevated play components* required to be on *accessible* routes. Transfer steps shall comply with 1008.3.2.

1008.3.2.1 Size. Transfer steps shall have level surfaces 14 inches (355 mm) deep minimum and 24 inches (610 mm) wide minimum.

1008.3.2.2 Height. Each transfer step shall be 8 inches (205 mm) high maximum.

1008.3.2.3 Transfer Supports. At least one means of support for transferring shall be provided.

Advisory 1008.3.2.3 Transfer Supports. Transfer supports are required on transfer platforms and transfer steps to assist children when transferring. Some examples of supports include a rope loop, a loop type handle, a slot in the edge of a flat horizontal or vertical member, poles or bars, or D rings on the corner posts.

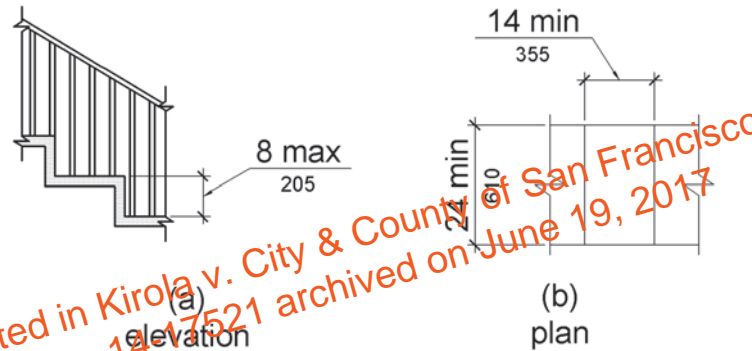


Figure 1008.3.2
Transfer Steps

1008.4 Play Components. *Ground level play components* on *accessible* routes and *elevated play components* connected by *ramps* shall comply with 1008.4.

1008.4.1 Turning Space. At least one turning *space* complying with 304 shall be provided on the same level as *play components*. Where swings are provided, the turning *space* shall be located immediately adjacent to the swing.

1008.4.2 Clear Floor or Ground Space. Clear floor or ground *space* complying with 305.2 and 305.3 shall be provided at *play components*.

Advisory 1008.4.2 Clear Floor or Ground Space. Clear floor or ground spaces, turning spaces, and accessible routes are permitted to overlap within play areas. A specific location has not been designated for the clear floor or ground spaces or turning spaces, except swings, because each play component may require that the spaces be placed in a unique location. Where play components include a seat or entry point, designs that provide for an unobstructed transfer from a wheelchair or other mobility device are recommended. This will enhance the ability of children with disabilities to independently use the play component.

When designing play components with manipulative or interactive features, consider appropriate reach ranges for children seated in wheelchairs. The following table provides guidance on reach ranges for children seated in wheelchairs. These dimensions apply to either forward or side reaches. The reach ranges are appropriate for use with those play components that children seated in wheelchairs may access and reach. Where transfer systems provide access to elevated play components, the reach ranges are not appropriate.

Children's Reach Ranges			
Forward or Side Reach	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
High (maximum)	36 in (915 mm)	40 in (1015 mm)	44 in (1120 mm)
Low (minimum)	20 in (510 mm)	18 in (455 mm)	16 in (405 mm)

1008.4.3 Play Tables. Where play tables are provided, knee clearance 24 inches (610 mm) high minimum, 17 inches deep (430 mm) minimum, and 30 inches (760 mm) wide minimum shall be provided. The tops of rims, curbs, or other obstructions shall be 31 inches (785 mm) high maximum.

EXCEPTION: Play tables designed and constructed primarily for children 5 years and younger shall not be required to provide knee clearance where the clear floor or ground *space* required by 1008.4.2 is arranged for a parallel approach.

1008.4.4 Entry Points and Seats. Where *play components* require transfer to entry points or seats, the entry points or seats shall be 11 inches (280 mm) minimum and 24 inches (610 mm) maximum from the clear floor or ground *space*.

EXCEPTION: Entry points of slides shall not be required to comply with 1008.4.4.

1008.4.5 Transfer Supports. Where *play components* require transfer to entry points or seats, at least one means of support for transferring shall be provided.

1009 Swimming Pools, Wading Pools, and Spas

1009.1 General. Where provided, pool lifts, sloped entries, transfer walls, transfer systems, and pool stairs shall comply with 1009.

1009.2 Pool Lifts. Pool lifts shall comply with 1009.2.

Advisory 1009.2 Pool Lifts. There are a variety of seats available on pool lifts ranging from sling seats to those that are preformed or molded. Pool lift seats with backs will enable a larger population of persons with disabilities to use the lift. Pool lift seats that consist of materials that resist corrosion and provide a firm base to transfer will be usable by a wider range of people with disabilities. Additional options such as armrests, head rests, seat belts, and leg support will enhance accessibility and better accommodate people with a wide range of disabilities.

1009.2.1 Pool Lift Location. Pool lifts shall be located where the water level does not exceed 48 inches (1220 mm).

EXCEPTIONS: 1. Where the entire pool depth is greater than 48 inches (1220 mm), compliance with 1009.2.1 shall not be required.

2. Where multiple pool lift locations are provided, no more than one pool lift shall be required to be located in an area where the water level is 48 inches (1220 mm) maximum.

1009.2.2 Seat Location. In the raised position, the centerline of the seat shall be located over the deck and 16 inches (405 mm) minimum from the edge of the pool. The deck surface between the centerline of the seat and the pool edge shall have a slope not steeper than 1:48.

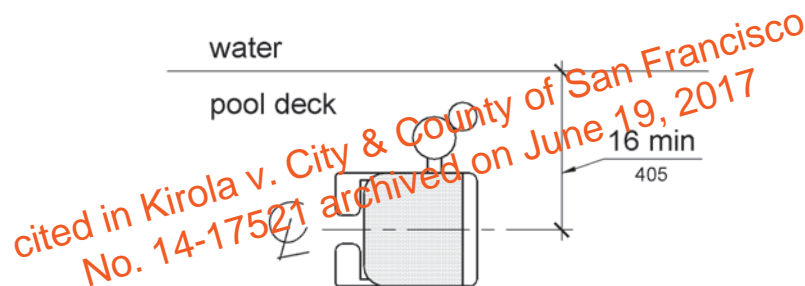


Figure 1009.2.2
Pool Lift Seat Location

1009.2.3 Clear Deck Space. On the side of the seat opposite the water, a clear deck *space* shall be provided parallel with the seat. The *space* shall be 36 inches (915 mm) wide minimum and shall extend forward 48 inches (1220 mm) minimum from a line located 12 inches (305 mm) behind the rear edge of the seat. The clear deck *space* shall have a slope not steeper than 1:48.

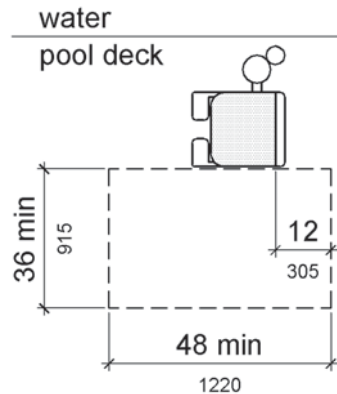


Figure 1009.2.3
Clear Deck Space at Pool Lifts

1009.2.4 Seat Height. The height of the lift seat shall be designed to allow a stop at 16 inches (405 mm) minimum to 19 inches (485 mm) maximum measured from the deck to the top of the seat surface when in the raised (load) position.

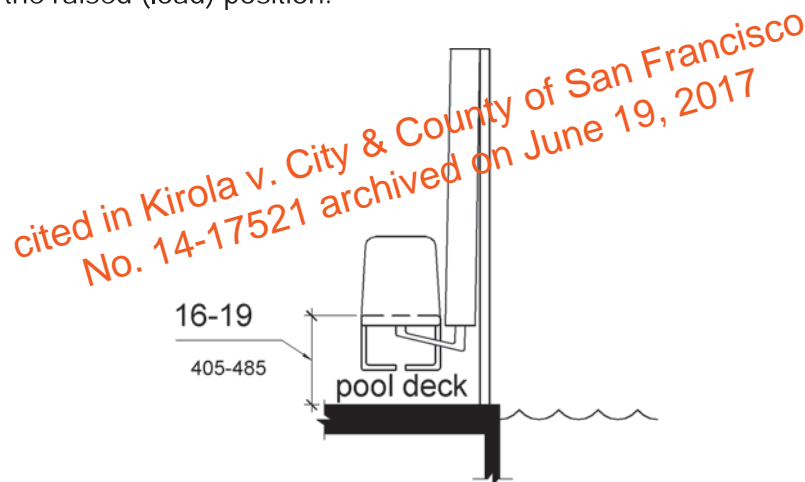


Figure 1009.2.4
Pool Lift Seat Height

1009.2.5 Seat Width. The seat shall be 16 inches (405 mm) wide minimum.

1009.2.6 Footrests and Armrests. Footrests shall be provided and shall move with the seat. If provided, the armrest positioned opposite the water shall be removable or shall fold clear of the seat when the seat is in the raised (load) position.

EXCEPTION: Footrests shall not be required on pool lifts provided in spas.

1009.2.7 Operation. The lift shall be capable of unassisted operation from both the deck and water levels. Controls and operating mechanisms shall be unobstructed when the lift is in use and shall comply with 309.4.

Advisory 1009.2.7 Operation. Pool lifts must be capable of unassisted operation from both the deck and water levels. This will permit a person to call the pool lift when the pool lift is in the opposite position. It is extremely important for a person who is swimming alone to be able to call the pool lift when it is in the up position so he or she will not be stranded in the water for extended periods of time awaiting assistance. The requirement for a pool lift to be independently operable does not preclude assistance from being provided.

1009.2.8 Submerged Depth. The lift shall be designed so that the seat will submerge to a water depth of 18 inches (455 mm) minimum below the stationary water level.

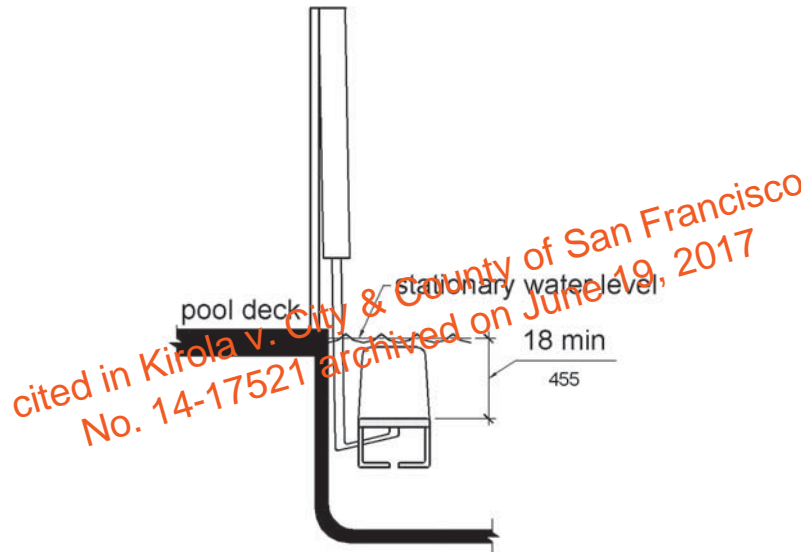


Figure 1009.2.8
Pool Lift Submerged Depth

1009.2.9 Lifting Capacity. Single person pool lifts shall have a weight capacity of 300 pounds. (136 kg) minimum and be capable of sustaining a static load of at least one and a half times the rated load.

Advisory 1009.2.9 Lifting Capacity. Single person pool lifts must be capable of supporting a minimum weight of 300 pounds (136 kg) and sustaining a static load of at least one and a half times the rated load. Pool lifts should be provided that meet the needs of the population they serve. Providing a pool lift with a weight capacity greater than 300 pounds (136 kg) may be advisable.

1009.3 Sloped Entries. Sloped entries shall comply with 1009.3.

Advisory 1009.3 Sloped Entries. Personal wheelchairs and mobility devices may not be appropriate for submerging in water. Some may have batteries, motors, and electrical systems that when submerged in water may cause damage to the personal mobility device or wheelchair or may contaminate the pool water. Providing an aquatic wheelchair made of non-corrosive materials and designed for access into the water will protect the water from contamination and avoid damage to personal wheelchairs or other mobility aids.

1009.3.1 Sloped Entries. Sloped entries shall comply with Chapter 4 except as modified in 1109.3.1 through 1109.3.3.

EXCEPTION: Where sloped entries are provided, the surfaces shall not be required to be slip resistant.

1009.3.2 Submerged Depth. Sloped entries shall extend to a depth of 24 inches (610 mm) minimum and 30 inches (760 mm) maximum below the stationary water level. Where landings are required by 405.7, at least one landing shall be located 24 inches (610 mm) minimum and 30 inches (760 mm) maximum below the stationary water level.

EXCEPTION: In wading pools, the sloped entry and landings, if provided, shall extend to the deepest part of the wading pool.

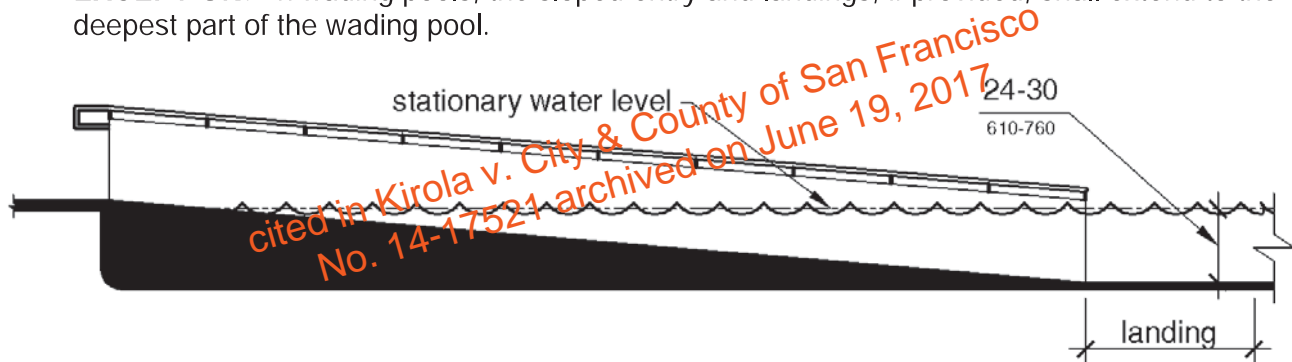


Figure 1009.3.2
Sloped Entry Submerged Depth

1009.3.3 Handrails. At least two handrails complying with 505 shall be provided on the sloped entry. The clear width between required handrails shall be 33 inches (840 mm) minimum and 38 inches (965 mm) maximum.

EXCEPTIONS: 1. Handrail extensions specified by 505.10.1 shall not be required at the bottom landing serving a sloped entry.

2. Where a sloped entry is provided for wave action pools, leisure rivers, sand bottom pools, and other pools where user access is limited to one area, the handrails shall not be required to comply with the clear width requirements of 1009.3.3.

3. Sloped entries in wading pools shall not be required to provide handrails complying with 1009.3.3. If provided, handrails on sloped entries in wading pools shall not be required to comply with 505.

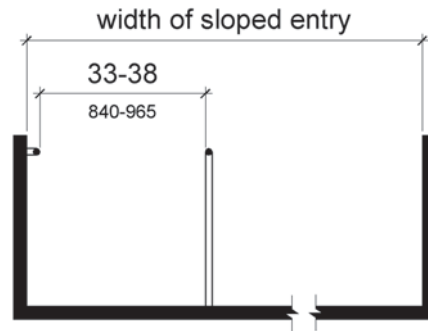


Figure 1009.3.3
Handrails for Sloped Entry

1009.4 Transfer Walls. Transfer walls shall comply with 1009.4.

1009.4.1 Clear Deck Space. A clear deck *space* of 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum with a slope not steeper than 1:48 shall be provided at the base of the transfer wall. Where one grab bar is provided, the clear deck *space* shall be centered on the grab bar. Where two grab bars are provided, the clear deck *space* shall be centered on the clearance between the grab bars.

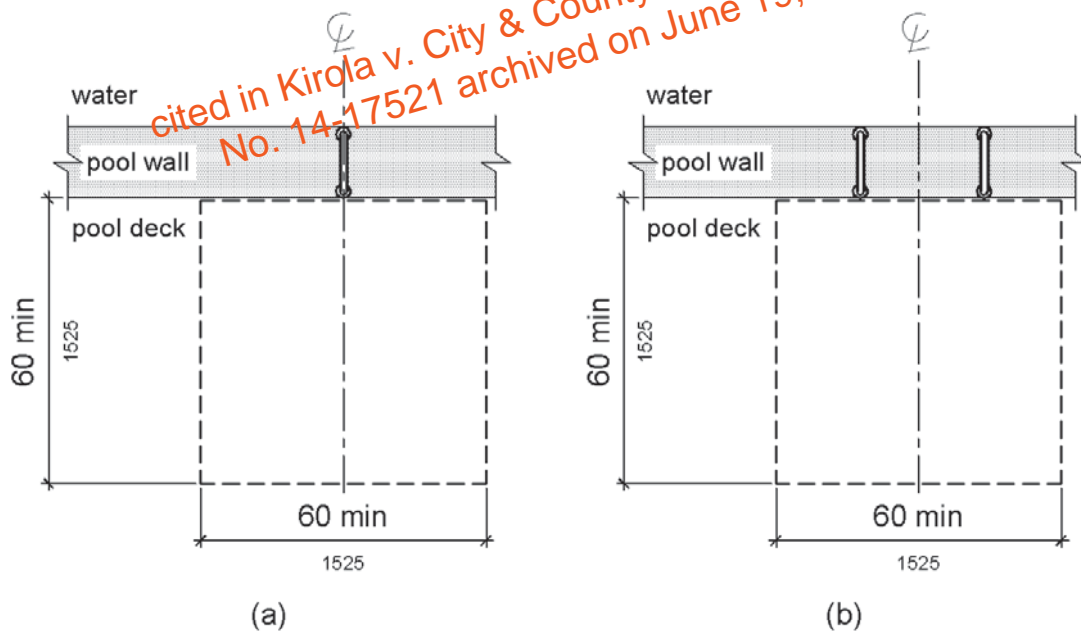


Figure 1009.4.1
Clear Deck Space at Transfer Walls

1009.4.2 Height. The height of the transfer wall shall be 16 inches (405 mm) minimum and 19 inches (485 mm) maximum measured from the deck.

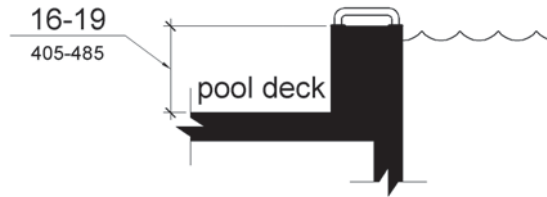


Figure 1009.4.2
Transfer Wall Height

1009.4.3 Wall Depth and Length. The depth of the transfer wall shall be 12 inches (305 mm) minimum and 16 inches (405 mm) maximum. The length of the transfer wall shall be 60 inches (1525 mm) minimum and shall be centered on the clear deck space.

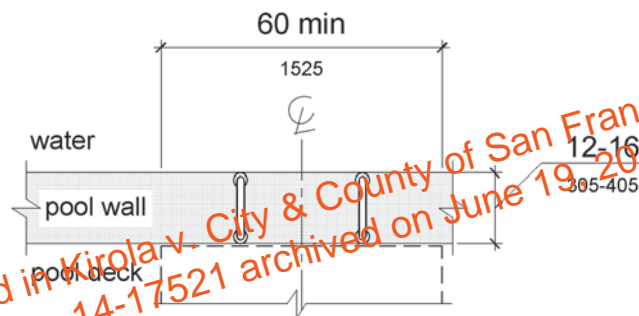


Figure 1009.4.3
Depth and Length of Transfer Walls

1009.4.4 Surface. Surfaces of transfer walls shall not be sharp and shall have rounded edges.

1009.4.5 Grab Bars. At least one grab bar complying with 609 shall be provided on the transfer wall. Grab bars shall be perpendicular to the pool wall and shall extend the full depth of the transfer wall. The top of the gripping surface shall be 4 inches (100 mm) minimum and 6 inches (150 mm) maximum above transfer walls. Where one grab bar is provided, clearance shall be 24 inches (610 mm) minimum on both sides of the grab bar. Where two grab bars are provided, clearance between grab bars shall be 24 inches (610 mm) minimum.

EXCEPTION: Grab bars on transfer walls shall not be required to comply with 609.4.

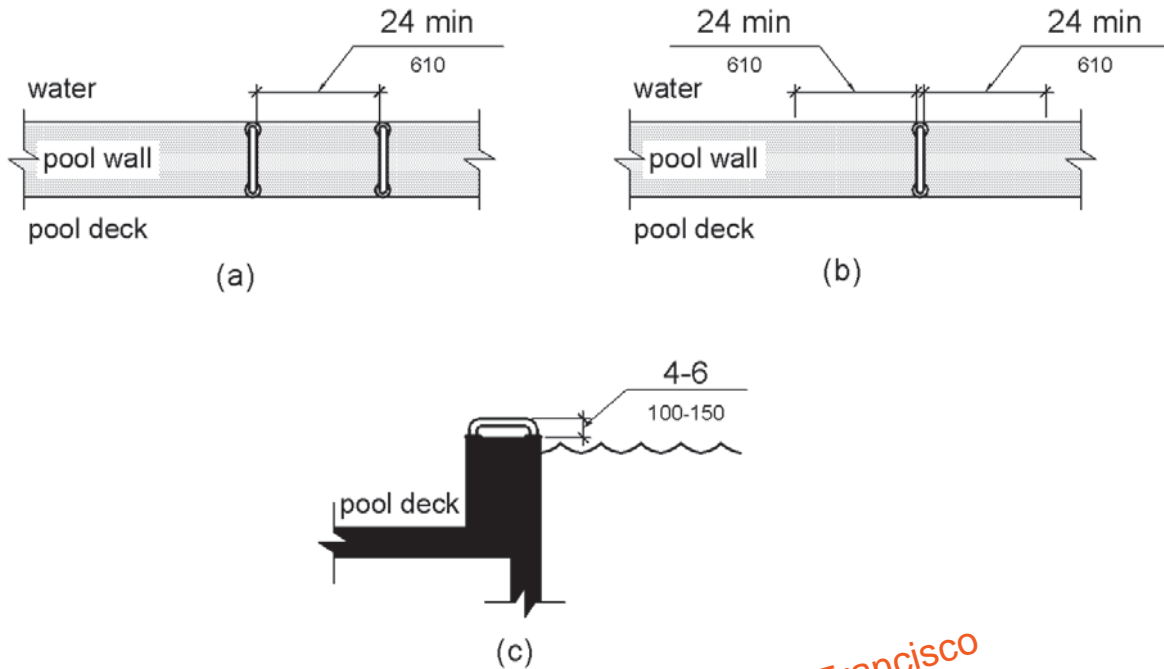


Figure 1009.4.5
Grab Bars for Transfer Walls

1009.5 Transfer Systems. Transfer systems shall comply with 1009.5.

1009.5.1 Transfer Platform. A transfer platform shall be provided at the head of each transfer system. Transfer platforms shall provide 19 inches (485 mm) minimum clear depth and 24 inches (610 mm) minimum clear width.

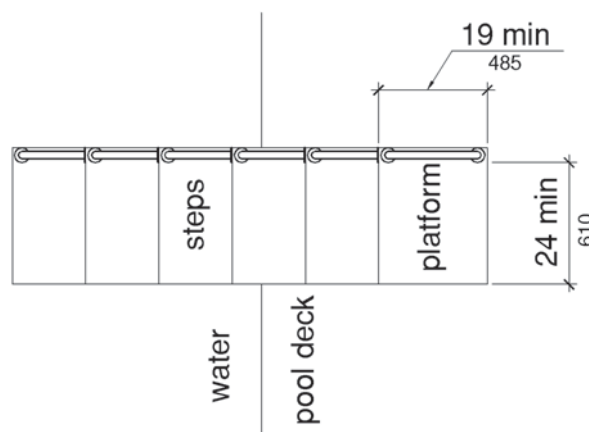


Figure 1009.5.1
Size of Transfer Platform

1009.5.2 Transfer Space. A transfer space of 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum with a slope not steeper than 1:48 shall be provided at the base of the transfer platform surface and shall be centered along a 24 inch (610 mm) minimum side of the transfer platform. The side of the transfer platform serving the transfer space shall be unobstructed.

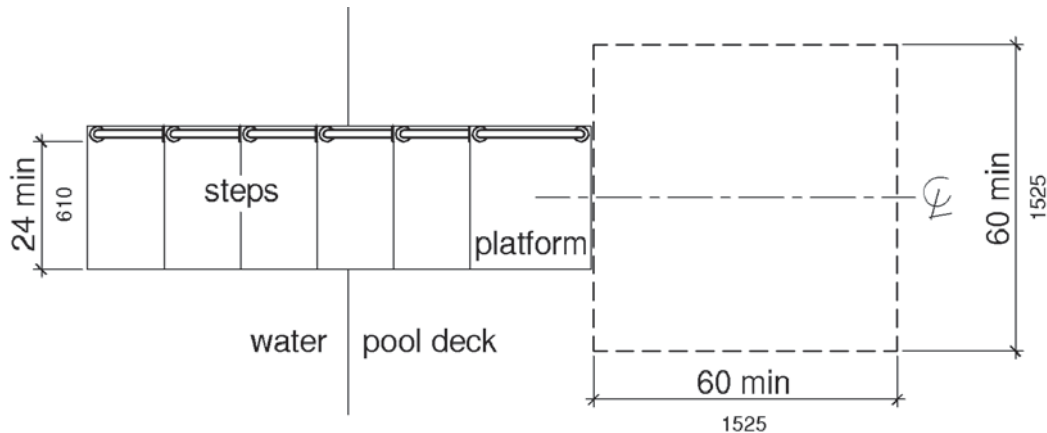


Figure 1009.5.2
Clear Deck Space at Transfer Platform

1009.5.3 Height. The height of the transfer platform shall comply with 1009.4.2.

1009.5.4 Transfer Steps. Transfer step height shall be 8 inches (205 mm) maximum. The surface of the bottom tread shall extend to a water depth of 18 inches (455 mm) minimum below the stationary water level.

Advisory 1009.5.4 Transfer Steps. Where possible, the height of the transfer step should be minimized to decrease the distance an individual is required to lift up or move down to reach the next step to gain access.

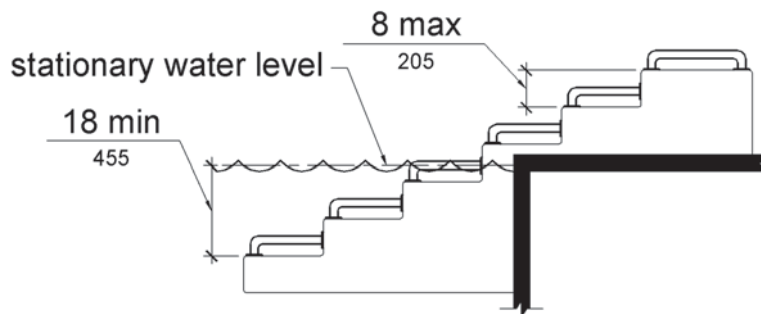


Figure 1009.5.4
Transfer Steps

1009.5.5 Surface. The surface of the transfer system shall not be sharp and shall have rounded edges.

1009.5.6 Size. Each transfer step shall have a tread clear depth of 14 inches (355 mm) minimum and 17 inches (430 mm) maximum and shall have a tread clear width of 24 inches (610 mm) minimum.

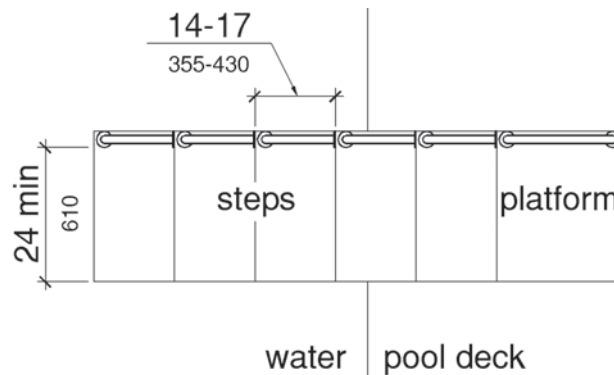


Figure 1009.5.6
Size of Transfer Steps

1009.5.7 Grab Bars. At least one grab bar on each transfer step and the transfer platform or a continuous grab bar serving each transfer step and the transfer platform shall be provided. Where a grab bar is provided on each step, the tops of gripping surfaces shall be 4 inches (100 mm) minimum and 6 inches (150 mm) maximum above each step and transfer platform. Where a continuous grab bar is provided, the top of the gripping surface shall be 4 inches (100 mm) minimum and 6 inches (150 mm) maximum above the step nosing and transfer platform. Grab bars shall comply with 609 and be located on at least one side of the transfer system. The grab bar located at the transfer platform shall not obstruct transfer.

EXCEPTION: Grab bars on transfer systems shall not be required to comply with 609.4.

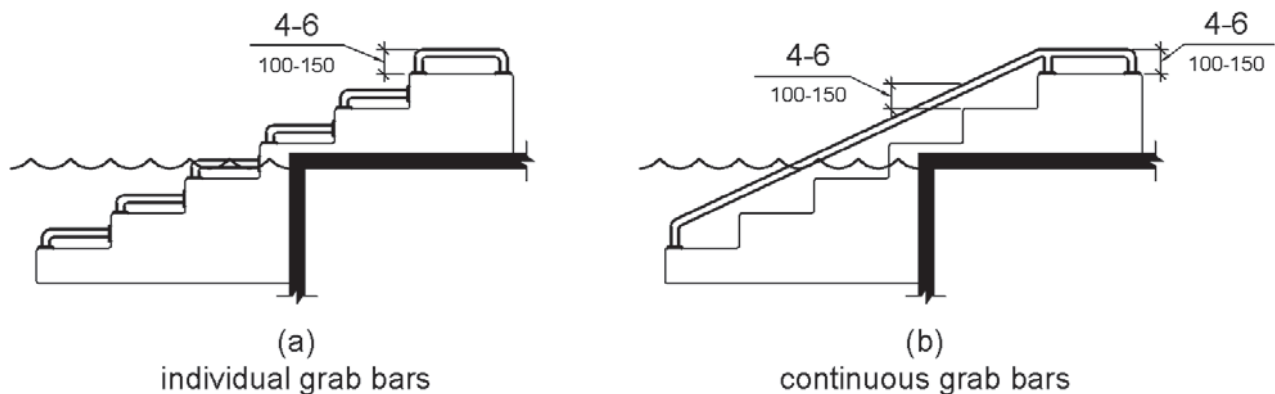


Figure 1009.5.7
Grab Bars

1009.6 Pool Stairs. Pool stairs shall comply with 1009.6.

1009.6.1 Pool Stairs. Pool stairs shall comply with 504.

EXCEPTION: Pool step riser heights shall not be required to be 4 inches (100 mm) high minimum and 7 inches (180 mm) high maximum provided that riser heights are uniform.

1009.6.2 Handrails. The width between handrails shall be 20 inches (510 mm) minimum and 24 inches (610 mm) maximum. Handrail extensions required by 505.10.3 shall not be required on pool stairs.

1010 Shooting Facilities with Firing Positions

1010.1 Turning Space. A circular turning *space* 60 inches (1525 mm) diameter minimum with slopes not steeper than 1:48 shall be provided at shooting facilities with firing positions.

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Americans with Disabilities Act

Title II Technical Assistance Manual 1994 Supplement

The following pages contain material to be added to the Americans with Disabilities Act Title II Technical Assistance Manual (Nov. 1993 edition.) These supplements are to be inserted, as appropriate, at the end of each chapter of the Manual.

II-1.0000 COVERAGE.

II-1.3000 Relationship to title III.

[Insert the following text at the end of ILLUSTRATION 2, p. 2.]

Similarly, if an existing building is owned by a private entity covered by title III and rented to a public entity covered by title II, the private landlord does not become subject to the public entity's title II program access requirement by virtue of the leasing relationship. The private landlord only has title III obligations. These extend to the commercial facility as a whole and to any places of public accommodation contained in the facility. The governmental entity is responsible for ensuring that the programs offered in its rented space meet the requirements of title II.

II-3.0000 GENERAL REQUIREMENTS

II-3.3000 Equality in participation/benefits.

[Insert the following text after ILLUSTRATION 5, p. 11.]

Finally, the ADA permits a public entity to offer benefits to individuals with disabilities, or a particular class of individuals with disabilities, that it does not offer to individuals without disabilities. This allows State and local governments to provide special benefits, beyond those required by the ADA, that are limited to individuals with disabilities or a particular class of individuals with disabilities, without thereby incurring additional obligations to persons without disabilities or to other classes of individuals with disabilities.

ILLUSTRATION 6: The ADA does not require a State government to continue providing medical support payments to dependent children with schizophrenia, if other dependent children without disabilities are also ineligible for continued coverage. This is true even if the State chooses to provide continued coverage to a particular class of children with disabilities (e.g., those with physical impairments, or those who have mental retardation).

II-3.5300 Unnecessary inquiries.

[Insert the following text at the end of this section, p. 14.]

ILLUSTRATION 2: An essential eligibility requirement for obtaining a license to practice medicine is the ability to practice medicine safely and competently. State Agency X requires applicants for licenses to practice medicine to disclose whether they have ever had any physical and mental disabilities. A much more rigorous investigation is undertaken of applicants answering in the affirmative than of others. This process violates title II because of the additional burdens placed on individuals with disabilities, and because the disclosure requirement is not limited to conditions that *currently* impair one's ability to practice medicine.

II-3.6000 Reasonable modifications.

II-3.6100 General.

[Insert the following text after ILLUSTRATION 3, p. 15.]

ILLUSTRATION 4: C, a person with a disability, stops at a rest area on the highway. C requires assistance in order to use the toilet facilities and his only companion is a person of the opposite sex. Permitting a person of the opposite sex to assist C in a toilet room designated for one sex may be a required reasonable modification of policy.

ILLUSTRATION 5: S, an individual with an environmental illness, requests a public entity to adopt a policy prohibiting the use of perfume or other scented products by its employees who come into contact with the public. Such a requirement is not a "reasonable" modification of the public entity's personnel policy.

II-5.0000 PROGRAM ACCESSIBILITY

II-5.1000 General.

[Insert the following text before the question, "*Can back doors . . . ?*" p. 22.]

Does the program accessibility requirement prevent a public entity from renting existing inaccessible space to a private entity? Not necessarily. For example, if a State leases space to a public accommodation in a downtown office building in a purely commercial transaction, i.e., the private entity does not provide any services as part of a State program, the State may rent out inaccessible space without violating its program access requirement. The private entity, though, would be responsible for compliance with title III. On the other hand, if a State highway authority leases a facility in one of its highway rest areas to a privately owned restaurant, the public entity would be responsible for making the space accessible, because the restaurant is part of the State's program of providing services to the motoring public. The private entity operating the restaurant would have an independent obligation to meet the requirements of title III.

II-5.2000 Methods for providing program accessibility.

[Insert the following text after ILLUSTRATION 3, P. 23.]

ILLUSTRATION 4: A municipal performing arts center provides seating at two prices -- inexpensive balcony seats and more expensive orchestra seats. All of the accessible seating is located on the higher priced orchestra level. In lieu of providing accessible seating on the balcony level, the city must make a reasonable number of accessible orchestra-level seats available at the lower price of balcony seats.

II-6.0000 NEW CONSTRUCTION AND ALTERATIONS

II-6.2000 Choice of design standard: UFAS or ADAAG.

II-6.2100 General.

[Insert the following text at the end of this section, p. 26]

What if neither ADAAG nor UFAS contain specific standards for a particular type of facility? In such cases the technical requirements of the chosen standard should be applied to the extent possible. If no standard exists for particular features, those features need not comply with a particular design standard. However, the facility must still be designed and operated to meet other title II requirements, including program accessibility (see II-5.0000).

ILLUSTRATION 1: A public entity is designing and constructing a playground. Because there are no UFAS or ADAAG standards for playground equipment, the equipment need not comply with any specific design standard. The title II requirements for equal opportunity and program accessibility, however, may obligate the public entity to provide an accessible route to the playground, some accessible equipment, and an accessible surface for the playground.

ILLUSTRATION 2: A public entity is designing and constructing a new baseball stadium that will feature a photographers' moat running around the perimeter of the playing field. While there are no specific standards in either ADAAG or UFAS for either dugouts or photographer's moats, the chosen standard should be applied to the extent that it contains appropriate technical standards. For example, an accessible route must be provided and any ramps or changes in level must meet the chosen standard. The public entity may have additional obligations under other title II

requirements.

II-6.6000 Curb ramps.

[Insert the following text at the end of this section.]

Resurfacing beyond normal maintenance is an alteration. Merely filling potholes is considered to be normal maintenance.

II-7.0000 COMMUNICATIONS

II-7.1000 Equally effective communication.

A. [Insert the following text after ILLUSTRATION 2, p. 38.]

ILLUSTRATION: S, who is blind, wants to use the laundry facilities in his State university dormitory. Displayed on the laundry machine controls are written instructions for operating the machines. The university could make the machines accessible to S by Brailleing the instructions onto adhesive labels and placing the labels (or a Brailled template) on the machines. An alternative method of ensuring effective communication with S would be to arrange for a laundry room attendant to read the instructions printed on the machines to S. Any one particular method is not required, so long as effective communication is provided.

B. [Insert the following text after ILLUSTRATION 2, p. 39.]

ILLUSTRATION 3: A municipal police department encounters many situations where effective communication with members of the public who are deaf or hard of hearing is critical. Such situations include interviewing suspects prior to arrest (when an officer is attempting to establish probable cause); interrogating arrestees; and interviewing victims or critical witnesses. In these situations, appropriate qualified interpreters must be provided when necessary to ensure effective communication.

The obligation of public entities to provide necessary auxiliary aids and services is not limited to individuals with a direct interest in the proceedings or outcome. Courtroom spectators with disabilities are also participants in the court program and are entitled to such aids or services as will afford them an equal opportunity to follow the court proceedings.

ILLUSTRATION: B, an individual who is hard of hearing, wishes to observe proceedings in the county courthouse. Even though the county believes that B has no personal or direct involvement in the courtroom proceedings at issue, the county must provide effective communication, which in this case may involve the provision of an assistive listening device, unless it can demonstrate that undue financial and administrative burdens would result.

C. [Insert the following text at the end of the question, "*Must tax bills . . . ?*" p. 39.]

Brailled documents are not required if effective communication is provided by other means.

II-7.1100 Primary consideration.

[Insert the following text after the first paragraph of this section, p. 39.]

ILLUSTRATION: A county's Supervisor of Elections provides magnifying lenses and readers for individuals with vision impairments seeking to vote. The election procedures specify that an individual who requests assistance will be aided by two poll workers, or by one person selected by the voter. C, a voter who is blind, protests that this method does not allow a blind voter to cast a secret ballot, and requests that the County provide him with a Brailled ballot. A Brailled ballot, however, would have to be counted separately and would be readily identifiable, and thus would not resolve the problem of ballot secrecy. Because County X can demonstrate that its current system of providing assistance is an effective means of affording an individual with a disability an equal opportunity to vote, the County need not provide

ballots in Braille.

II-7.3000 Emergency telephone services.

II-7.3300 Seven-digit lines.

[Insert the following text at the end of this section, p. 42.]

ILLUSTRATION: Some States may operate a statewide 911 system for both voice and nonvoice calls and, in addition, permit voice callers only to dial seven-digit numbers to obtain assistance from particular emergency service providers. Such an arrangement does not violate title II so long as nonvoice callers whose calls are directed through 911 receive emergency attention as quickly as voice callers who dial local emergency seven-digit numbers for assistance.

II-9.0000 INVESTIGATION OF COMPLAINTS AND ENFORCEMENT

II-9.2000 Complaints.

[Insert the following text at the end of this section, p. 51.]

Is a private plaintiff entitled to compensatory damages? A private plaintiff under title II is entitled to all of the remedies available under section 504 of the Rehabilitation Act of 1973, including compensatory damages.

ILLUSTRATION: A county court system is found by a Federal court to have violated title II of the ADA by excluding a blind individual from a jury because of his blindness. The individual is entitled to compensatory damages for any injuries suffered, including compensation, when appropriate, for any emotional distress caused by the discrimination.

cited in *Kirola v. City & County of San Francisco*
No. 14-17521 archived on June 19, 2017

NOTICE

Portions of this introduction may not fully reflect the current ADA regulations. The [regulation implementing title II](#) of the ADA was revised as recently as 2016. Revised [ADA Standards for Accessible Design \(2010 Standards\)](#) were issued on September 15, 2010 and went into effect on March 15, 2012.

ADA Best Practices Tool Kit for State and Local Governments

Appendices 1 and 2

ADA Accessibility Survey Forms and Instructions

A. About Appendices 1 and 2

Reviewing programs and facilities for accessibility is one of the most effective ways for state and local governments to ensure that they are complying with the Americans with Disabilities Act (ADA). The survey forms in Appendix 1 of this Tool Kit and the survey instructions in Appendix 2 are resources that will assist you in conducting surveys and identifying architectural barriers to access. The materials in Appendices 1 and 2 guide surveyors – even those with little or no knowledge of accessibility or experience surveying – through the process of surveying elements in a step-by-step manner while explaining common sources of confusion along the way.

The survey forms in Appendix 1 serve as the foundation of the accessibility survey. The forms tell you what information to collect during the survey and provide a place for you to record that information. Consisting of a series of yes/no questions, the survey forms are designed to make identifying architectural barriers easy because the questions are formulated so that responding “no” (circling “N” on the form) indicates a barrier.

The survey forms contain some questions and terms that people unfamiliar with accessibility requirements or surveying might not fully understand. When that occurs, surveyors need to refer to the survey instructions in Appendix 2. The survey instructions, which include illustrations and explanations, are intended to be used in tandem with the survey forms. Each question on the survey forms has a number in the left-hand column, and that number corresponds to an explanation in the survey instructions. Surveyors should refer to the instructions the first time they use a form and as often as needed to make sure they are taking the required measurements and answering the questions correctly. These forms and instructions are intended to help you identify many of the most common architectural barriers to access for people with disabilities. They will not teach you to identify all architectural barriers to access. To identify all architectural barriers, you must refer to one of the applicable design standards – either the ADA Standards for Accessible Design (excluding the elevator exception contained in § 4.1.3(5) of the Standards) or the Uniform Federal Accessibility Standards – and survey for compliance with each of the applicable requirements. The survey materials included in this Tool Kit are based on the requirements in the ADA Standards.

B. What does an accessibility survey entail?

The purpose of an accessibility survey is to determine whether or not a facility, or the component parts of a facility, have barriers to access by people with a variety of disabilities. During an accessibility survey, surveyors assess the current conditions of the facility to identify barriers. The forms and instructions contained in Appendices 1 and 2 will guide surveyors through this process, which generally entails:

- identifying the features at the facility that need to be measured;
- determining which form needs to be completed in order to survey a feature;
- measuring all of the features that impact accessibility using proper measurement devices and techniques;
- accurately answering the questions on the survey forms based on the measurements taken and recording those measurements; and
- taking photographs of the surveyed features, including, when possible, the measurements obtained on measuring tapes and digital levels.

C. Who should conduct the survey?

While it is possible for a single individual to survey facilities for accessibility, most people find it easier to conduct surveys while working in teams of two or three. A team approach can be more efficient because it allows team members to assume different roles. For example, one surveyor can take notes and complete forms while another surveyor is obtaining measurements and taking photos. If the survey is conducted by a three-person team, the third team member can take the photographs or read aloud the survey instructions in Appendix 2.

Like the director of a movie, the person filling out the survey forms generally leads the accessibility survey, which should proceed in the same order as the questions appear on the form. To make sure all questions are answered, the surveyor taking notes should read the question out loud so that the surveyor taking measurements will know what data is needed. Then the surveyor taking measurements can check the survey instructions to see how the measurement should be taken, obtain the measurement, and announce it to the note-taker, who can then record the data on the form.

The note-taking role and the measurement-taking role require different skills. The person recording data on the survey form needs to be detail conscious, ensuring that all the questions are answered, all the data is recorded accurately, and all the answers are legible. Taking measurements, on the other hand, can be more physically demanding than taking notes because it requires frequent stretching, bending, and stooping. In addition, the person taking photographs needs to know how to use the camera and be able to take clear photographs. When assembling a survey team, it is helpful to match these different skills to the relative strengths of the team members.

Being familiar with the contents of the survey forms and instructions is the best way to ensure that the survey proceeds smoothly. Surveyors will naturally gain familiarity with the materials by going out and surveying with them, but it is a good idea to review the forms and instructions before conducting the survey. Knowledge of the materials will enable the surveyors to quickly establish a good pace and rhythm for the survey.

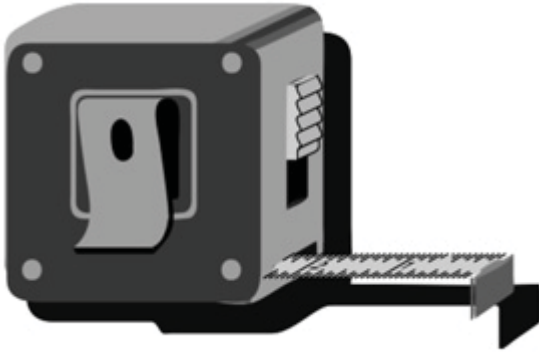
D. What tools are needed to conduct a survey and how do you use them?

Now that you know how team members should work together, you need to gather your “tools of the trade.” The following are the standard tools that the Civil Rights Division uses in conducting its surveys under Project Civic Access:

- a metal measuring tape that is at least 25-feet long;
- a two-foot long electronic (digital) level;
- a digital camera (one with at least three megapixels of resolution with a zoom feature can be used to photograph measurements on tape measures and digital levels); and
- a pressure gauge.

1. Measuring Tape

A metal measuring tape is an essential tool for a successful survey



because many of the accessibility requirements concern the width, height, or depth of various features.

A measuring tape will make a good surveying instrument if it has the following characteristics: it is metal, which is important for durability; it is 25- to 50-feet long, which is necessary because surveyors will often have to measure long distances; and it is easy to read, which will help ensure that the surveyors report accurate data. You will generally not need to measure dimensions in increments of less than $\frac{1}{4}$ inch.

2. Electronic (Digital) Level

The slope of a curb ramp or a walkway can make or break its accessibility. People who use wheelchairs, walkers, and other mobility devices cannot safely use a curb ramp, walkway, or ramp that is too steep. The most effective and efficient way to measure the slope of a walkway is to use a two-foot long electronic (digital) level.

Digital levels are relatively inexpensive, easy to use, and extremely accurate if you read and follow the instructions provided by the manufacturer. For the digital level to perform accurately, you must calibrate it at the beginning of each day before using it to measure any slopes and recalibrate it before using it again if you drop it. Calibrating a digital level is usually simple, taking less than a minute once you read the manufacturer's instructions.



*cited in Kirola v. City & County of San Francisco
No. 14-17521 archived on June 19, 2017*

Helpful Tips for Using a Digital Level

- Don't assume you can tell if a running slope or cross slope is too steep without measuring. Even experts can misjudge how steep a running slope or cross slope is if they do not use a level.
- Make sure there are no pebbles or other debris under your level when you measure slopes and cross slopes. A small pebble or debris under a level can cause your slope measurement to be inaccurate.
- Electronic levels typically show measurements in three different ways: percentages (%), degrees ($^{\circ}$), and ratios (1:8). It is important to keep your level on the same setting – we recommend percentages. If you do not keep your level on the same setting, you will have difficulty determining what your survey data means.

The ADA Standards set requirements for maximum running and cross slopes, so surveyors can generally check compliance with the Standards by measuring where the running slopes appear steepest and where the cross slopes appear

steepest. If the running slopes and cross slopes at the steepest points comply with the requirements for maximum running and cross slopes, the running and cross slopes at other locations will also comply. The illustrated survey instructions for the features where slope and cross slope are likely to be an issue will show you how and where to take the measurements.

Note: Some architects use a "rise over run" formula to calculate the slope of a surface. This formula is useful when designing walkways and other surfaces, but it is not useful when assessing the accessibility of a feature that has already been constructed. This formula does not reliably provide the actual slope because it does not take into account factors such as the existing topography of a site and because it assumes that the slope over the length of the run is consistent, which is often an inaccurate assumption.

3. Camera

Taking photographs is an important part of an accessibility survey. Surveying takes a lot of concentrated effort, it can be physically taxing, and even the best surveyors can make mistakes when they become tired. Photos fill in the gaps. If a question on a survey form is overlooked accidentally, a well-taken photograph will sometimes provide the answer to the question. Photos also help identify accessibility problems that surveyors have inadvertently overlooked. In addition, photos may be useful for reporting and explaining survey techniques and results to decision makers and for crafting solutions to accessibility problems.

For best results, use a digital camera with at least three megapixels of resolution and a zoom lens. Consider using a strap on your camera, since a camera can be easily dropped during a long day of shifting back and forth between taking photos and taking measurements or notes. If possible, use a camera with a time/date stamp setting showing when photographs were taken, since that feature will help you organize.

- Remember to charge the camera battery or, for cameras that use standard disposable batteries, have extra batteries on hand.
- Take "establishing shots" – that is, photographs that show what you are about to survey. Establishing shots help you to organize your photographs after the survey work is done for the day. If you are surveying the County Courthouse, the first photo you should take is an establishing shot showing an easily identifiable exterior view of the County Courthouse. Remember, establishing shots not only help you separate photographs of one building from another, they also help you separate photos of one room from another, otherwise, it may be difficult to separate photos of one courtroom from another. If the establishing shot does not include a sign with a room number or description, consider making a handwritten sign that you photograph.
- Use the camera to take photos of everything measured for accessibility so you can easily determine the exact location of features that may need to be modified.
- Consider taking additional photos of the digital level showing slope and cross slope measurements of walkways and ramps as well as photos showing exactly where the digital level was placed. This survey technique will help to resolve questions that may arise about how and where measurements were taken and whether information recorded on survey forms is accurate.
- Keep a log of each photograph taken. After all, the drinking fountains on one floor of a facility will often look very similar to the drinking fountains on every other floor.
- At the end of your survey day, either print out your photos and label them carefully or create a detailed photo log while reviewing the photos on a computer. Remember to stop surveying early enough so you have time to organize and label your photos.

Whenever possible, include your measuring tape in your photographs. A good photograph showing the tape measure being used to measure the accessibility of a feature such as a door is an excellent way of documenting ADA compliance as well as accessibility problems that need to be addressed. Photographs of this kind can also assist project managers and

facilities and maintenance personnel in understanding exactly how a feature needs to be modified to provide accessibility.

4. Pressure Gauge

Many people with disabilities have limitations on the amount of force they can exert to open a door or operate a device that requires pushing or pulling. In general, if the operation of a door, a faucet, or other device requires more than 5 pounds of force, it is not accessible to many people with disabilities.

To ensure that doors and mechanical devices are not barriers to accessibility, you need to measure the force required to operate them. The device used to make this measurement is called a **pressure gauge**. A pressure gauge can be manual or electronic. Either one will work as long as it is periodically checked for proper calibration in accordance with the manufacturer's instructions. The survey instructions provided in Appendix 1 will explain how to use the pressure gauge to measure the force needed to operate specific elements.

Examples of What to Measure with a Pressure Gauge:

Use a pressure gauge to measure the force needed to:

- Open interior doors
- Operate "push-style" faucets
- Operate "push-style" drinking fountains
- Use a paper towel dispenser or hand dryer
- Use call buttons
- Operate locking mechanisms

*cited in Kirola v. City & County of San Francisco
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5. Other Helpful Tools

Many surveyors find other tools helpful, such as a clipboard to hold survey forms, a binder to hold survey instructions, a tabbed accordion folder to hold copies of survey forms, a rolling bag to hold survey equipment and forms, and a highlighter pen to identify barriers on completed survey forms.

October 26, 2009

cited in *Kirola v. City & County of San Francisco*
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