



**ICC (ASC A117) CONSENSUS COMMITTEE ON  
ACCESSIBLE AND USABLE BUILDINGS AND  
FACILITIES**

**Second Ballot**

**Clean draft for Ballot**

**9-12-2024**

The complete draft is shown so that the revisions can be viewed in context. However, only the gray highlighted sections contain revisions with technical changes that are open for comment. The proposal change numbers are indicated for those sections so that commenters can relate the changes to the proposals. The deadline to receive comments is Nov. 25, 2024.

## CHAPTER 1

# APPLICATION AND ADMINISTRATION

### SECTION 101 TITLE

**101.1 General.** This document shall be known as the standard for *Accessible* and Usable Buildings and *Facilities*, hereinafter referred to as “this standard.”

### SECTION 102 PURPOSE

**102.1 General.** The technical criteria in Chapters 3 through 10, Sections 1102, 1103, and 1106 of this standard make *sites*, buildings, *facilities* and *elements accessible* to and usable by people with such physical disabilities: as the inability to walk, difficulty walking, reliance on walking aids, blindness and visual impairment, deafness and hearing impairment, incoordination, reaching and manipulation disabilities, lack of stamina, difficulty interpreting and reacting to sensory information, and extremes of physical size. The intent of these sections is to allow a person with a physical disability to independently get to, enter, and use a *site*, building, *facility* or *element*.

The intent of Sections 611 and 615 is to allow for assistance by a care giver where a person may not be able to independently use toileting or bathing *facilities*.

Section 1104 of this standard provides criteria for Type B units. These criteria are intended to be consistent with the intent of the criteria of the U.S. Department of Housing and Urban Development (HUD) Fair Housing Accessibility Guidelines. The Type B units are intended to supplement, not replace, Accessible units or Type A units as specified in this standard.

Section 1105 of this standard provides criteria for minimal accessibility features for one and two family *dwelling units* and townhouses which are not covered by the U.S. Department of Housing and Urban Development (HUD) Fair Housing Accessibility Guidelines.

This standard is intended for adoption by government agencies and by organizations setting model codes to achieve uniformity in the technical design criteria in building codes and other regulations.

**102.2 Applicability.** *Sites*, buildings, *facilities*, and *elements* required to be *accessible* by the scoping provisions adopted by the *administrative authority* shall comply with the applicable provisions of Chapters 3 through 10. *Dwelling units* and *sleeping units* shall comply with the applicable provisions of Chapter 11.

### SECTION 103 HUMAN FACTOR PROVISIONS

**103.1 General.** The technical criteria in this standard are based on body sizes and functional abilities of adults and, in those sections where specifically noted, children.

## **SECTION 104 COMPLIANCE ALTERNATIVES**

**104.1 General.** Nothing in this standard is intended to prevent the use of designs, products or technologies as alternatives to those prescribed by this standard, provided they result in equivalent or greater accessibility and such equivalency is approved by the *administrative authority* adopting this standard.

## **SECTION 105 CONVENTIONS**

**105.1 General.** Where specific criteria of this standard differ from the general criteria of this standard, the specific criteria shall apply.

**105.2 Calculation of percentages.** 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.

**105.3 Dimension tolerances.** All dimensions are subject to conventional industry tolerances except where the requirement is a range with stated minimum and maximum end points.

**105.4 Figures.** Unless specifically stated, figures included herein are provided for informational purposes only and are not considered part of the standard.

### **Figure 105.4**

#### **GRAPHIC CONVENTION FOR FIGURES**

**105.5 Referenced sections.** Unless specifically stated otherwise, a reference to another section or subsection within this standard includes all subsections of the referenced section or subsection.

## **SECTION 106 REFERENCED DOCUMENTS**

**106.1 General.** The documents listed in Section 106.2 shall be considered part of this standard to the prescribed extent of each such reference. Where criteria in this standard differ from those of these referenced documents, the criteria of this standard shall apply.

### **106.2 Documents.**

#### **Proposal 07-19-2021 D/AMBC2 & PC2**

**106.2.1 Aerospace Material Specification - (R) Colors Used in Government Procurement.** AMS-STD-595A, revised 2017-02. (SAE International, 400 Commonwealth Drive, Warrendale, PA 15096).

**106.2.2 Americans with Disabilities Act (ADA) Accessibility Guidelines for Transportation Vehicles.** 36 CFR 1192 published in 56 Federal Register 45558, September 6, 1991 (United States Access Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004-1111).

**106.2.3 Hearing aids – Magnetic field strength in audio-frequency induction loops for hearing aids operating with an induction pickup coil.** IEC 60118.4-2014 (International Electrotechnical Commission, 3 rue de Varenbe, PO Box 131, 1211 Geneva 20, Switzerland.)

**Proposal 05-10-2021 AM/AM PC1, PC2, PC3**

**106.2.4 International Building Code.** International Building Code-2024 (International Code Council (ICC), Inc. 200 Massachusetts Avenue. NW, Suite 250, Washington, DC 2001.)

**106.2.5 Manual on Uniform Traffic Control Devices.** MUTCD-2009 with Revisions 1 and 2 incorporated, May 2012 (The Federal Highway Administration, Office of Transportation Operations, Room 3408, 400 7th Street, S.W., Washington, DC 20590).

**106.2.6 National Fire Alarm and Signaling Code.** NFPA 72-2016 (National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269-9101).

**106.2.7 National Fire Alarm and Signaling Code.** NFPA 72 2022 (National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269-9101).

**106.2.8 Performance Criteria for Accessible Communications Entry Systems.** ANSI/DASMA 303 2017. (Door and Access Systems Manufacturers Association, 1300 Sumner Avenue, Cleveland, OH 44115-2851).

**106.2.9 Power Assist and Low Energy Power Operated Doors.** ANSI/BHMA A156.19-2019 (Builders Hardware Manufacturers' Association, 355 Lexington Avenue, 15th Floor, New York, NY 10017).

**106.2.10 Power Operated Pedestrian Doors.** ANSI/BHMA A156.10-2022 (Builders Hardware Manufacturers' Association, 355 Lexington Avenue, 15th Floor, New York, NY 10017).

**106.2.11 Safety Code for Elevators and Escalators.** ASME A17.1-2022/CSA B44-2022 (American Society of Mechanical Engineers International, Three Park Avenue, New York, NY 10016-5990).

**106.2.12 Safety Standard for Platform Lifts and Stairway Chairlifts.** ASME A18.1-2020 (American Society of Mechanical Engineers International, Three Park Avenue, New York, NY 10016-5990).

**106.2.13 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use.** ASTM F 1487-21 (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959).

**Proposal 06-90-2021 AM/AMPC 4 AM**

**106.2.14 Standard for Assistive Tables** IAPMO Z1390-2024 (IAPMO, 4755 E. Philadelphia St., Ontario, CA 91761)

**106.2.15 Standard Laboratory Test Method for Determination of Forces and Motions Required to Activate Operable Parts of Operable Windows and Doors in Accessible Spaces.** AAMA 513-14 (AAMA, 1827 Walden Office Square, Suite 550, Schaumburg, IL 60173-4268).

**106.2.16 Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment.** ASTM F 1292-18e1 (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959).

**106.2.17 Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods.** ASTM E 2235-04 (2020) (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959).

## SECTION 107 DEFINITIONS

**107.1 General.** For the purpose of this standard, the terms listed in Section 107.5 have the indicated meaning.

**107.2 Terms defined in referenced documents.** Terms specifically defined in a referenced document, and not defined in Section 107, shall have the specified meaning from the referenced document.

**107.3 Undefined terms.** The meaning of terms not specifically defined in this standard or in a referenced document shall be as defined by collegiate dictionaries in the sense that the context implies.

**107.4 Interchangeability.** Words, terms and phrases used in the singular include the plural, and those used in the plural include the singular.

### 107.5 Defined terms.

**accessibility function button:** A button on an elevator *hall call console* in a *destination-oriented elevator system* that, when pressed, will activate a series of visual and verbal prompts or announcements providing instruction regarding *hall call console* operation and direction to an assigned elevator.

**accessible:** Describes a *site*, building, *facility* or portion thereof that complies with this standard.

**administrative authority:** A jurisdictional body that adopts or enforces regulations and standards for the design, construction or operation of buildings and *facilities*.

**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, worship, 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, spaces utilized for viewing motion picture projections, auditoria, theaters,

playhouses, dinner theaters, concert halls, centers for the performing arts, amphitheaters, arenas, stadiums, grandstands, places of religious worship 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.

**blended transition:** A raised pedestrian street crossing, depressed corner or similar connection between the pedestrian access route at the level of the sidewalk and the level of the pedestrian street crossing that has a grade of one unit vertical in 20 units horizontal (5 percent slope) or less.

### Proposal 08-09-2021 AS/AMPC1

**boarding platform:** A platform raised above standard curb height used for transit vehicle boarding and alighting.

**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.

### Proposal E11-24 AS

**building blocks:** The core components of an *accessible* and usable building or *facility*.

**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:** Spaces and *elements* specifically designed for use primarily by people 12 years old or younger.

### Proposal 01-05-21 D/AMPC1

**CIE tristimulus value Y:** The ratio of the luminance of a surface to that of a perfectly diffusing white surface, when illuminated and viewed under specific spectral and geometric conditions of measurement as defined by the International Commission in Illumination (CIE). (See Light Reflectance Value (LRV))

### Proposal E11-24 AS

**clear floor space:** The *building block* that is the minimum space to accommodate one person using a wheelchair or other mobility device.

**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*.

**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.

**counter slope:** Any slope opposing the *running slope* of a *curb ramp*.

**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.

### Proposal 01-05-21 D/AMPC1

**dark:** Surfaces with very low *light reflectance values (LRV)*, approaching pure black. (See *Light Reflectance Value (LRV)*)

**destination-oriented elevator system:** An elevator system that provides lobby controls for the selection of destination floors, lobby indicators designating which elevator to board and a car indicator designating the floors at which the car will stop.

**detectable warning surfaces:** A standardized surface feature built in or applied to floor surfaces to warn of hazards on a *circulation path*.

**dwelling unit:** A single unit providing complete, independent living *facilities* for one or more persons including permanent provisions for living, sleeping, eating, cooking, and sanitation.

### Proposal 05-08-2021 AS/AM PC1

**electric vehicle (EV) charging space:** A space to park a vehicle for charging. (see *electric vehicle (EV) charging station*)

### Proposal 05-08-2021 AS/AM PC1

**electric vehicle (EV) charging station:** One or more electrical vehicle (EV) chargers at a common location (see *electric vehicle (EV) charging space*).

**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.

**elevator car call sequential step scanning:** A technology used to enter a car call by means of an up or down floor selection button.

**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*.

**existing building:** A building erected prior to the date of adoption of this standard, or one for which a legal building permit has been issued.

**existing facility:** A facility completed prior to the date of adoption of this standard, or one for which a legal permit has been issued.

**facility:** All or any portion of a building, structure, site improvements, *elements* and pedestrian routes or *vehicular ways* located on a *site*.

### Proposal 05-10-2021 AM/AFM PC3

**flight:** A continuous run of treads from one *landing* to another.

**floor surface.** The *building block* that is the minimum criteria for finish floor or ground surface.

**gangway:** A variable-sloped pedestrian walkway that links a fixed structure or 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.

**grade break:** The line where two surface planes with different grades meet.

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

**habitable:** A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

**hall call console.** An elevator call user interface exclusive to a *destination-oriented elevator system* that requires the user to select a destination floor prior to entering the elevator car.

### Proposal 05-10-2021 AM/AFM PC3

**handrail:** A horizontal or sloping rail intended for grasping by the hand for guidance or support.

**key surface:** The surface or plane of any key or button that must be touched to activate or deactivate an *operable part* or a machine function or enter data.

**knee and toe clearance:** The *building block* that is the volume of space required by *knee clearance* and *toe clearance* combined.

**knee clearance:** The *building block* that is the volume of space required for a person seated in a wheelchair to position or maneuver their knees beneath an *element*.

**toe clearance:** The *building block* that is the volume of space required for a person seated in a wheelchair to position or maneuver their toes beneath an *element*.

### Proposal 05-10-2021 AM/AFM PC2

**landing:** That portion of a walking surface required for direct access to or from; an adjacent *stair*, *flight of stairs*, ramp run, curb ramp or elevator.



## Proposal 01-05-21 D/AMPC1

**light:** Surfaces with very high *light reflectance values (LRV)*, approaching pure white. (See Light Reflectance Value (LRV))

## Proposal 01-05-21 D/AMPC1

**light reflectance value (LRV):** A value from 0 to 100 points representing the proportion of visible light reflected by a surface, weighted for the sensitivity to light of the human eye, with a value of 0 points for pure black and a value of 100 points for pure white. *LRV* is equivalent to *CIE tristimulus value Y*.

**maneuvering clearance:** The minimum space for a person using a wheelchair or other mobility device to access an *accessible element*.

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

## Proposal 05-10-2021 AM/AFM PC3

**nosing:** The leading edge of treads of *stairs* and of *landings* at the top of stairway *flights*.

## Proposal 03-16-2021 AM; E11-24 AS

**operable part:** The *building block* that is a component of an *element* used to insert or withdraw objects, or to activate, deactivate, control 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. (see elevated play component, ground level play component, play area, soft contained play structure)

**protruding object:** The *building block* that describes the extent of leading edges of objects on *circulation path*.

**ramp:** A walking surface that has a *running slope* steeper than one unit vertical in 20 units horizontal (5 percent slope).

**reach range:** The *building block* that describes the extent of unobstructed and obstructed forward and side reaches to an *element*.

**running slope:** The slope that is parallel to the direction of travel (see cross slope).

**sign:** An architectural *element* composed of displayed textual, symbolic, tactile or pictorial information.

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

**sleeping unit:** A room or space in which people sleep that can also include permanent provisions for living, sleeping, eating and either sanitation or kitchen facilities but not both. Such rooms and spaces that are also part of a *dwelling unit* are not *sleeping units*.

**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.

#### Proposal 10-03-2021 AS/AMBC1

**spa.** A product intended for the immersion of persons in temperature-controlled water circulated in a closed system, and not intended to be drained and filled with each use.

#### Proposal 05-10-2021 AM/AFM PC3

**stair:** A change in elevation, consisting of one or more risers.

#### Proposal 05-10-2021 AM/AFM PC3

**stairway:** One or more *flights* of stairs, either exterior or interior, with the necessary *landings* and platforms connecting them, to form a continuous and uninterrupted passage from one level to another.

#### Proposal 05-10-2021 AM/AFM PC3

**spiral stairway:** A *stairway* having a closed circular form in its plan view with uniform section-shaped treads attached to and radiating from a minimum-diameter supporting column.

**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 aide to and from an *amusement ride seat*.

**transition plate:** A sloping pedestrian walking surface located at the ends of a *gangway*.

**TTY:** An abbreviation for teletypewriter. Equipment that employs interactive, text-based communications through the transmission of coded signals across the standard telephone network. The term *TTY* also refers to devices known as text telephones and TDDs.

**turning space:** The *building block* that is a space for a person using a wheelchair or other mobility device to turn around.

**use zone:** The ground level area beneath and immediately adjacent to a play structure or play equipment that is designated by ASTM F 1487 listed in Section 106.2.13, 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.

**variable message signs (VMS):** Electronic signs that have a message with the capacity to change by means of scrolling, streaming or paging across a background.

**variable message sign (VMS) characters:** *Characters* of an electronic sign are composed of pixels in an array. High resolution VMS *characters* have vertical pixel counts of 16 rows or greater. Low resolution VMS *characters* have vertical pixel counts of 7 to 15 rows.

**vehicular way:** A route provided for vehicular traffic, such as in a street, driveway or parking *facility*.

**walk:** An exterior pathway with a prepared surface for pedestrian use.

**wheelchair space:** A space for a single wheelchair and its occupant.

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

## CHAPTER 2

# SCOPING

### SECTION 201

#### GENERAL

**201.1 Scope.** This standard provides technical criteria for making *sites*, building, *facilities* and *elements accessible*. The *administrative authority* shall provide scoping provisions to specify the extent to which these technical criteria apply. These scoping provisions shall address the application of this standard to each building and occupancy type; new construction, alterations, temporary *facilities*, and *existing buildings* and *facilities*; specific *site* and building *elements*; and to multiple *elements* or spaces provided within a *site* or building.

### SECTION 202

#### DWELLING AND SLEEPING UNITS

**202.1 Scope.** Chapter 11 of this standard contains *dwelling unit* and *sleeping unit* criteria for Accessible units, Type A units, Type B units, Type C (Visitable) *dwelling units* and units with communication features. The *administrative authority* shall specify, in separate scoping provisions, the extent to which these technical criteria apply. These scoping provisions shall address the types and numbers of units required to comply with each set of unit criteria.

### SECTION 203

#### ADMINISTRATION

**203.1 General.** The *administrative authority* shall provide an appropriate review and approval process to ensure compliance with this standard.

## CHAPTER 3

# BUILDING BLOCKS

### SECTION 301 GENERAL

**301.1 Scope.** The provisions of Chapter 3 shall apply where required by the scoping provisions adopted by the *administrative authority* or by Chapters 4 through 11.

**301.2 Building blocks.** The *building blocks*, where required by this standard, shall comply with the following:

1. *Floor surfaces* shall comply with Section 302.
2. Changes in level in *floor surfaces* shall comply with Section 303.
3. *Turning spaces* shall comply with Section 304.
4. *Clear floor spaces* shall comply with Section 305.
5. *Knee and toe clearance* shall comply with Section 306
6. *Protruding objects on circulation paths* shall comply with Section 307.
7. *Reach ranges* shall comply with Section 308.
8. *Operable parts* shall comply with Section 309.

**301.3 Overlap.** Unless otherwise specified, *clear floor spaces*, *maneuvering clearances* at fixtures, *maneuvering clearances* at doors, and *turning spaces* shall be permitted to overlap.

### SECTION 302 FLOOR SURFACES

**302.1 General.** *Floor surfaces* shall be stable, firm, and slip resistant, and shall comply with Section 302.

**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. The pile shall be  $\frac{1}{2}$  inch (12.7 mm) maximum in height. Exposed edges of carpet shall be fastened to the floor and shall have trim along the entire length of the exposed edge. Carpet edge trim shall comply with Section 303.

#### FIGURE 302.2 CARPET ON FLOOR SURFACES

**302.3 Openings.** Openings in *floor surfaces* shall be of a size that does not permit the passage of a  $\frac{1}{2}$ -inch (12.7 mm) diameter sphere, except as allowed in Sections 407.4.3, 408.4.3, 409.4.3, 410.4 and 805.10. Elongated openings shall be placed so that the long dimension is perpendicular to the predominant direction of travel.

#### Figure 302.3 OPENINGS IN FLOOR SURFACES

## SECTION 303 CHANGES IN LEVEL

**303.1 General.** Changes in level in *floor surfaces* shall comply with Section 303.

**303.2 Vertical.** Changes in level of  $\frac{1}{4}$  inch (6.4 mm) maximum in height shall be permitted to be vertical.

**Figure 303.2 VERTICAL CHANGE IN LEVEL**

**303.3 Beveled.** Changes in level greater than  $\frac{1}{4}$  inch (6.4 mm) in height and not more than  $\frac{1}{2}$  inch (12.7 mm) maximum in height shall be beveled with a slope not steeper than one unit vertical in 2 units horizontal (50 percent slope).

**Figure 303.3 BEVELED CHANGES IN LEVEL**

**303.4 Ramps.** Changes in level greater than  $\frac{1}{2}$  inch (12.7 mm) in height shall be by a *ramp* complying with Section 405 or by a *curb ramp* complying with Section 406.

## SECTION 304 TURNING SPACE

**304.1 General.** A *turning space* shall comply with Section 304.

**304.2 Floor surface.** *Floor surfaces* of a *turning space* shall comply with Section 302. Changes in level shall not be permitted within the *turning space*.

**Exception:** Slopes not steeper than one unit vertical in 48 inches horizontal (2 percent slope) one unit vertical in 48 inches horizontal (2 percent slope) shall be permitted.

**Proposal 03-04-21 D/BC2 AM**

**304.3 Size and slope.** *Turning spaces* shall comply with Section 304.3.1 or 304.3.2. *Circular turning spaces* shall not have slopes steeper than one unit vertical in 48 inches horizontal (2 percent slope) measured along any diameter and along the diameter 90 degrees to the first diameter. The base and arms of T-turns shall not have slopes steeper than one unit vertical in 48 inches horizontal (2 percent slope) measured along the length and width.

**304.3.1 Circular space.** *Circular turning space* shall comply with Section 304.3.1.1 or 304.3.1.2 as applicable.

**304.3.1.1 New buildings and facilities.** In new buildings and *facilities*, the *turning space* shall be a circular space with a 67-inch (1700 mm) minimum diameter.

**Figure 304.3.1.1 CIRCULAR TURNING SPACE – NEW BUILDINGS SIZE AND OVERLAP**

**Proposal 03-05-21 D/BC2 AM**

**304.3.1.1.1 Overlap.** *Turning spaces* shall be permitted to include *knee and toe clearance* complying with Section 306. Where the *turning space* includes *knee and toe clearances* under an obstruction, the overlap shall comply with of the following:

1. The depth of the overlap shall not be more than 16 inches (406 mm).
2. The depth shall not exceed the depth of the *knee and toe clearances* provided.

3. The overlap shall be permitted only within the turning circle area shown shaded in Figure 304.3.1.1.

**304.3.1.2 Existing buildings and facilities.** In *existing buildings and facilities*, the *turning space* shall be a circular space with a 60-inch (1525 mm) minimum diameter.

**Figure 304.3.1.2 CIRCULAR TURNING SPACE – EXISTING BUILDINGS – SIZE AND OVERLAP**

**304.3.1.2.1 Overlap.** *Turning spaces* shall be permitted to include *knee and toe clearance* complying with Section 306.

**304.3.2 T-Shaped space.** T-shape *turning space* shall comply with Section 304.3.2.1 or 304.3.2.2 as applicable.

**304.3.2.1 New buildings and facilities.** In new buildings and *facilities*, the *turning space* shall be a T-shaped space complying with one of the following:

1. A T-shaped space, clear of obstruction, that fits within an area 68 inches (1725 mm) wide and 60 inches (1525 mm) deep, with two arms and one base that are all 36 inches (915 mm) minimum in width. Each arm shall extend 16 inches (405 mm) minimum from each side of the base located opposite the other, and the base shall extend 24 inches (610 mm) minimum from the arms. At the intersection of each arm and the base, the interior corners shall be chamfered for 8 inches (205 mm) minimum along both the arm and along the base.
2. A T-shaped space, clear of obstruction, that fits within an area 64 inches (1625 mm) wide and 60 inches (1525 mm) deep, with two arms 38 inches (965 mm) minimum in width and a base 42 inches (1065 mm) minimum in width. Each arm shall extend 11 inches (280 mm) minimum from each side of the base, located opposite the other, and the base shall extend 22 inches (560 mm) minimum from each arm.
3. A T-shaped space, clear of obstruction, 64 inches (1625 mm) wide and 60 inches (1525 mm) deep, with two arms and one base 40 inches (1015 mm) minimum in width. Each arm shall extend 12 inches (305 mm) minimum from each side of the base and the base shall extend 20 inches (510 mm) minimum from each arm.

**Figure 304.3.2.1 (A) T-SHAPED TURNING SPACE - NEW BUILDINGS – OPTION 1**

**Figure 304.3.2.1 (B) T-SHAPED TURNING SPACE - NEW BUILDINGS – OPTION 2**

**Figure 304.3.2.1 (C) T-SHAPED TURNING SPACE - NEW BUILDING – OPTION 3**

**304.3.2.1.1 Overlap.** *Turning spaces* shall be permitted to include *knee and toe clearance* complying with Section 306 of either the base or one arm. For Option 1, the base or arm is the portion beyond the chamfer.

**Figure 304.3.2.1.1 T-SHAPED TURNING SPACE - NEW BUILDINGS - OVERLAP**

**304.3.2.2 Existing buildings and facilities.** In *existing buildings and facilities*, the *turning space* shall be a T-shaped space within a 60-inch (1525 mm) minimum square, with arms and base 36

inches (915 mm) minimum in width. 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.

**Figure 304.3.2.2 T-SHAPED TURNING SPACE - EXISTING BUILDINGS - SIZE**

**304.3.2.2.1 Overlap.** *Turning spaces* shall be permitted to include i complying with Section 306 only at the end of either the base or one arm.

**Figure 304.3.2.2.1 T-SHAPED TURNING SPACE – EXISTING BUILDINGS - OVERLAP**

**304.4 Door swing.** Unless otherwise specified, doors shall be permitted to swing into *turning spaces*.

**SECTION 305  
CLEAR FLOOR SPACE**

**305.1 General.** A *clear floor space* shall comply with Section 305.

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**305.2 Floor surfaces.** *Floor surfaces* of a *clear floor space* shall comply with Section 302. Changes in level shall comply with Section 303 within the *clear floor space*.

**Exception:** *Running slope* and *cross slope* not steeper than one unit vertical in 48 inches horizontal (2 percent slope) shall be permitted.

**305.3 Size.** The *clear floor space* shall comply with Section 305.3.1 or 305.3.2 as applicable.

**305.3.1 New buildings and facilities.** In new buildings and *facilities*, the *clear floor space* shall be 52 inches (1320 mm) minimum in length and 30 inches (760 mm) minimum in width.

**Figure 305.3.1**

**SIZE OF CLEAR FLOOR SPACE – NEW BUILDINGS**

**305.3.2 Existing buildings and facilities.** In *existing buildings* and *facilities*, the *clear floor space* shall be 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width.

**Figure 305.3.2 SIZE OF CLEAR FLOOR SPACE – EXISTING BUILDINGS**

**305.3.3 Type B dwelling and sleeping units.** In new and *existing buildings* and *facilities*, the clear floor space in Type B dwelling units and sleeping units shall be 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width.

**Figure 305.3.3**

**SIZE OF CLEAR FLOOR SPACE – TYPE B DWELLING UNITS AND SLEEPING UNITS**

**305.4 Knee and toe clearance.** Unless otherwise specified, *clear floor space* shall be permitted to include *knee and toe clearance* complying with Section 306.

**305.5 Position.** Unless otherwise specified, *clear floor spaces* shall be positioned for either forward or parallel approach to an *element*.

**Figure 305.5 (A) POSITION OF CLEAR FLOOR SPACE - FORWARD**

**Figure 305.5 (B) POSITION OF CLEAR FLOOR SPACE - PARALLEL**

**305.6 Approach.** One full, unobstructed side of a *clear floor space* shall adjoin or overlap an *accessible route* or adjoin another *clear floor space*.

**305.7 Alcoves.** Where a *clear floor space* is in an alcove or otherwise confined on all or part of three sides, *maneuvering clearances* complying with Sections 305.7.1 and 305.7.2 shall be provided in the alcove, as applicable.

**305.7.1 Parallel approach.** Where a *clear floor space* is positioned for a parallel approach, the *maneuvering clearance* in the alcove shall be 60 inches (1525 mm) minimum in width where the depth exceeds 15 inches (380 mm).

**Figure 305.7.1 MANEUVERING CLEARANCE IN AN ALCOVE - PARALLEL APPROACH**

**305.7.2 Forward approach.** Where a *clear floor space* is positioned for a forward approach the *maneuvering clearance* in the alcove shall be 36 inches (915 mm) minimum in width where the depth exceeds 24 inches (610 mm).

**Figure 305.7.2 MANEUVERING CLEARANCE IN AN ALCOVE - FORWARD APPROACH**

## SECTION 306 KNEE AND TOE CLEARANCE

**306.1 General.** Where space beneath an *element* is included as part of the *clear floor space* at an *element*, *maneuvering clearance* at an *element*, or a *turning space*, the *knee and toe clearance* at that space shall comply with Section 306. Additional space shall not be prohibited beneath an *element*, but shall not be considered as part of the *clear floor space* or *turning space*.

**306.2 Toe clearance.** Space beneath an *element* between the floor and 9 inches (230 mm) above the floor shall be considered *toe clearance* and shall comply with Section 306.2.

**Figure 306.2 (A) TOE CLEARANCE – ELEVATION**

**Figure 306.2 (B) TOE CLEARANCE - PLAN**

**306.2.1 Maximum depth.** *Toe clearance* shall be permitted to extend 25 inches (635 mm) maximum under an *element*.

**306.2.2 Minimum depth.** Where *toe clearance* is required at an *element* as part of a *clear floor space* complying with Section 305, the *toe clearance* shall extend 17 inches (430 mm) minimum beneath the *element*.

**306.2.3 Additional clearance.** Space extending greater than 6 inches (150 mm) beyond the available *knee clearance* at 9 inches (230 mm) above the floor shall not be considered *toe clearance*.

**306.2.4 Width.** *Toe clearance* shall be 30 inches (760 mm) minimum in width.



**306.3 Knee clearance.** ~~306.3.1 General.~~ Space beneath an *element* between 9 inches (230 mm) and 27 inches (685 mm) above the floor shall be considered *knee clearance* and shall comply with Section 306.3.

**Figure 306.3 (A) KNEE CLEARANCE – ELEVATION**

**Figure 306.3 (B) KNEE CLEARANCE - PLAN**

**306.3.1 Maximum depth.** *Knee clearance* shall be permitted to extend 25 inches (635 mm) maximum under an *element* at 9 inches (230 mm) above the floor.

**306.3.2 Minimum depth.** Where *knee clearance* is required beneath an *element* as part of a *clear floor space* complying with Section 305, the *knee clearance* shall be 11 inches (280 mm) minimum in depth at 9 inches (230 mm) above the floor, and 8 inches (205 mm) minimum in depth at 27 inches (685 mm) above the floor.

**306.3.3 Clearance reduction.** Between 9 inches (230 mm) and 27 inches (685 mm) above the floor, the *knee clearance* shall be permitted to be reduced at a rate of 1 inch (25 mm) in depth for each 6 inches (150 mm) in height.

**306.3.4 Width.** *Knee clearance* shall be 30 inches (760 mm) minimum in width.

## SECTION 307 PROTRUDING OBJECTS

**307.1 General.** *Protruding objects* on *circulation paths* shall comply with Section 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 floor shall protrude 4 inches (100 mm) maximum horizontally into a *circulation path*.

**Exception:** *Handrails* shall be permitted to protrude 4<sup>1/2</sup> inches (115 mm) maximum.

**Figure 307.2 LIMITS OF PROTRUDING OBJECTS**

**307.3 Post-mounted objects.** Objects on posts or pylons shall be permitted to overhang 4 inches (100 mm) maximum where more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the floor. Objects on multiple posts or pylons where the clear distance between posts or pylons is greater than 12 inches (305 mm) shall have the lowest edge of such object either 27 inches (685 mm) maximum or 80 inches (2030 mm) minimum above the floor.

**Exception:** Sloping portions of *handrails* between the top and bottom riser of *stairs* and above the ramp run shall not be required to comply with Section 307.3.

**Figure 307.3 (A) POST-MOUNTED PROTRUDING OBJECTS**

**Figure 307.3 (B) POST-MOUNTED PROTRUDING OBJECTS**

### Proposal 03-09-2021 AM/AFM BC5 & PC3; E-01-2023 AM; E8-2024 AS

**307.4 Headroom clearance.** Headroom clearance shall be 80 inches (2030 mm) high minimum. Rails or other barriers shall be provided where the headroom clearance is less than 80 inches (2030 mm) high. The leading edge of such rails or barrier shall be located 10 inches (255 mm) minimum and 27 inches (685 mm) maximum above the floor.

**Exception:** Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the floor.

**Figure 307.4 REDUCED HEADROOM CLEARANCE**

**307.5 Required clear width.** *Protruding objects* shall not reduce the clear width required for *accessible routes*.

**SECTION 308  
REACH RANGES**

**308.1 General.** Reach ranges shall comply with Section 308.

**308.2 Forward reach.** Forward reach shall comply with Section 308.2.1 or 308.2.2.

**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 floor.

**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* complying with Section 305 and *knee and toe clearance* complying with Section 306 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 above the floor where the reach depth over the obstruction is 20 inches (510 mm) maximum. The high forward reach shall be 44 inches (1120 mm) maximum above the floor where the reach depth over the obstruction is greater than 20 inches (510 mm) and not more than 25 inches (635 mm) maximum.

**Figure 308.2.2 OBSTRUCTED HIGH FORWARD REACH**

**308.3 Side reach.** Side reach shall comply with Section 308.3.1 or 308.3.2.

**308.3.1 Unobstructed.** Where a *clear floor space* complying with Section 305 allows a parallel approach to an *element* and the edge of the *clear floor space* is 10 inches (255 mm) maximum from the *element*, 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 floor.

**Exceptions:**

1. Existing *elements* that are not altered shall be permitted at 54 inches (1370 mm) maximum above the floor.
2. *Operable parts* on fuel dispensers installed on existing curbs shall be permitted at 54 inches (1370 mm) maximum above the floor.

**Figure 308.3.1 UNOBSTRUCTED SIDE REACH**

**308.3.2 Obstructed high reach.** Where a *clear floor space* complying with Section 305 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 above the floor and the depth of the obstruction shall be 24 inches (610 mm) maximum. The high side reach shall be 48 inches (1220 mm) maximum above the floor 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 above the floor for a reach depth of 24 inches (610 mm) maximum.

**Figure 308.3.2 (A) OBSTRUCTED HIGH SIDE REACH**

**Figure 308.3.2 (B) OBSTRUCTED HIGH SIDE REACH**

## **SECTION 309 OPERABLE PARTS**

### **Proposal 03-10-2021 AM/AFM Combined PC**

**309.1 General.** *Operable parts* shall comply with Section 309.

**Exceptions:** The *operable parts* of the following items are not required to comply with Section 309:

1. Receptacle outlets serving a dedicated use.
2. Floor receptacle outlets.
3. HVAC diffusers.
4. Controls mounted on ceiling fans.
5. Where redundant controls other than light switches are provided for a single *element*, one control in each space shall not be required to comply with Section 309.
6. Reset buttons and shut-offs serving appliances, piping or plumbing fixtures.
7. Electrical panelboards shall not be required to comply with Section 309.4.
8. Emergency aid devices, such as fire department hose connections, valve controls, gauges, police call boxes and annunciator panels shall not be required to comply with Section 309 provided that they are used only for emergencies by emergency personnel acting in their official capacity.
9. Receptacle outlets serving counters in kitchens shall not be required to comply with Section 309 where they comply with Section 804.6.

**309.2 Clear floor space.** A *clear floor space* complying with Section 305 shall be provided.

**309.3 Height.** All portions of *operable parts* required for use or operation shall be located within one or more of the *reach ranges* specified in Section 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 5.0 pounds (22.2 N) maximum.

**Exception:** Gas pump nozzles shall not be required to provide *operable parts* that have an activating force of 5.0 pounds (22.2 N) maximum.

## CHAPTER 4

# ACCESSIBLE ROUTES

### SECTION 401 GENERAL

**401.1 Scope.** *Accessible* routes required by the scoping provisions adopted by the *administrative authority* shall comply with the applicable provisions of Chapter 4. Where *building blocks* are required in this chapter, they shall comply with the applicable provisions of Chapter 3.

### SECTION 402 ACCESSIBLE ROUTES

**402.1 General.** *Accessible* routes shall comply with Section 402.

**402.2 Components.** *Accessible* routes shall consist of one or more of the following components:

1. Walking surfaces with a *running slope* not steeper than one unit vertical in 20 units horizontal (5 percent slope).
2. Doors, doorways, and gates.
3. *Ramps*.
4. *Curb ramps* excluding the flared sides, and *blended transitions*.
5. Passenger elevators, including Limited-Use/Limited-Application elevators and Private Residence elevators.
6. Platform lifts.

All components of an *accessible* route shall comply with the applicable portions of this standard.

**402.3 Revolving doors, revolving gates and turnstiles.** Revolving doors, revolving gates and turnstiles shall not be part of an *accessible* route.

### SECTION 403 WALKING SURFACES

**403.1 General.** Walking surfaces that are a part of an *accessible* route shall comply with Section 403.

**403.2 Walking surface.** Walking surfaces shall comply with *floor surfaces*.

**403.3 Slope.** The *running slope* of walking surfaces shall not be steeper than one unit vertical in 20 units horizontal (5 percent slope). The *cross slope* of a walking surface shall not be steeper than one unit vertical in 48 inches horizontal (2 percent slope).

**403.4 Clear width.** The clear width of an *accessible* route shall comply with Section 403.4.1, 403.4.2, 403.4.3 or 403.4.4 as applicable.

**403.4.1 General.** The clear width of an interior *accessible* route shall be 36 inches (915 mm) minimum. The clear width of an exterior *accessible* route shall be 48 inches (1220 mm) minimum.

**Exceptions:**

1. In new buildings and *facilities*, 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 the reduced-width segments are separated by segments that are 52 inches (1320 mm) minimum in length and 36 inches (915 mm) minimum in width.
2. In *existing buildings* and *facilities*, 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 the reduced width segments are separated by segments that are 48 inches (1220 mm) minimum in length and 36 inches (915 mm) minimum in width.
3. The clear width of an exterior accessible route located within seating areas shall be 36 inches (915 mm) minimum.
4. The clear width of an exterior ramp shall comply with Section 405.5.

**Figure 403.4.1 (A) CLEAR WIDTH OF AN ACCESSIBLE ROUTE – NEW BUILDINGS – INTERIOR**

**Figure 403.4.1 (B) CLEAR WIDTH OF AN ACCESSIBLE ROUTE – NEW BUILDINGS – EXTERIOR**

**Figure 403.4.1 (C) CLEAR WIDTH OF AN ACCESSIBLE ROUTE – EXISTING BUILDINGS – INTERIOR**

**Figure 403.4.1 (D) CLEAR WIDTH OF AN ACCESSIBLE ROUTE – EXISTING BUILDINGS – EXTERIOR**

**403.4.2 Clear width at 180-degree turn.** Clear width at 180-degree turns shall comply with Section 403.4.2.1 or 404.4.2.2 as applicable.

**403.4.2.1 New buildings and facilities.** In new building and *facilities*, where an *accessible* route makes a 180-degree turn around an object that is equal to or greater than 52 inches (1320 mm) in width, the clear widths in the turn shall comply with Section 403.4.3.1. Where an *accessible* route makes a 180-degree turn around an object that is less than 52 inches (1320 mm) in width, the clear widths approaching the turn, during the turn and leaving the turn, shall be one of the following sets of dimensions:

1. Approaching width is 36 inches (915 mm) minimum, during width is 60 inches (1525 mm) minimum, and leaving width is 36 inches (915 mm) minimum.
2. Approaching width is 42 inches (1065 mm) minimum, during width is 48 inches (1220 mm) minimum, and leaving width is 42 inches (1065 mm) minimum.
3. Approaching width is 43 inches (1090 mm) minimum, during width is 43 inches (1090 mm) minimum, and leaving width is 43 inches (1090 mm) minimum.

**Figure 403.4.2.1 (A)**

CLEAR WIDTH AT 180-DEGREE TURN  
NEW BUILDINGS – OPTION 1

**Figure 403.4.2.1 (B)**

CLEAR WIDTH AT 180-DEGREE TURN

NEW BUILDINGS – OPTION 2

**Figure 403.4.2.1 (C)**

CLEAR WIDTH AT 180-DEGREE TURN

NEW BUILDINGS – OPTION 3

**403.4.2.2 Existing buildings and facilities.** In *existing buildings and facilities*, where an *accessible* route makes a 180 degree turn around an object that is less than 48 inches (1220 mm) in width, clear widths shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum during the turn, and 42 inches (1065 mm) minimum leaving the turn.

**Exception:** Section 403.4.2.2 shall not apply where the clear width during the turn is 60 inches (1525 mm) minimum.

**Figure 403.4.2.2 (A)**

CLEAR WIDTH AT 180-DEGREE TURN

EXISTING BUILDINGS

**Figure 403.4.2.2 (B)**

CLEAR WIDTH AT 180-DEGREE TURN

EXISTING BUILDINGS - EXCEPTION

**403.4.3 Clear width at 90-degree turn.** Clear width at 90-degree turns shall comply with Section 403.4.3.1 or 404.4.3.2 as applicable.

**Proposal 04-04-21 D/BC1 AM**

**403.4.3.1 New buildings and facilities.** In new buildings and *facilities*, where an *accessible* route makes a 90-degree turn the clear widths approaching the turn and leaving the turn shall be one of the following sets of dimensions:

1. Both legs of the turn shall be 40 inches (1015 mm) minimum in width. The width of each leg of the turn shall be maintained for 28 inches (710 mm) minimum from the inner corner.
2. Where the interior corners of the turn are chamfered for 8 inches (205 mm) minimum along both walls, both legs of the turn shall be 36 inches (915 mm) minimum in width.
3. Where one leg of the turn is 42 inches (1065 mm) minimum in width, the other shall be permitted to be 38 inches (965 mm) minimum in width.
4. Where one leg of the turn is 44 inches (1120 mm) minimum in width, the other shall be permitted to be 36 inches (915 mm) minimum in width.

**Exceptions:**

1. Where an *accessible* route makes a 90-degree turn at doors, doorways and gates complying with Section 404.2.3, the route shall not be required to comply with Section 403.4.3.1.

2. Where an *accessible* route makes a 90-degree turn at an elevator or platform lift complying with Sections 407 through 410, the *accessible* route shall not be required to comply with Section 403.4.3.1.
3. Where an *accessible* route makes a 90-degree turn into a *clear floor space*, *wheelchair space* or *maneuvering clearance* the *accessible* route shall not be required to comply with Section 403.4.3.1.

**Figure 403.4.3.1 (A)**

CLEAR WIDTH AT 90-DEGREE TURN

NEW BUILDINGS – OPTION 1

**Figure 403.4.3.1 (B)**

CLEAR WIDTH AT 90-DEGREE TURN

NEW BUILDINGS – OPTION 2

**Figure 403.4.3.1 (C)**

CLEAR WIDTH AT 90-DEGREE TURN

NEW BUILDINGS – OPTION 3

**Figure 403.4.3.1 (D)**

CLEAR WIDTH AT 90-DEGREE TURN

NEW BUILDINGS – OPTION 4

**403.4.3.2 Existing buildings and facilities.** In *existing buildings* and *facilities*, where an *accessible* route makes a 90-degree turn, the clear widths approaching the turn and leaving the turn shall be 36 inches (915 mm) minimum.

**Figure 403.4.3.2**

CLEAR WIDTH AT 90-DEGREE TURN

EXISTING BUILDINGS

**403.4.4 Passing space.** Passing space shall comply with Section 403.4.4.1 or 403.4.4.2 as applicable.

**403.4.4.1 New buildings and facilities.** In new buildings and *facilities*, 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 60-inch (1525 mm) minimum by 60-inch (1525 mm) minimum space, or an intersection of two walking surfaces that provide a T-shaped *turning space*, provided the base and arms of the T-shaped space extend 52 inches (1320 mm) minimum beyond the intersection.

**Figure 403.4.4.1 (A)**

PASSING SPACE – NEW BUILDINGS – 60 X 60 OPTION

**Figure 403.4.4.1 (B)**

PASSING SPACE – NEW BUILDINGS – T-TURN OPTION

**403.4.4.2 Existing buildings and facilities.** In *existing buildings and facilities*, 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 60-inch (1525 mm) minimum by 60-inch (1525 mm) minimum space, or an intersection of two walking surfaces that provide a T-shaped *turning space*, provided the base and arms of the T-shaped space extend 48 inches (1220 mm) minimum beyond the intersection.

**Figure 403.4.4.2 (A)**

PASSING SPACE – EXISTING BUILDINGS – 60 X 60 OPTION

**Figure 403.4.4.2 (B)**

PASSING SPACE – EXISTING BUILDINGS – T-TURN OPTION

**403.5 Handrails.** Where *handrails* are required at the side of a corridor, they shall comply with Sections 506.4 through 506.9.

## SECTION 404 DOORS, DOORWAYS AND GATES

**404.1 General.** Doors, doorways, and gates that are part of an *accessible* route shall comply with Section 404.

**Exception:** Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with Sections 404.2.3, 404.2.6, 404.2.7, 404.2.8, 404.3.1, 404.3.2, 404.3.4, 404.3.7 and 404.3.8.

**404.2 Manual doors, doorways, and manual gates.** Manual doors, doorways, and manual gates intended for user passage shall comply with Section 404.2.

**404.2.1 Double-leaf doors and gates.** At least one active leaf of doors with two leaves shall comply with Sections 404.2.2 and 404.2.3.

**404.2.2 Clear opening width.** Doorways shall have a clear opening width of 32 inches (815 mm) minimum. Clear opening width of doorways with swinging doors shall be measured between the face of door and stop, with the door open 90 degrees. Openings more than 24 inches (610 mm) in depth at doors and doorways without doors shall provide a clear opening width of 36 inches (915 mm) minimum. There shall be no projections into the clear opening width lower than 34 inches (865 mm) above the floor. Projections 34 inches (865 mm) minimum and 80 inches (2030 mm) maximum into the clear opening width above the floor shall not exceed 4 inches (100 mm).

**Exceptions:**

1. Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the floor.
2. In alterations, a projection of 5/8 inch (15.9 mm) maximum into the required clear opening width shall be permitted for the latch side stop.

**Figure 404.2.2 (A) CLEAR WIDTH OF DOORWAYS – HINGED DOOR**

**Figure 404.2.2 (B) CLEAR WIDTH OF DOORWAYS – SLIDING DOOR**



**Figure 404.2.2 (C) CLEAR WIDTH OF DOORWAYS – FOLDING DOOR**

**Figure 404.2.2 (D) CLEAR WIDTH OF DOORWAYS – DOORWAYS WITHIN DOORS**

**404.2.3 Maneuvering clearances.** Minimum *maneuvering clearances* at doors and gates shall comply with Section 404.2.3. *Maneuvering clearances* shall include the full clear opening width of the doorway and the required latch-side or hinge-side clearance.

**Proposal 03-04-21 D/BC2 AM**

**404.2.3.1 Floor surface.** The *floor surface* within the *maneuvering clearances* shall have *running slope* and *cross slope* not steeper than one unit vertical in 48 inches horizontal (2 percent slope).

**404.2.3.2 Swinging doors and gates.** Swinging doors and gates shall have *maneuvering clearances* complying with Table 404.2.3.2.

**TABLE 404.2.3.2—MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS AND GATES**

TYPE OF USE		MINIMUM MANEUVERING CLEARANCES	
Approach Direction	Door or Gate Side	Perpendicular to Doorway (inches)	Parallel to Doorway (beyond latch unless noted) (inches)
From front	Pull	60	18
From front	Push	52 <sup>e</sup>	0 <sup>c</sup>
From hinge side	Pull	60	36
From hinge side	Pull	54	42
From hinge side	Push	42 <sup>a</sup>	22 <sup>d</sup>
From latch side	Pull	48 <sup>b</sup>	24
From latch side	Push	42 <sup>2</sup>	24 <sup>i</sup>

For SI: 1 inch = 25.4 mm

- a. Add 6 inches where closer and latch provided.
- b. Add 6 inches where closer provided.
- c. Add 12 inches beyond latch where closer and latch provided
- d. Beyond hinge side.
- e. In existing buildings and facilities, the dimension perpendicular to the door or gate for the front direction on the push side shall be 48 inches minimum.

**Figure 404.2.3.2 (A)**

**MANEUVERING CLEARANCE AT MANUAL SWINGING DOORS**

FRONT APPROACH – PULL SIDE

**Figure 404.2.3.2 (B)**

MANEUVERING CLEARANCE AT MANUAL SWINGING DOORS

FRONT APPROACH – PUSH SIDE – NEW BUILDINGS

**Figure 404.2.3.2 (C)**

MANEUVERING CLEARANCE AT MANUAL SWINGING DOORS

FRONT APPROACH – PUSH SIDE – EXISTING BUILDINGS

FOOTNOTE E

**Figure 404.2.3.2 (D)**

MANEUVERING CLEARANCE AT MANUAL SWINGING DOORS

HINGE APPROACH – PULL SIDE

**Figure 404.2.3.2 (E)**

MANEUVERING CLEARANCE AT MANUAL SWINGING DOORS

HINGE APPROACH – PULL SIDE

**Figure 404.2.3.2 (F)**

MANEUVERING CLEARANCE AT MANUAL SWINGING DOORS

HINGE APPROACH – PUSH SIDE

**Figure 404.2.3.2 (G)**

MANEUVERING CLEARANCE AT MANUAL SWINGING DOORS

LATCH APPROACH – PULL SIDE

**Figure 404.2.3.2 (H)**

MANEUVERING CLEARANCE AT MANUAL SWINGING DOORS

LATCH APPROACH – PUSH SIDE

**404.2.3.3 Sliding and folding doors.** Sliding doors and folding doors shall have *maneuvering clearances* complying with Table 404.2.3.3.

**TABLE 404.2.3.3—MANEUVERING CLEARANCES AT SLIDING AND FOLDING DOORS**

Approach Direction	MINIMUM MANEUVERING CLEARANCES	
	Perpendicular to Doorway (inches)	Parallel to Doorway (beyond stop or latch side unless noted) (inches)
From front	52 <sup>b</sup>	0
From nonlatch side	42	22 <sup>a</sup>
From latch side	42	24

For SI: 1 inch = 25.4 mm

- a. Beyond pocket or hinge side.
- b. In existing buildings and facilities, the dimension perpendicular to the door for the front direction shall be 48 inches minimum.

**Figure 404.2.3.3 (A)**

MANEUVERING CLEARANCE AT SLIDING AND FOLDING  
DOORS – FRONT APPROACH – NEW BUILDINGS

**Figure 404.2.3.3 (B)**

MANEUVERING CLEARANCES AT SLIDING AND FOLDING  
DOORS – FRONT APPROACH – EXISTING BUILDINGS  
FOOTNOTE 2

**Figure 404.2.3.3 (C)**

MANEUVERING CLEARANCES AT SLIDING AND FOLDING  
DOORS – POCKET OR HINGE APPROACH

**Figure 404.2.3.3 (D)**

MANEUVERING CLEARANCES AT SLIDING AND FOLDING  
DOORS – STOP OR LATCH APPROACH

**404.2.3.4 Doorways without doors or gates.** Doorways without doors or gates that are less than 36 inches (915 mm) in width shall have *maneuvering clearances* complying with Table 404.2.3.4

**TABLE 404.2.3.4—MANEUVERING CLEARANCES FOR DOORWAYS WITHOUT DOORS OR GATES**

<b>Approach Direction</b>	<b>MINIMUM MANEUVERING CLEARANCES PERPENDICULAR TO DOORWAY (inches)</b>
From front	52 <sup>a</sup>
From side	42

For SI: 1 inch = 25.4 mm

- a. In existing buildings and facilities the dimension perpendicular to the doorway for the front direction shall be 48 inches minimum.

**Figure 404.2.3.4 (A)**

MANEUVERING CLEARANCE FOR DOORWAYS WITHOUT  
DOORS OR GATES – FRONT APPROACH – NEW BUILDINGS

**Figure 404.2.3.4 (B)**

MANEUVERING CLEARANCE FOR DOORWAYS WITHOUT DOORS OR FATE – FRONT AP-  
PROACH – EXISTING BUILDINGS – FOOTNOTE 1

**Figure 404.2.3.4 (C)**

MANEUVERING CLEARANCE FOR DOORWAYS WITHOUT DOORS OR GATES – SIDE APPROACH

**404.2.3.5 Recessed doors and gates.** Where 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 or gate, measured perpendicular to the face of the door or gate, *maneuvering clearances* for a forward approach shall be provided.

**Figure 404.2.3.5 (A)**

RECESSED DOORS AND GATES – NEW BUILDINGS  
PULL SIDE

**Figure 404.2.3.5 (B)**

RECESSED DOORS AND GATES – NEW BUILDINGS  
PUSH SIDE

**Figure 404.2.3.5 (C)**

RECESSED DOORS AND GATES – NEW BUILDINGS  
PUSH SIDE – DOOR PROVIDED WITH BOTH CLOSER AND LATCH

**Figure 404.2.3.5 (D)**

RECESSED DOORS AND GATES – EXISTING BUILDINGS  
PULL SIDE

**Figure 404.2.3.5 (E)**

RECESSED DOORS AND GATES – EXISTING BUILDINGS  
PUSH SIDE

**Figure 404.2.3.5 (F)**

RECESSED DOORS AND GATES – EXISTING BUILDINGS  
PUSH SIDE- DOOR PROVIDED WITH BOTH CLOSER AND LATCH

**404.2.4 Thresholds.** Where provided, thresholds at doorways shall be  $\frac{1}{2}$  inch (12.7 mm) maximum in height. Raised thresholds and changes in level at doorways shall comply with *floor surfaces*.

**Exception:** An existing or altered threshold shall be permitted to be  $\frac{3}{4}$  inch (19 mm) maximum in height provided that the threshold has a beveled edge on each side with a maximum slope of one unit vertical in 2 units horizontal (50 percent slope) for the height exceeding  $\frac{1}{4}$  inch (6.4 mm).

**404.2.5 Two doors or gates in series.** Distance between two hinged or pivoted doors or gates in series shall be 48 inches (1220 mm) minimum plus the width of any door or gate swinging into the space. The space between the doors and gates shall provide a *turning space*.

**Figure 404.2.5 (A)**

TWO DOORS OR GATES IN A SERIES – NEW BUILDINGS

**Figure 404.2.5 (B)**

TWO DOORS OR GATES IN A SERIES – NEW BUILDINGS

**Figure 404.2.5 (C)**

TWO DOORS OR GATES IN A SERIES – NEW BUILDINGS

**Figure 404.2.5 (D)**

TWO DOORS OR GATES IN A SERIES – EXISTING BUILDINGS

**Figure 404.2.5 (E)**

TWO DOORS OR GATES IN A SERIES – EXISTING BUILDINGS

**Figure 404.2.5 (F)**

TWO DOORS OR GATES IN A SERIES – EXISTING BUILDINGS

**404.2.6 Door and gate hardware.** Handles, pulls, latches, locks and other *operable parts* on doors and gates shall have a shape that is easy to grasp with one hand and does not require tight grasping, pinching or twisting of the wrist to operate. The operational force to retract latches or disengage devices that hold the door or gate in a closed position shall be as follows:

1. Hardware operation by a forward, pushing or pulling motion: 15 pounds (66.7 N) maximum.
2. Hardware operation by a rotational motion: 28 inch-pounds (315 N·cm) maximum.

**404.2.6.1 Hardware height.** *Operable parts* of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the floor. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.

**Exceptions:**

1. Locks used only to secure the premises when not normally occupied and not used for normal operation are permitted at any height.
2. Where the *administrative authority* requires restricting access to a pool, or *spa*, and where door and gate latch release mechanisms are accessed from the outside of the barrier and are not of the self-locking type, such mechanism shall be located above the finished floor or ground surface, not less than 52 inches (1219 mm) and not greater than 54 inches (1370 mm).

**404.2.7 Closing speed.** Door and gate closing speed shall comply with 404.2.7.

**404.2.7.1 Door and gate closers.** Door and gate closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door or gate to an open position of 12 degrees shall be 5 seconds minimum.

**404.2.7.2 Spring hinges.** Door and gate spring hinges shall be adjusted so that from an open position of 70 degrees, the door or gate shall move to the closed position in 1.5 seconds minimum.

**Proposal 4-12-2021 D/BC2 AM**

**404.2.8 Door and gate opening force.** Fire doors and doors or gates required to be equipped with panic hardware, break away features or other factors requiring higher opening force for safety reasons shall have the minimum opening force allowable in scoping provisions adopted by the *administrative authority*. For other doors or gates, the force for pushing or pulling open doors or gates shall be as follows:

1. Interior hinged door: 5.0 pounds (22.2 N) maximum.

2. Interior sliding or folding door: 5.0 pounds (22.2 N) maximum.

**Exception:** The force required to retract latch bolts or disengage other devices that hold the door or gate in a closed position shall not apply to panic hardware, delayed egress devices or fire-rated hardware.

**404.2.9 Swinging door and gate surface.** Door and gate surfaces on the push side and within 10 inches (255 mm) of the floor, measured vertically, shall be smooth and extend the width of the door or gate. Door and gate hardware, obstructions or protrusions shall not be mounted in nor extend into the area within 10 inches (255 mm) of the floor without being protected by a smooth surface. Parts creating horizontal or vertical joints in such surfaces shall be within 1/16 inch (1.6 mm) of the same plane as the other. Cavities created by added protection plates shall be capped.

**Exceptions:**

1. Sliding doors shall not be required to comply with Section 404.2.9.
2. Tempered glass doors without stiles and having a bottom rail or fitting with the top edge tapered at no less than 60 degrees from the horizontal shall not be required to comply with the 10-inch (255 mm) bottom rail height requirement.
3. Doors and gates that do not extend to within 10 inches (255 mm) of the floor shall not be required to comply with Section 404.2.9.
4. The installation of protection plates on existing doors and gates, without a smooth surface within 10 inches (255 mm) of the floor, shall be permitted. The protection plates shall extend to 10 inches (255 mm) above the floor, measured vertically, and no more than 1 inch (25 mm) from the sides and bottom of the door. Cavities created by such protection plates shall be capped.

**404.2.10 Vision lites.** Doors, gates, and sidelites 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 panel on either the door, gate or an adjacent sidelite 43 inches (1090 mm) maximum above the floor.

**Exception:** Vision lites with the lowest part more than 66 inches (1675 mm) above the floor shall not be required to comply with Section 404.2.10.

**404.3 Automatic and power-assisted doors and gates.** Automatic doors and gates shall comply with Section 404.3. Full powered automatic doors and gates shall comply with ANSI/BHMA A156.10 listed in Section 106.2.10. Power-assist doors and gates and low-energy automatic doors and gates shall comply with ANSI/BHMA A156.19 listed in Section 106.2.9.

**404.3.1 Public entrances.** Where an automatic door or gate is required at a building or *facility* public entrance, it shall be a full powered automatic or a low-energy automatic door or gate.

**404.3.2 Vestibules.** Where an entrance includes a vestibule, at least one exterior door or gate and one interior door or gate in the vestibule shall have the same type of automatic door or gate opener.

**404.3.3 Clear width.** Doorways shall have a clear opening width of 32 inches (815 mm) in power-on and power-off mode. The minimum clear opening width for automatic door systems shall be based on the clear opening width provided with all leafs in the open position.

**404.3.4 Maneuvering clearances.** *Maneuvering clearances* at power-assisted doors and gates shall comply with Section 404.2.3. *Maneuvering clearances* complying with Section 404.2.3 shall be provided on the egress side of low-energy automatic and full power automatic doors and gates that serve as part of an *accessible* means of egress.

1. Low-energy automatic and full power automatic doors and gates that have standby power or battery back-up that will unlock and unlatch the door to allow free egress shall not be required to comply with Section 404.3.4.
2. Low-energy automatic and full power automatic doors and gates that remain open in the power-off condition shall not be required to comply with Section 404.3.4.
3. Full power automatic sliding doors and gates that include a break-away feature shall not be required to comply with Section 404.3.4.

**404.3.5 Thresholds.** Thresholds and changes in level at doorways shall comply with Section 404.2.4.

**404.3.6 Two doors or gates in series.** Doors or gates in series shall comply with Section 404.2.5.

**Exception:** Where both doors or gates in a series are low-energy automatic or full power automatic doors or gates, the two doors or gates in a series shall not be required to provide a *turning space* between the doors or gates.

**404.3.7 Controls.** Manually operated controls shall comply with *operable parts*. The *clear floor space* adjacent to the controls shall be located beyond the arc of the door or gate swings.

**404.3.8 Door and gate hardware.** Handles, pulls, latches, locks and other *operable parts* shall comply with Section 404.2.6.

**404.3.9 Break out opening.** Where full power automatic sliding doors and gates are equipped with a break out feature, the clear break out opening shall be 32 inches (815 mm) minimum when operated in emergency mode.

**404.3.10 Power-assisted door and gate surfaces.** On power-assisted swinging doors and gates, surfaces within 10 inches (255 mm) of the finish floor or ground, measured vertically, shall comply with Section 404.2.9.

## SECTION 405 RAMPS

### Proposal 04-19-21 D/AM BC1

**405.1 General.** *Ramps* along *accessible* routes shall comply with Section 405.

**Exceptions:**

1. 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 Section 405.
2. Exterior sidewalks that connect *elements* on a *site* and that are 48 inches (1220 mm) minimum in width and slope with grade of an existing road or street are not required to comply with Section 405.

**405.2 Slope.** Ramp runs shall have a *running slope* greater than one unit vertical in 20 units horizontal (5 percent slope) and not steeper than one unit vertical in 12 units horizontal (8.33 percent slope).

**Exception:** In *existing buildings* or *facilities*, *ramps* shall be permitted to have slopes steeper than one unit vertical in 12 units horizontal (8.33 percent slope) complying with Table 405.2 where such slopes are necessary due to space limitations.

**TABLE 405.2—ALLOWABLE RAMP DIMENSIONS FOR CONSTRUCTION IN EXISTING SITES, BUILDINGS AND FACILITIES**

Slope <sup>a</sup>	Maximum Rise (inches)
Steeper than 1:10 but not steeper than 1:8	3
Steeper than 1:12 but not steeper than 1:10	6

For SI: 1 inch = 25.4 mm

a. A slope steeper than 1:8 shall not be permitted.

**405.3 Cross slope.** *Cross slope* of ramp runs shall not be steeper than one unit vertical in 48 inches horizontal (2 percent slope).

**405.4 Ramp surfaces.** Ramp runs shall comply with *floor surfaces*.

**405.5 Clear width.** The clear width of a ramp run shall be 36 inches (915 mm) minimum. *Handrails* and handrail supports that are provided on the ramp run shall not project into the required clear width of the ramp run.

**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 bottom and top of each ramp run. *Landings* shall comply with Section 405.7.

### Figure 405.7

#### RAMP LANDINGS

#### Proposal 03-04-21 D/BC2 AM

**405.7.1 Slope.** *Landings* shall have *running slope* and *cross slope* not steeper than one unit vertical in 48 inches horizontal (2 percent slope) and shall comply with *floor surfaces*.

**405.7.2 Width.** Clear width of *landings* shall be at least as wide as the widest ramp run leading to the *landing*.

**405.7.3 Length.** *Landings* shall have a clear length of 60 inches (1525 mm) 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.

#### Proposal 04-21-21 D/AM BC1; E11 coord

**405.7.5 Doorways.** Where a door or gate is adjacent to a ramp *landing*, *maneuvering clearances* required by Sections 404.2.3 and 404.3.4 shall be permitted to overlap the *landing* area. Doors or gates shall not swing into the minimum *landing* width and depth required by Sections 405.7.2 and 405.7.3. Where a door or gate that is subject to locking is located adjacent to a ramp *landing*, the *landing* shall be sized to provide a *turning space*.

**Exception:** Doors or gates that provide only exit discharge shall be permitted to overlap the minimum *landing* width and depth required by Sections 405.7.2 and 405.7.3.



**405.8 Handrails.** Ramp runs with a rise greater than 6 inches (150 mm) shall have *handrails* complying with Section 506.

**Exception:** Within *employee work areas*, *handrails* shall not be required where *ramps* that are part of *common use circulation paths*, and which are used for the movement of equipment, are designed to permit the installation of *handrails* complying with Section 506. *Ramps* not subject to the exception to Section 405.5 shall be designed to maintain a 36-inch (915 mm) minimum clear width where *handrails* are installed.

**405.9 Edge protection.** Edge protection complying with Section 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* not required to have *handrails* and that have flared sides complying with Section 406.2.3.
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 1/2 inch (12.7 mm) maximum within 10 inches (255 mm) horizontally of the minimum *landing* area specified in Section 405.7.
4. Edge protection shall not be required on the sides of ramped aisles where *ramps* provide access to the adjacent seats and aisle accessways.

**Figure 405.9**

EDGE PROTECTION – LIMITED DROP OFF – EXCEPTION 3

**405.9.1 Extended floor surface.** The *floor surface* of ramp runs and ramp *landings* shall extend 12 inches (305 mm) minimum beyond the inside face of a railing complying with Section 506.

**Figure 405.9.1**

EXTENDED FLOOR SURFACE

**405.9.2 Curb or barrier.** A curb complying with Section 405.9.2.1 or a barrier complying with Section 405.9.2.2 shall be provided.

**405.9.2.1 Curb.** A curb shall be 4 inches (100 mm) minimum in height.

**Figure 405.9.2.1**

CURB

**405.9.2.2 Barrier.** Barriers shall be constructed so that the barrier 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 floor.

**Figure 405.9.2.2**

BARRIER

**405.10 Wet conditions.** *Landings* subject to wet conditions shall be designed to prevent the accumulation of water.

**405.11 Tactile signage.** Provide tactile signage within an enclosed *ramp* in accordance with Section 505.16. Provide tactile exit signs adjacent to each door in accordance with Section 505.17.

**SECTION 406**  
**CURB RAMPS AND BLENDED TRANSITIONS**

**406.1 General.** *Curb ramps* and *blended transitions* on *accessible* routes shall comply with Section 406.

**406.2 Perpendicular curb ramps.** Perpendicular *curb ramps* shall comply with Sections 406.2 and 406.5.

**Figure 406.2 (A)**

PERPENDICULAR CURB RAMP

**Figure 406.2 (B)**

PERPENDICULAR CURB RAMP

**Proposal 03-04-21 D/BC2 AM**

**406.2.1 Landings.** A *landing* 48 inches (1220 mm) minimum by 48 inches (1220 mm) minimum shall be provided at the top of a *curb ramp*. The *landing* shall be permitted to overlap other walking surfaces. Where the *landing* is constrained at the back-of-sidewalk, the *landing* shall be 48 inches (1220 mm) minimum by 60 inches (1525 mm) minimum. The 60-inch (1525 mm) dimension shall be provided in the direction of the curb ramp run. The *running slope* and *cross slope* of *landings* shall not be steeper than one unit vertical in 48 inches horizontal (2 percent slope).

**406.2.2 Running slope.** The *running slope* of a *curb ramp* shall cut through or shall be built up to the curb at right angles or shall meet the gutter *grade break* at right angles where the curb is curved. The *running slope* of a *curb ramp* shall be one unit vertical in 20 units horizontal (5 percent slope) minimum and one unit vertical in 12 units horizontal (8.33 percent slope) maximum. The curb ramp run length shall not be required to exceed 15 feet (4570 mm).

**406.2.3 Flared sides.** Where a pedestrian *circulation path* crosses a *curb ramp*, flared sides shall be provided and shall be sloped 10 percent maximum.

**406.3 Parallel curb ramps.** Parallel *curb ramps* shall comply with Sections 406.3 and 406.5.

**Figure 406.3 (A)**

PARALLEL CURB RAMP

**Figure 406.3 (B)**

PARALLEL CURB RAMP

**Proposal 03-04-21 D/BC2 AM**

**406.3.1 Landing.** A *landing* 48 inches (1220 mm) minimum by 48 inches (1220 mm) minimum shall be provided at the bottom of a *curb ramp*. The *landing* shall be permitted to overlap other walking surfaces.

Where the *landing* is constrained on two or more sides, the *landing* shall be 48 inches (1220 mm) minimum by 60 inches (1525 mm) minimum. The 60-inch (1525 mm) dimension shall be provided in the direction of the pedestrian street crossing. The *running slope* and *cross slope* of *landings* shall not be steeper than one unit vertical in 48 inches horizontal (2 percent slope).

**406.3.2 Running slope.** The *running slope* of a *curb ramp* shall be in line with the direction of sidewalk travel. The *running slope* of a *curb ramp* shall be one unit vertical in 20 units horizontal (5 percent slope) minimum and one unit vertical in 12 units horizontal (8.33 percent slope) maximum. The curb ramp run length shall not be required to exceed 15 feet (4570 mm).

**406.4 Blended transitions.** *Blended transitions* shall comply with Sections 406.4 and 406.5.

#### Figure 406.4

##### BLENDED TRANSITION

**406.4.1 Running slope.** The *running slope* of *blended transitions* shall be one unit vertical in 20 units horizontal (5 percent slope) maximum.

**406.5 Common requirements.** *Curb ramps* and *blended transitions* shall comply with Section 406.5.

**406.5.1 Width.** The clear width of curb ramp runs (excluding any flared sides) and *blended transitions* shall be 48 inches (1220 mm) minimum.

**406.5.2 Grade breaks.** *Grade breaks* at the top and bottom of curb ramp runs shall be perpendicular to the direction of the curb ramp run. *Grade breaks* shall not be permitted on the surface of curb ramp runs and *landings*. Surface slopes that meet at *grade breaks* shall be flush.

#### Figure 406.5.2

##### GRADE BREAK

**406.5.3 Cross slope.** The *cross slope* of *curb ramps* and *blended transitions* shall be one unit vertical in 48 inches horizontal (2 percent slope) maximum. At pedestrian street crossings without yield or stop control and at midblock pedestrian street crossings, the *cross slope* shall be permitted to equal the street or highway grade.

**406.5.4 Counter slope.** The *counter slope* of the gutter or street at the foot of curb ramp runs, *blended transitions* and *landings* shall be one unit vertical in 20 units horizontal (5 percent slope) maximum.

#### Figure 406.5.4

##### COUNTER SLOPE OF SURFACES ADJACENT TO CURB RAMPS

**406.5.5 Clear space.** Beyond the bottom *grade break*, a clear space 48 inches (1220 mm) minimum by 48 inches (1220 mm) minimum shall be provided within the width of the pedestrian street crossing and wholly outside the parallel vehicle travel lane.

#### Figure 406.5.5

##### CLEAR SPACE AT BOTTOM OF CURB RAMPS AND BLENDED TRANSITIONS

**406.5.6 Marking.** Where curbs adjacent to the ramp flares are painted, the painted surface shall extend along the flared portion of the curb.

**406.5.7 Location.** *Curb ramps* and the flared sides of *curb ramps* shall be located so 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.

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

**406.5.9 Handrails.** *Handrails* shall not be required on *curb ramps*.

**406.6 Detectable warnings surfaces.** Detectable warning surfaces shall comply with Section 406.6.

**406.6.1 General.** Where provided, *detectable warning surfaces*, they shall comply with Section 705.

**406.6.2 Locations for detectable warning surfaces.** *Detectable warning surfaces* shall be provided at the following locations on pedestrian access routes and at transit stops.

1. *Curb ramps* and *blended transitions* at pedestrian street crossings,
2. Pedestrian refuge islands,

**Exception:** *Detectable warning surfaces* shall not be required at pedestrian refuge islands that are cut-through at street level and are less than 6 feet (1830 mm) in length in the direction of pedestrian travel.

3. Pedestrian at-grade rail crossings not located within a street or highway,
4. *Boarding platforms* at transit stops for buses and rail vehicles where the edges of the *boarding platform* are not protected by screens or guards and
5. Boarding and alighting areas at sidewalk or street-level transit stops for rail vehicles where the side of the boarding and alighting areas facing the rail vehicles is not protected by screens or guards.

## SECTION 407 ELEVATORS

**407.1 General.** Elevators shall comply with Section 407 and ASME A17.1/CSA B44 listed in Section 106.2.11. Elevators shall be passenger elevators as classified by ASME A17.1/CSA B44. Elevator operation shall be automatic.

**407.2 Elevator landing requirements.** Elevator call controls, hall signals, and hoistway signs shall comply with Section 407.2. Where provided elevator call buttons, key pads, or *hall call consoles* shall also comply with the *operable parts* requirements in Section 309.4.

**407.2.1 Call Controls.** Call buttons, *accessibility function buttons*, and additional feature buttons shall be raised or flush. Objects beneath hall call buttons shall protrude 1 inch (25 mm) maximum.

### Exceptions:

1. Existing elevators shall be permitted to have recessed call buttons.

2. The restriction on objects beneath call buttons shall not apply to existing call buttons.

#### Proposal 04-24-2021 AS; 04-25-2021 AM/AM BC2, E4-2023 AS

**407.2.1.1 Height.** Call buttons, keypads, and *hall call consoles* shall be located 30 inches (760 mm) minimum and 48 inches (1 220 mm) maximum above the floor, measured to the centerline of the *operable parts*.

**Exceptions:**

1. Existing call buttons, existing keypads, and *hall call consoles* shall be permitted to be located 54 inches (1370 mm) maximum above the floor, measured to the centerline of the highest *operable part*.
2. Where provided, foot controls or other alternate means in addition to the required landing controls shall be permitted to be located mounted outside the specified range.

#### Figure 407.2.1.1

#### HEIGHT OF ELEVATOR CALL BUTTONS

**407.2.1.2 Size.** Buttons shall be  $\frac{3}{4}$  inch (19.1 mm) minimum in the smallest dimension.

**Exception:** Existing elevator call buttons shall not be required to comply with Section 407.2.1.2.

**407.2.1.3 Clear floor space.** A *clear floor space* shall be provided at call controls.

**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 Section 407.2.1.4.

**407.2.1.5 Signals.** Call buttons shall have visible signals to indicate when each call is registered and when each call is answered. Call buttons shall provide an audible signal or mechanical motion of the button to indicate when each call is registered.

**Exceptions:**

1. Destination-oriented elevators shall not be required to comply with Section 407.2.1.5.
2. Existing elevators shall not be required to comply with Section 407.2.1.5.

**407.2.2 Keypads.** Where provided, keypads shall be in a standard telephone keypad arrangement complying with Figure 707.5(A) and shall comply with Section 407.4.7.2.

**407.2.3 Hall Call Consoles.** *Hall call consoles* shall comply with Section 407.2.3.

**407.2.3.1 Location.** At least one *hall call console* shall be wall mounted adjacent to a hoistway entrance in the elevator *landing* area. For a multi-car group, the console shall be located between two entrances. Where provided, additional *hall call consoles* shall be located inside or outside the elevator *landing* area and shall be wall-mounted, pedestal mounted, or mounted on a kiosk or security turnstile.

**407.2.3.2 Required features.** *Hall call consoles* shall include a touch screen or keypad complying with Section 407.2.2 with a display screen, an *accessibility function button*, and an audio output loudspeaker. The *accessibility function button* shall be identified by the International Symbol for Accessibility and a raised indication. The International Symbol for Accessibility, complying with Section 703.6.2.1, shall be 5/8 inch (16 mm) minimum in height and be a visual character complying with Section 703.2. The indication shall be three raised dots, spaced 1/4 inch (6.4 mm) at base diameter, in the form of an equilateral triangle. The *accessibility function button* shall be located immediately below the keypad arrangement or floor buttons.

**407.2.3.3 Touch screen.** Touch screen displays shall comply with Section 407.2.3.3.

**407.2.3.3.1 Display screen.** Upon activation, the display screen shall display information such as user input confirmation, elevator assignment designation, direction to the assigned elevator and, where applicable, instruction or error messages.

**407.2.3.3.1.1 Contrast.** Display screens shall provide contrast with lighter *characters* and symbols on a darker background or darker *characters* and symbols on a lighter background. The background shall be solid and static.

**407.2.3.3.1.2 Size.** Elevator assignment *characters* shall be 5/8 inch (16 mm) minimum in height.

**407.2.3.3.1.3 Duration.** Elevator assignment *characters* shall be displayed for a minimum of 5 seconds upon activation of the *accessibility function button*.

**407.2.3.4 Audio output.** Upon activation of the *accessibility function button*, the audio output shall provide verbal announcements of operating instructions and information such as, user input confirmation, announcement of the elevator assignment designation, direction to the assigned elevator and, where applicable, error messages. Audio output shall be recorded, digitized human, or synthesized speech and shall be delivered through a loudspeaker. Auditory volume, measured 35 inches (890 mm) in front of the console, shall be maintained at a minimum of 10 dBA above ambient. The volume shall not exceed 80 dBA.

**407.2.3.5 Arrangement.** *Hall call console* arrangement of required features shall comply with Section 407.2.3.5.

**407.2.3.5.1 Keypad call console arrangement.** Where keypad call consoles are provided, the display screen shall be located directly above the keypad. The *accessibility function button* shall be located directly below the keypad at a height of not less than 30 inches (760 mm), measured to the centerline of the button, above the finished floor.

**407.2.3.5.2 Touch screen call console arrangement.** Where provided, touch screen call consoles shall be arranged so that, the touch screen is directly above the *accessibility function button*. Any portion of the touch screen requiring user input shall be 48 inches (1220 mm) maximum, above the floor. The *accessibility function button* shall be 30 inches (760 mm) minimum, measured to the centerline of the button.

**407.2.3.5.3 Proximity of required elements.** Required features shall be provided on a *hall call console* assembly or as individual *elements* grouped in close proximity.

**407.2.3.5.4 Position.** For *hall call consoles* required by Section 407.2.3.1, the face of individual *elements* or group of individual *elements* that are operated by user input shall be permitted to slope away from the user, at an angle of no more than 25 degrees from the vertical plane. The face of *hall call console* shall be permitted to be sloped away from the user, at an angle of no more than 25 degrees from the vertical plane. Additional *hall call consoles* are permitted to have an angle greater than 25 degrees.

**407.2.3.6 Additional features.** Where provided, additional features on *hall call consoles*, shall comply with Section 407.2.3.6.1 and 407.2.3.6.2.

**407.2.3.6.1 Hall call console additional buttons.** Where provided, *hall call console* buttons provided in addition to those required by Section 407.3.2 shall be arranged and located adjacent to the keypad with a minimum spacing from the keypad to the additional buttons of 1.5 times the spacing used for the standard telephone keypad complying with Section 407.2.2. Buttons shall be identified by raised *characters* and braille complying with Sections 703.3.1 through 703.3.9 and 703.4. The identification shall be located immediately to the left of the control button to which the designation applies.

**407.2.3.6.2 Security or access controls.** Security or access control system card readers associated with elevator operation shall be in close proximity to each *hall call console* in a consistent manner throughout the *facility*.

**407.2.3.7 Elevator car assignment.** When the *accessibility function button* is pressed, elevator car assignment shall comply with the following:

1. The audio output shall provide verbal instruction for the user to enter a destination floor.
2. The selected destination floor shall be confirmed by verbal announcement and on the display screen.
3. Verbal and visible indication of an invalid input shall be provided.
4. The display screen shall indicate the elevator assignment designation and a verbal announcement shall be made of the assigned elevator responding to the call.
5. Visual and verbal direction to the assigned elevator shall be provided.
6. The system shall assign an elevator adjacent to the *hall call console* unless the adjacent elevator is out of service.

**407.2.4 Hall signals.** Hall signals, including in-car signals, shall comply with Section 407.2.4.

**407.2.4.1 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. Destination-oriented elevators shall not be required to comply with Section 407.2.4.1, provided a visible signal and audible tones and verbal announcements complying with Section 407.2.4.4 are provided.

2. In existing elevators, a signal indicating the direction of car travel shall not be required.

**407.2.4.2 Visible signals.** Visible signal fixtures shall be centered at 72 inches (1830 mm) minimum above the floor. The visible signal *elements* shall be 2<sup>1</sup>/<sub>2</sub> inches (64 mm) minimum between the uppermost and lowest edges of the illuminated shape measured vertically. 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 Section 407.2.4.2.

**Figure 407.2.4.2 (A)**

ELEVATOR VISIBLE SIGNALS

HEIGHT OF SIGNALS

**Figure 407.2.4.2 (B)**

ELEVATOR VISIBLE SIGNALS

SIZE OF SIGNALS

**407.2.4.3 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 3,000 Hz maximum. The audible signal or verbal annunciator shall be 10 dBA minimum above ambient, but shall not exceed 80 dBA, measured at the hall call button.

**Exceptions:**

1. Destination-oriented elevators shall not be required to comply with Section 407.2.4.3, provided the audible tone and verbal announcement is the same as those given at the call button or call button keypad.
2. The requirement for the frequency and range of audible signals shall not apply in existing elevators.

**407.2.4.4 Destination-oriented elevator signals.** Destination-oriented elevators shall be provided with *hall call consoles* complying with Section 407.2.3 and with a visible signal, audible tones, and verbal announcements to indicate which car is responding to a call. The audible tone and verbal announcement shall be activated by pressing an *accessibility function button*.

**407.2.4.4.1 Verbal Announcement.** When the *accessibility function button* is pressed, verbal announcement such as the car designation, shall be provided at the elevator car entrance upon arrival. Audio output shall be recorded digitized human or synthesized speech and shall be delivered through a loudspeaker. The verbal annunciator shall have a frequency of 300 Hz minimum and 3000 Hz maximum. Auditory volume, measured 35 inches (890 mm) in front of the elevator entrance and at 48 inches (1220 mm) above the floor, shall be maintained at a minimum of 10 dBA. The volume shall not exceed 80 dBA.

**407.2.4.5 Differentiation.** Each destination-oriented elevator in a group of elevators shall have audible and visible means for differentiation.



**407.2.5 Hoistway signs.** Signs at elevator hoistways shall comply with Section 407.2.5.

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**407.2.5.1 Floor designation.** Floor designations shall be provided in raised *characters* and braille complying with Sections 703.4.1.3, 703.3 and 703.4, except that raised *characters* shall be 2 inches (51 mm) minimum in height. Floor designations shall be located on both jambs of the elevator hoistway entrances. A raised five-pointed star polygon that is equilateral and equiangular, complying with Table 407.4.7.1.4, shall be provided on both jambs at the main entry level and located to the left of the floor designation. The height of the star shall equal the height of the floor designation.

**Exception:** Where the width of the jamb of the elevator hoistway entrance does not have sufficient space for a 2 inch (51 mm) star placed to the left of the floor designation, the star shall be permitted to be located above the floor designation.

**Figure 407.2.5.1**  
FLOOR DESIGNATION

**407.2.5.2 Car identification.** Destination-oriented elevator cars shall be designated with a single alphabetic character or an alphanumeric designation such as “A1”. Car identification shall be provided in raised *characters* and braille complying with Sections 703.1.4.3, 703.3.1 through 703.3.9 and 703.4. Raised *characters* shall be 2 inches (51 mm) minimum in height. Car identifications shall be located on both jambs of the hoistway immediately below the floor designation.

**Figure 407.2.5.2**  
DESTINATION-ORIENTED ELEVATOR CAR IDENTIFICATION

**407.2.6 Destination signs.** Where signs indicate that elevators do not serve all *landings*, signs in raised *characters* and braille complying with Sections 703.1.4.3, 703.3.1 through 703.3.9 and 703.4 shall be provided above the hall call button or keypad.

**Exception:** Destination oriented elevator systems shall not be required to comply with Section 407.2.6.

**407.3 Elevator door requirements.** Hoistway and elevator car doors shall comply with Section 407.3.

**407.3.1 Type.** Elevator doors shall be 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 the following criteria are met:

1. The hoistway doors comply with Sections 404.2.2 and 404.2.8.
2. The car door closing is not initiated until the hoistway door is closed.

**407.3.3 Reopening device.** Elevator doors shall be provided with a reopening device complying with Section 407.3.3 that shall stop and reopen a car door and hoistway door automatically where the door becomes obstructed by an object or person.

**Exception:** In existing elevators, manually operated doors shall not be required to comply with Section 407.3.3.

**407.3.3.1 Height.** The reopening 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 floor.

**407.3.3.2 Contact.** The reopening device shall not require physical contact to be activated, although contact shall be permitted before the door reverses.

**407.3.3.3 Duration.** The reopening device 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 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 hoist-way 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 Section 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.** Elevator door clear opening width shall comply with Table 407.4.1.

**Exception:** In existing elevators, a power-operated car door complying with Section 404.2.2 shall be permitted.

**407.4 Elevator car requirements.** Elevator cars shall comply with Section 407.4.

**407.4.1 Inside dimensions.** Inside dimensions of elevator cars shall comply with Table 407.4.1.

**Exception:** Existing elevator car configurations that provide a clear inside floor area of 16 square feet (1.5 m<sup>2</sup>) minimum, and provide a clear inside dimensions of 36 inches (915 mm) minimum in width and 54 inches (1370 mm) minimum in depth, shall be permitted.

**TABLE 407.4.1—MINIMUM DIMENSIONS OF ELEVATOR CARS**

<b>Door Location</b>	<b>Door Clear Opening Width (inches)</b>	<b>Inside Car, Side to Side(inches)</b>	<b>Inside Car, Back Wall to Front Return(inches)</b>	<b>Inside Car, Back Wall to Inside Face(inches)</b>
Centered	42	80	51	54
Side (Off Center)	36 <sup>a</sup>	68	51	54
Any	36 <sup>a</sup>	54	80 <sup>i</sup>	80
Any	36 <sup>a</sup>	60 <sup>b</sup>	60 <sup>b</sup>	60 <sup>b</sup>

For SI: 1 inch = 25.4 mm

- a. A tolerance of minus  $\frac{5}{8}$  inch is permitted.
- b. Other car configurations that provide a 36-inch door clear opening width and a 60-inch diameter space with the door closed are permitted.

**Figure 407.4.1 (A)**

INSIDE DIMENSIONS OF ELEVATOR CARS – CENTERED DOOR LOCATION

**Figure 407.4.1 (B)**

INSIDE DIMENSION OF ELEVATOR CARS  
SIDE (OFF-CENTERED DOOR) LOCATION

**Figure 407.4.1 (C)**

INSIDE DIMENSION OF ELEVATOR CARS  
ANY DOOR LOCATION

**Figure 407.4.1 (D)**

INSIDE DIMENSIONS OF ELEVATOR CARS  
ANY DOOR LOCATION

**Figure 407.4.1 (E)**

INSIDE DIMENSIONS OF ELEVATOR CARS  
EXISTING CAR CONFIGURATION

**407.4.2 Floor in elevator cars.** Floors in elevator cars shall comply with *floor surfaces*.

**407.4.3 Platform to hoistway clearance.** The clearance between the car platform sill and the edge of any hoistway *landing* shall comply with ASME A17.1/CSA B44 listed in Section 106.2.11.

**407.4.4 Leveling.** Each car shall automatically stop and maintain position at floor *landings* within a tolerance of  $\frac{1}{2}$  inch (12.7 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 comply with ASME A17.1/CSA B44 listed in Section 106.2.11.

**407.4.6 Elevator car controls.** Where provided, elevator car controls shall comply *operable parts* and with Sections 407.4.6.

**Exception:** In existing elevators, where a new car operating panel complying with Section 407.4.6 is provided, existing car operating panels shall not be required to comply with Section 407.4.6.

**407.4.6.1 Location.** Controls shall be located within one of the *reach ranges*.

**Exceptions:**

1. Where the elevator panel complies with Section 407.4.8.
2. In existing elevators, where a parallel approach is provided to the controls, car control buttons with floor designations shall be permitted to be located 54 inches (1370 mm) maximum above the floor. Where the panel is changed, it shall comply with *reach ranges*.

**407.4.6.2 Buttons.** Car control buttons with floor designations shall be raised or flush, and shall comply with Section 407.4.6.2.

**Exception:** In existing elevators, buttons shall be permitted to be recessed.

**Figure 407.4.6.2**

ELEVATOR CAR CONTROL BUTTONS

**407.4.6.2.1 Size.** Buttons shall be  $\frac{3}{4}$  inch (19 mm) minimum in their smallest dimension.

**407.4.6.2.2 Arrangement.** Buttons shall be arranged with numbers in ascending order. Where two or more columns of buttons are provided they shall read from left to right.

**407.4.6.3 Keypads.** Where provided, car control keypads shall be in a standard telephone keypad arrangement and shall comply with Section 407.4.7.2.

**407.4.6.4 Emergency controls.** Where provided, controls for emergency alarm and emergency stop, shall be 30 inches (760 mm) minimum above the floor measured to the centerline of the buttons and shall be below the car control buttons.

**407.4.7 Designations and indicators of car controls.** Designations and indicators of car controls shall comply with Section 407.4.7.

**Exceptions:**

1. In existing elevators, where a new car operating panel complying with Section 407.4.7 is provided, existing car operating panels shall not be required to comply with Section 407.4.7.
2. In *existing building or facilities*, where floor designations differ from the arrangement required by Section 407.4.6.2.2, or are alphanumeric, a new operating panel shall be permitted to use such floor designations.

**407.4.7.1 Buttons.** Car control buttons shall comply with Section 407.4.7.1.

**407.4.7.1.1 Control Identification.** Control buttons shall be identified by raised *characters* and braille complying with Sections 703.3.1 through 703.3.9 and 703.4. Either the identification provided on the face of the control buttons or raised *characters* shall contrast visually with their background with either lighter *characters* on a darker background, or darker *characters* on a lighter background. Contrasting identification provided on control buttons shall not rely on internal illumination of the button.

**Proposal 04-24-2021 AS; 04-31-2021 D/AMPC1**

**407.4.7.1.2 Designation.** Floors shall be designated . . . -4, -3, -2, -1, 0, 1, 2, 3, 4, etcetera, with floors below the main entry floor designated with minus numbers. Numbers shall be permitted to be omitted, provided the remaining numbers are in sequence. Where a keypad arrangement is used complying with Figure 707.5(A), the number key (“#”) shall be utilized to enter the minus symbol (“-”). A minus sign (-) on the lower right button is permitted instead of the number (#) sign. Ancillary letters shall be permitted to be used in conjunction with the numbers, provided the letters are located to the right of the numbers and not more than two letters are used for each floor designation. For access to special floors, such as floors with rear entrances, instructions shall be provided at the

keypad or console. The font style for letters and number shall be consistent and comply with the requirements in Section 703.2.

**407.4.7.1.2.1 Existing facilities.** In *existing building* or *facilities* where new elevators are installed or existing elevators are altered into a *destination-oriented elevator system*, floor designations shall conform to the following:

1. Levels within stories, such as mezzanines located above or below the main entry level shall be permitted to be designated with an alphanumeric character such as "M2", indicating "mezzanine" and the "story number", respectively, in which it is located, provided there is no duplication with alphanumeric designations of elevator cars in the *facility*. The entire word shall be used, when announced, for the floor description, e.g., "mezzanine" not "M".
2. Non-successive floor numbering shall be permitted.

**407.4.7.1.3 Location.** Raised character and braille designations shall be placed immediately to the left of the control button to which the designations apply. Where a negative number is used to indicate a negative floor, the braille designation shall be a cell with the dots 3 and 6 followed by the ordinal number.

**Exception:** Where space on an existing car operating panel precludes raised *characters* and braille to the left of the control button, markings shall be placed as near to the control button as possible.

**407.4.7.1.4 Symbols.** The control button for the emergency stop, alarm, door open, door close, main entry floor, and phone, shall be identified with raised symbols and braille as shown in Table 407.4.7.1.4.

#### **Figure 407.4.7.1.4**

#### CONTROL BUTTON IDENTIFICATION

**407.4.7.1.5 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.** Keypad keys shall be identified by visual *characters* complying with Section 703.2 centered on the corresponding keypad button. The number five key shall have a single raised dot. The dot shall have a base diameter of 0.118 inch (3 mm) minimum and 0.120 inch (3.05 mm) maximum, and a height of 0.025 inch (0.6 mm) minimum and 0.037 inch (0.9 mm) maximum. The dot shall be centrally located.

**407.4.8 Elevator car call sequential step scanning.** *Elevator car call sequential step scanning* shall be provided where car control buttons are provided more than 48 inches (1220 mm) above the floor. Floor selection shall be accomplished by applying momentary or constant pressure to the up or down scan button. The up scan button shall sequentially select floors above the current floor. The down scan button shall sequentially select floors below the current floor. When pressure is removed from the up or down

scan button for more than 2 seconds, the last floor selected shall be registered as a car call. The up and down scan button shall be located adjacent to or immediately above the emergency control buttons.

**407.4.9 Car position indicators.** Audible and visible car position indicators shall be provided in elevator cars.

**407.4.9.1 Visible indicators.** Visible indicators shall comply with Section 407.4.9.1.

**407.4.9.1.1 Size.** *Characters* shall be  $\frac{5}{8}$  inch (16 mm) minimum in height.

**407.4.9.1.2 Location.** Indicators shall be located above the car control panel or above the door.

**407.4.9.1.3 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 Section 407.4.9.1.3, provided the visible indicators extinguish when the call has been answered.

**407.4.9.1.4 Destination indicator.** In destination-oriented elevators, a display shall be provided in the car with visible indicators to show car destinations.

**407.4.9.2 Audible indicators.** Audible indicators shall comply with Section 407.4.9.2.

**407.4.9.2.1 Signal type.** The signal shall be an automatic verbal annunciator that announces the floor at which the car is about to stop. The verbal announcement indicating the floor shall be completed prior to the initiation of the door opening.

**Exception:** For elevators other than destination-oriented elevators that have a rated speed of 200 feet per minute (1 m/s) maximum, a non-verbal audible signal with a frequency of 1500 Hz maximum that sounds as the car passes or is about to stop at a floor served by the elevator shall be permitted.

**407.4.9.2.2 Signal level.** The verbal annunciator shall be 10 dBA minimum above ambient, but shall not exceed 80 dBA, measured at the annunciator.

**407.4.9.2.3 Frequency.** The verbal annunciator shall have a frequency of 300 Hz minimum and 3,000 Hz maximum.

**407.4.10 Emergency communications.** Emergency two-way communication systems between an elevator car and a point outside the hoistway shall comply with Section 407.4.10 and ASME A17.1/CSA B44 listed in Section 106.2.11.

**407.4.10.1 Height.** *Operable parts* of the communication system shall be located 30 inches (760 mm) minimum and 48 inches (1 220 mm) maximum above the floor.

**407.4.10.2 Identification.** Raised *characters* and braille complying with Sections 703.1.4.3, 703.3 and 703.4 and raised symbols complying with Section 407.4.7.1.4 shall be provided adjacent to the device.

**407.4.10.3 Instructions.** Where instructions for use are provided, essential instructions shall be presented in visual form, raised *characters* and braille complying with Sections 703.1.4.3, 703.2, 703.3 and 703.4.

**407.4.10.4 Message display screen.** Message display screens shall comply with 407.4.10.4.1 and 407.4.10.4.2.

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**407.4.10.4.1 Visibility.** The display screen shall be visible from a point located 40 inches (1015 mm) above the center of the *clear floor space*, 24 inches (610 mm) immediately in front of the car operating panel.

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**407.4.10.4.2 Characters.** *Characters* displayed on the screen comply with Section 703.2 for visual *characters* except that the minimum character height is 3/16 inches (4.8 mm) minimum.

**SECTION 408  
LIMITED-USE/LIMITED-APPLICATION ELEVATORS**

**408.1 General.** Limited-use/limited-application elevators shall comply with Section 408 and ASME A17.1/CSA B44 listed in Section 106.2.11. Elevator operation shall be automatic.

**408.2 Elevator landing requirements.** *Landings* serving limited-use/limited-application elevators shall comply with Section 408.2.

**408.2.1 Call controls.** Elevator call buttons and keypads shall comply with Section 407.2.1.

**408.2.2 Hall signals.** Hall signals shall comply with Section 407.2.4.

**408.2.3 Hoistway signs.** Signs at elevator hoistways shall comply with Section 407.2.5.

**408.3 Elevator door requirements.** Elevator hoistway doors shall comply with Section 408.3.

**408.3.1 Sliding doors.** Sliding hoistway and car doors shall comply with Sections 407.3.1 through 407.3.3, and 408.3.3.

**408.3.2 Swinging doors.** Swinging hoistway doors shall open and close automatically and shall comply with Sections 408.3.2, 404, and 407.3.2.

**408.3.2.1 Power operation.** Swinging doors shall be power-operated and shall comply with ANSI/BHMA A156.19 listed in Section 106.2.9.

**408.3.2.2 Duration.** Power-operated swinging doors shall remain open for 20 seconds minimum when activated.

**408.3.3 Door location and width.** Car doors shall comply with Section 408.3.3.

**Figure 408.3.3 (A)**

DOOR LOCATION FOR LIMITED USE/LIMITED APPLICATION  
(LULA) ELEVATORS – CAR WITH SINGLE DOOR

**Figure 408.3.3 (B)**

DOOR LOCATION FOR LIMITED USE/LIMITED APPLICATION  
(LULA) ELEVATORS – CAR WITH DOORS ON OPPOSITE SIDES

**Figure 408.3.3 (C)**

DOOR LOCATION FOR LIMITED USE/LIMITED APPLICATION  
(LULA) ELEVATORS – CAR WITH DOOR ON ADJACENT SIDES

**Figure 408.3.3 (D)**

DOOR LOCATION FOR LIMITED US/LIMITED APPLICATION  
(LULA) ELEVATORS – CAR WITH DOORS ON ADJACENT SIDES - EXCEPTION

**408.3.3.1 Cars with single door or doors on opposite ends.** Car doors shall be positioned at the narrow end of cars with a single door and on cars with doors on opposite ends. Doors shall provide a clear opening width of 32 inches (815 mm) minimum.

**408.3.3.2 Cars with doors on adjacent sides.** Car doors shall be permitted to be located on adjacent sides of cars that provide a clear inside floor area of 18 square foot (1.67 m<sup>2</sup>) platform. Doors located on the narrow end of cars shall provide a clear opening width of 36 inches (915 mm) minimum. Doors located on the long side shall provide a clear opening width of 42 inches (1065 mm) minimum and be located as far as practicable from the door on the narrow end.

**Exception:** Car doors that provide a clear opening width of 36 inches (915 mm) minimum shall be permitted to be located on adjacent sides of cars that provide clear inside dimensions of 51 inches (1295 mm) in width and 51 inches (1295 mm) in depth.

**408.4 Elevator car requirements.** Elevator cars shall comply with Section 408.4.

**408.4.1 Inside dimensions.** Elevator cars shall provide a clear inside dimension of 42 inches (1065 mm) minimum in width. The clear floor area shall not be less than 15.75 square feet (1.46 m<sup>2</sup>). The elevator car shall provide a *clear floor space* complying with Section 305.3.

**Exceptions:**

1. Where installed in *existing buildings* or *facilities*, elevator cars that provide a clear inside floor area of 15 square feet (1.4 m<sup>2</sup>) minimum, and provide a clear inside dimensions of 36 inches (915 mm) minimum in width and 54 inches (1370 mm) minimum in depth, shall be permitted. This exception shall not apply to cars with doors on adjacent sides.
2. Where installed in *existing buildings* or *facilities*, elevator cars that provide a clear inside dimension of 51 inches (1295 mm) minimum in width, 51 inches (1295 mm) minimum in depth and car doors providing a clear opening width of 36 inches (915 mm) minimum shall be permitted.

**Figure 408.4.1 (A)**

INSIDE DIMENSIONS OF LIMITED USE/LIMITED APPLICATION  
(LULA) ELEVATOR CARS – NEW BUILDINGS

**Figure 408.4.1 (B)**



INSIDE DIMENSIONS OF LIMITED USE/LIMITED APPLICATION  
(LULA) ELEVATOR CARS  
EXISTING BUILDINGS – EXCEPTION 1

**Figure 408.4.1 (C)**

INSIDE DIMENSIONS OF LIMITED USE/LIMITED APPLICATION  
(LULA) ELEVATOR CARS  
EXISTING BUILDINGS – EXCEPTION 2`

**408.4.2 Floors in elevator cars.** Floors in elevator cars shall comply with *floor surfaces*.

**408.4.3 Platform to hoistway clearance.** The clearance between the car platform sill and the edge of any hoistway *landing* shall comply with ASME A17.1/CSA B44 listed in Section 106.2.11.

**408.4.4 Leveling.** Elevator car leveling shall comply with Section 407.4.4.

**408.4.5 Illumination.** Elevator car illumination shall comply with Section 407.4.5.

**408.4.6 Elevator car controls.** Elevator car controls shall comply with Section 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 Section 407.4.7.

**408.4.8 Emergency communications.** Car emergency signaling devices complying with Section 407.4.10 shall be provided.

## SECTION 409 PRIVATE RESIDENCE ELEVATORS

**409.1 General.** Private residence elevators shall comply with Section 409 and ASME A17.1/CSA B44 listed in Section 106.2.11. Elevator operation shall be automatic.

**Exception:** Elevators complying with Section 407 or 408 shall not be required to comply with Section 409.

**409.2 Call controls.** Call buttons at elevator *landings* shall comply with *operable parts*. Call buttons shall be <sup>3</sup>/<sub>4</sub> inch (19 mm) minimum in their smallest dimension.

**409.3 Doors and gates.** Elevator car and hoistway doors and gates shall comply with Sections 409.3 and 404.

**Exception:** The *maneuvering clearances* required by Section 404.2.3 shall not apply for approaches to the push side of swinging doors.

**409.3.1 Power operation.** Elevator car doors and gates shall be power operated and shall comply with ANSI/BHMA A156.19 listed in Section 106.2.9. Elevator cars with a single opening shall have low energy power operated hoistway doors and gates.

**Exception:** Hoistway doors or gates shall be permitted to be of the self-closing, manual type, where that door or gate provides access to a narrow end of the car that serves only one *landing*.

**409.3.2 Duration.** Power operated doors and gates shall remain open for 20 seconds minimum when activated.

**409.3.3 Door or gate location and width.** Car gates or doors positioned at a narrow end of the clear floor area required by Section 409.4.1 shall provide a clear opening width of 32 inches (815 mm) minimum. Car gates or doors positioned on adjacent sides shall provide a clear opening width of 42 inches (1065 mm) minimum.

**409.4 Elevator car requirements.** Elevator cars shall comply with Section 409.4.

**409.4.1 Inside dimensions.** Inside dimensions of elevator cars shall comply with Section 409.4.1.1 or 409.4.1.2 as applicable.

**Figure 409.4.1 (A)**

PRIVATE RESIDENCE ELEVATORS

NEW BUILDINGS – CAR SIZE

**Figure 409.4.1 (B)**

PRIVATE RESIDENCE ELEVATORS

EXISTING BUILDINGS – CAR SIZE

**409.4.1.1 New buildings.** In new buildings, elevator cars shall provide a clear inside dimensions of 36 inches (915 mm) minimum in width and 52 inches (1320 mm) minimum in depth.

**409.4.1.2 Existing buildings.** In *existing buildings or facilities*, elevator cars shall provide a clear inside dimensions of 36 inches (915 mm) minimum in width and 48 inches (1220 mm) minimum in depth.

**409.4.2 Floors in elevator cars.** Floors-elevator cars shall comply with *floor surfaces*.

**409.4.3 Platform to hoistway clearance.** The clearance between the car platform sill and the edge of any hoistway *landing* shall be 1<sup>1</sup>/<sub>4</sub> inches (32 mm) maximum.

**409.4.4 Leveling.** Each car shall automatically stop at a floor *landing* within a tolerance of 1/2 inch (12.7 mm) under rated loading to zero loading conditions.

**409.4.5 Illumination.** The level of illumination at the car controls, platform, and car threshold and landing sill shall be 5 foot-candles (54 lux) minimum.

**409.4.6 Elevator car controls.** Elevator car controls shall comply with Sections 409.4.6 and the *operable parts* requirements in Section 309.4.

**409.4.6.1 Buttons.** Control buttons shall be 3/4 inch (19.1 mm) minimum in their smallest dimension. Control buttons shall be raised or flush.

**409.4.6.2 Height.** Buttons with floor designations shall comply with the *operable parts* requirements in Section 309.3.

**409.4.6.3 Location.** Controls shall be on a sidewall, 12 inches (305 mm) minimum from any adjacent wall.

**Figure 409.4.6.3**

LOCATION OF CONTROLS IN PRIVATE RESIDENCE ELEVATORS

**409.4.7 Emergency communications.** Emergency communications systems shall comply with Section 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 the *operable parts* requirements in Section 309.3 and 309.4.

**409.4.7.3 Compartment.** Where the device is in a closed compartment, the compartment door hardware shall comply with *operable parts*.

**409.4.7.4 Cord.** The telephone cord shall be 29 inches (735 mm) minimum in length.

**SECTION 410  
PLATFORM LIFTS**

**410.1 General.** Platform lifts shall comply with Section 410 and ASME A18.1 listed in Section 106.2.12. Platform lifts shall not be attendant operated and shall provide unassisted entry and exit from the lift.

**410.2 Lift Entry.** Lifts with doors shall comply with Section 410.2.1. Lifts with *ramps* shall comply with Section 410.2.2.

**410.2.1 Doors.** Doors shall be low-energy power operated doors complying with Section 404.3. Doors shall remain open for 20 seconds minimum. On lifts with one door or with doors on opposite ends, the end door clear opening width shall be 32 inches (815 mm) minimum. On lifts with one door on a narrow end and one door on a long side, the end door clear opening width shall be 36 inches (915 mm) minimum. Side door clear opening width shall be 42 inches (1065 mm) minimum. Where a door is provided on a long side and on a narrow end of a lift, the side door shall be located with either the strike side or the hinge side in the corner furthest from the door on the narrow end.

**Exceptions:**

1. Doors shall be permitted to be of the self-closing, manual type, where that door provides access to a narrow end of the platform that serves only one *landing*. This exception shall not apply to doors with *ramps*.
2. Lifts serving two *landings* maximum and having doors on adjacent sides shall be permitted to have self-closing manual doors provided that the side door is located with the strike side furthest from the end door. This exception shall not apply to doors with *ramps*.

**Figure 410.2.1 (A)**

PLATFORM LIFT DOORS AND GATES – PLATFORM LIFT WITH DOOR AT ONE END OR AT OPPOSITE ENDS

**Figure 410.2.1 (B)**

## PLATFORM LIFT DOORS AND GATES

### PLATFORM WITH DOORS ON ADJACENT SIDE

**410.2.2 Ramps.** *Ramp* widths shall not be less than the platform opening they serve.

**410.3 Floors in platform lifts.** Floors of platform lifts shall comply with *floor surfaces*.

**410.4 Platform to runway clearance.** The clearance between the platform sill and the edge of any runway *landing* shall be 1<sup>1</sup>/<sub>4</sub> inch (32 mm) maximum.

**410.5 Clear inside floor area.** Clear inside floor dimensions of platform lifts shall comply with Section 410.5.

**410.5.1 Lifts with single door or, doors on opposite ends.** Inside dimensions of platform lifts with a single door or, doors on opposite ends shall comply with Sections 410.5.1.1 or 410.5.1.2.

**410.5.1.1 New buildings.** In new buildings or *facilities*, platform lifts with a single door or doors on opposite ends shall provide clear inside dimensions of 36 inches (915 mm) minimum in width and 52 inches (1320 mm) minimum in depth.

**Exception:** Incline platform lifts with passenger restraining arms, shall be permitted to provide clear inside dimensions of 36 inches (915 mm) minimum in width and 48 inches (1220 mm) minimum in depth.

#### Figure 410.5.1.1

PLATFORM LIFTS – SIZE WITH SINGLE DOOR OR DOORS ON OPPOSITE ENDS – NEW BUILDINGS

**410.5.1.2 Existing buildings.** In *existing buildings* or *facilities*, platform lifts with a single door or with doors on opposite ends shall provide clear inside dimensions of 36 inches (915 mm) minimum in width and 48 inches (1220 mm) minimum in depth.

#### Figure 410.5.1.2

PLATFORM LIFTS – SIZE WITH SINGLE DOOR OR DOORS ON OPPOSITE ENDS – EXISTING BUILDINGS

**410.5.2 Platform lifts with doors on adjacent sides.** Inside dimensions of platform lifts with doors on adjacent sides shall comply with Sections 410.5.2.1 or 410.5.2.2.

**410.5.2.1 New buildings.** In new buildings or *facilities*, platform lifts with doors on adjacent sides shall provide clear inside dimensions of 42 inches (1065 mm) minimum in width and 60 inches (1525 mm) minimum in depth.

**Figure 410.5.2.1**

PLATFORM LIFTS – SIZE WITH DOORS ON ADJACENT SIDES  
NEW BUILDINGS

**E4-2023 AS**

**410.5.2.2 Existing buildings.** In *existing buildings* or *facilities*, platform lifts with doors on adjacent sides shall be permitted to provide a clear inside dimensions of 36 inches (915 mm) in width and 60 inches (1525 mm) in depth.

**Figure 410.5.2.2**

PLATFORM LIFTS – SIZE WITH DOORS ON ADJACENT SIDES  
EXISTING BUILDINGS

**410.6 Operable parts.** Controls for platform lifts shall comply with *operable parts*.

**CHAPTER 5**  
**GENERAL SITE AND BUILDING ELEMENTS**

**SECTION 501**  
**GENERAL**

**501.1 Scope.** General *site* and building *elements* required to be *accessible* by the scoping provisions adopted by the *administrative authority* shall comply with the applicable provisions of Chapter 5. Where *building blocks* are required in this chapter, they shall comply with the applicable provisions of Chapter 3.

**SECTION 502**  
**PARKING SPACES**

**502.1 General.** Car and van parking spaces shall comply with Sections 502.2 through 502.8. Car and van parking spaces provided as part of on-street parking shall comply with Sections 502.9 and 502.10.

**502.2 Vehicle space size.** Car parking spaces shall be 96 inches (2440 mm) minimum in width. Van parking spaces shall be 132 inches (3355 mm) minimum in width.

**Exception:** Where the adjacent access aisle is 96 inches (2440 mm) minimum in width, van parking spaces shall be 96 inches (2440 mm) minimum in width.

**Figure 502.2 (A)**

VEHICLE PARKING SPACE SIZE

**Figure 502.2 (B)**

VAN PARKING SPACE SIZE EXCEPTION

**502.3 Vehicle space marking.** Car and van parking spaces shall be marked to define the width. Where parking spaces are marked with lines, the width measurements of parking spaces and adjacent 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.

**502.4 Access aisle.** Car and van parking spaces shall have an adjacent access aisle complying with Section 502.4.

**Figure 502.4**

PARKINGS SPACE ACCESS AISLE

**502.4.1 Location.** Access aisles shall adjoin an *accessible* route. Two parking spaces shall be permitted to share a common access aisle. Access aisles shall not overlap with the *vehicular way*. Parking spaces shall be permitted to have access aisles located on either side of the car or van parking space. Van parking spaces that are angled shall have access aisles located on the passenger side of the parking space.

**502.4.2 Width.** Access aisles serving car and van parking spaces shall be 60 inches (1525 mm) minimum in width.

**502.4.3 Length.** Access aisles shall extend the full length of the parking spaces they serve.

**502.4.4 Marking.** Access aisles shall be marked so as to discourage parking in them. Where access aisles are marked with lines, the width measurements of access aisles and adjacent parking spaces shall be made from the centerline of the markings.

**Exception:** Where access aisles or parking spaces are not adjacent to another access aisle or parking space, measurements shall be permitted to include the full width of the line defining the access aisle or parking space.

### Proposal 03-04-21 D/BC2 AM

**502.5 Floor surfaces.** Parking spaces and access aisles shall comply with *floor surfaces* and shall not have surface slopes steeper than one unit vertical in 48 inches horizontal (2 percent slope) measured along their length and width. Access aisles shall be at the same level as the parking spaces they serve.

**502.6 Vehicle clearance.** A vehicle clearance of 98 inches (2490 mm) minimum in height shall be provided at the following locations:

1. Parking spaces for vans.
2. The access aisles serving parking spaces for vans.
3. The vehicular routes serving parking spaces for vans.

**502.7 Identification.** Where parking spaces are required to be identified by signs, the signs shall include the International Symbol of Accessibility complying with Section 703.6.2.1. Signs identifying van parking spaces shall contain the designation “van accessible.” Signs shall be 60 inches (1525 mm) minimum above the floor of the parking space, measured to the bottom of the lowest *sign* required by Section 502.7.

**502.8 Relationship to accessible routes.** Parking spaces and access aisles shall be designed so that cars and vans, when parked, do not obstruct the required clear width of adjacent *accessible* routes.

### Proposal 05-06-2021 AM/AFM PC1

**502.9 On-street parking spaces.** On-street parallel parking in the public right-of-way shall comply with Section 502.9.1. On-street perpendicular or angled parking shall comply with Section 502.9.2.

**502.9.1 Wide sidewalks.** Where the width of the adjacent sidewalk or available right-of-way exceeds 14 feet (4265 mm), an access aisle 60 inches (1525 mm) minimum in width shall be provided at street level the full length of the parking space and shall connect to an *accessible* route. The access aisle shall comply with Section 502.4 and shall not encroach on vehicular travel lanes.

#### Figure 502.9.1

#### WIDE SIDEWALKS

**502.9.1.1 Alterations.** In alterations where the street or sidewalk adjacent to the parking spaces is not altered, an access aisle shall not be required provided the parking spaces are located at the end of the block face.

**502.9.1.2 Narrow sidewalks.** An access aisle is not required where the width of the adjacent sidewalk or the available right-of-way is less than or equal to 14 feet (4265 mm). Where an access aisle is not provided, the parking spaces shall be located at the end of the block face.

**Figure 502.9.1.2**

NARROW SIDEWALKS

**502.9.2 Perpendicular or angled parking spaces.** Where perpendicular or angled parking is provided, an access aisle 96 inches (2440 mm) minimum in width shall be provided at street level the full length of the parking space and shall connect to an *accessible* route. The access aisle shall comply with Section 502.4 and shall be marked so as to discourage parking in the access aisle. Two parking spaces are permitted to share a common access aisle.

**Figure 502.9.2**

PERPENDICULAR OR ANGLED PARKING SPACE

**502.10 Parking meters and parking pay stations.** Parking meters and parking pay stations that serve parking spaces shall comply with *operable parts*.

**502.10.1 Location.** At parallel parking spaces, parking meters shall be located at the head or foot of the parking space.

**502.10.2 Displays and information.** Displays and information shall be visible from a point located 40 inches (1015 mm) maximum above the center of the clear space in front of the parking meter or parking pay station.

**Proposal 05-08-2021 AS/AM PC1 Entire section**

**SECTION 503**

**ELECTRICAL VEHICLE (EV) CHARGING STATIONS**

**503.1 Electrical vehicle (EV) charging stations.** Where an *electrical vehicle (EV) charging station* serves an *accessible* vehicle space, that *EV charging station* shall comply with Sections 503.1.1 through 503.1.3. The *accessible* vehicle space shall comply with Section 503.1.4.

**503.1.1 Operable parts.** Controls on the *EV charging station*, including card readers, shall comply with *operable parts*. Where numeric keys or display screens are provided, they shall comply with Section 707.5 through 707.10. Where two-way communication is integrated in the *EV charging station*, they shall comply with Section 708.



**503.1.2 Accessible route.** An *accessible* route shall be provided from the access aisle adjacent to the *EV charging space* to the *clear floor space* adjacent to the *EV charging station*. When the vehicle is being charged, the *accessible* route shall not be obstructed by the cable between the car and *EV charging station*.

**503.1.3 Obstructions.** Protection bollards, curbs or wheel stops shall be located so that they do not obstruct the *clear floor space* or the *accessible* route.

**503.1.4 EV charging space.** The *electric vehicle (EV) charging spaces* shall comply with Section 503.1.4.

**503.1.4.1 EV charging space size.** The *EV charging spaces* shall be 132 inches (3353 mm) minimum in width and 240 inches (6096 mm) minimum in length.

#### **Figure 503.1.4.1**

##### **EV CHARGING SPACE SIZE**

**503.1.4.2 EV charging space marking.** The *EV charging spaces* shall be marked to define the width and length. Where *EV charging spaces* are marked with lines, the width measurements of *EV charging spaces* and adjacent access aisles shall be made from the centerline of the markings.

#### **Exceptions:**

1. Where parking spaces or access aisles are not adjacent to another *EV charging space* or access aisle, measurements shall be permitted to include the full width of the line defining the *EV charging space* or access aisle.
2. *EV charging space* in pull-through *EV charging stations* are not required to comply with Section 503.1.4.2.

**503.1.4.3 Access aisle.** The *EV charging spaces* shall have an adjacent access aisle complying with Section 503.1.4.3.

**Exception:** Where *EV charging stations* are provided at parallel parking in the public right-of-way, the access aisle for the *EV charging space* shall be permitted to comply with Section 502.9.

#### **Figure 503.1.4.3**

##### **EV CHARGING SPACE ACCESS AISLE**

**503.1.4.3.1 Location.** Access aisles shall adjoin an *accessible* route. Two *EV charging spaces* shall be permitted to share a common access aisle. Access aisles shall not overlap with the *vehicular way*.

The *EV charging spaces* shall be permitted to have access aisles placed on either side of the *EV charging space*.

**503.1.4.3.2 Width.** Access aisles serving the *EV charging spaces* shall be 60 inches (1525 mm) minimum in width.

**503.1.4.3.3 Length.** Access aisles shall extend the full length of the *EV charging spaces* they serve.

**503.1.4.3.4 Marking.** Access aisles shall be marked so as to discourage parking in them. Where access aisles are marked with lines, the width measurements of access aisles and adjacent *EV charging spaces* shall be made from the centerline of the markings.

**Exception:**

1. Where access aisles or *EV charging spaces* are not adjacent to another access aisle or *EV charging space*, measurements shall be permitted to include the full width of the line defining the access aisle or *EV charging space*.
2. *EV charging space* in pull-through *EV charging stations* are not required to comply with Section 503.1.4.3.4.

**503.1.4.4 Vertical clearance.** A vertical clearance of 98 inches (2490 mm) minimum shall be provided at the following locations:

1. *EV charging spaces*.
2. The access aisles serving the *EV charging space*.
3. The vehicular routes serving the On-street *EV charging space*.

**503.1.4.5 Floor surfaces.** *EV charging spaces* and access aisles shall comply with *floor surfaces* and have surface slopes not steeper than one unit vertical in 48 inches horizontal (2 percent slope). Access aisles shall be at the same level as the *EV charging spaces* they serve.

**503.1.5 Identification.** Where *EV charging spaces* are identified by signs, the signs shall include “Accessible EV Charing - Use Last”. Signs shall be 60 inches (1525 mm) minimum above the floor of the *EV charging space*, measured to the bottom of the sign.

## SECTION 504 PASSENGER LOADING ZONES

**504.1 General.** Passenger loading zones shall comply with Section 504.

**504.2 Vehicle pull-up space size.** Passenger loading zones shall provide a vehicular pull-up space 96 inches (2440 mm) minimum in width and 20 feet (6095 mm) minimum in length.

**504.3 Access aisle.** Passenger loading zones shall have an adjacent access aisle complying with Section 504.3.

**Figure 504.3 (A)**

PASSENGER LOADING ZONE ACCESS AISLE – NEW BUILDINGS

**Figure 504.3 (B)**

PASSENGER LOADING ZONE ACCESS AISLE – EXISTING BUILDINGS

**504.3.1 Location.** Access aisles shall adjoin an *accessible* route. Access aisles shall not overlap *vehicular ways*.

**504.3.2 Width.**

**504.3.2.1 New buildings and facilities.** In new buildings and *facilities*, aisles serving vehicle pull-up spaces shall be 67 inches (1700 mm) minimum in width.

**504.3.2.2 Existing buildings and facilities.** In *existing buildings* and *facilities*, access aisles serving vehicle pull-up spaces shall be 60 inches (1525 mm) minimum in width.

**504.3.3 Length.** Access aisles shall extend the full length of the vehicle pull-up spaces they serve.

**504.3.4 Marking.** Access aisles shall be marked so as to discourage parking in them.

**Proposal 03-04-21 D/BC2 AM**

**504.4 Floor surfaces.** Vehicle pull-up spaces and access aisles serving them shall comply with *floor surfaces* and shall not have surface slopes steeper than one unit vertical in 48 inches horizontal (2 percent slope) measured along their length and width. Access aisles shall be at the same level as the vehicle pull-up space they serve.

**504.5 Vertical clearance.** A vertical clearance of 114 inches (2895 mm) minimum shall be provided at the following locations:

1. Vehicle pull-up spaces;
2. The access aisles serving vehicle pull-up spaces;
3. A vehicular route from an entrance to the passenger loading zone, and;
4. A vehicular route from the passenger loading zone to a vehicular exit serving vehicle pull-up spaces.

**SECTION 505  
STAIRWAYS**

**505.1 General.** *Accessible stairs* shall comply with Section 505.

**505.2 Stairway width.** The minimum stairway width shall comply with Section 1011.2 of the International Building Code listed in Section 106.2.4.

**505.3 Stairway landings.** Stairway *landings* shall comply with Section 1011.6 of the International Building Code listed in Section 106.2.4.

## Proposal 05-10-2021 AM/AFM PC1; E11 coordination

**505.4 Headroom.** The headroom clearance along the *stairway* shall comply with Section 1011.3 of the International Building Code listed in Section 106.2.4. The *circulation path* along the *stairway* shall comply with *protruding objects*.

**505.5 Treads and risers.** All steps on a *flight* of stairs shall have uniform riser height and uniform tread depth. Risers shall be 4 inches (100 mm) minimum and 7 inches (180 mm) maximum in height. Treads shall be 11 inches (280 mm) minimum in depth.

### Figure 505.5

#### TREADS AND RISERS FOR STAIRWAYS

**505.6 Open risers.** Open risers shall not be permitted.

**505.7 Tread surface.** Stair treads shall comply with *floor surfaces* and shall have a slope not steeper than one unit vertical in 48 inches horizontal (2 percent slope).

**505.8 Dimensional uniformity.** The stair tread and risers shall be of uniform size and shape. The tolerances between largest and smallest shall comply with Section 1011.5.4 and 1011.5.4.1 of the International Building Code listed in Section 106.2.4.

**505.9 Nosings.** *Nosings* shall comply with the following:

1. *Nosings* within a *stairway* shall be uniform.
2. If rounded, the radius of curvature at the leading edge of the tread shall be  $\frac{1}{2}$  inch (12.7 mm) maximum.
3. If beveled, the bevel at the leading edge shall slope at 45 degrees to the plane of the top surface of the tread and *landing* and extend for a horizontal distance of  $\frac{1}{2}$  inch (12.7 mm) maximum.
4. *Nosings* that project beyond risers shall have the underside of the leading edge curved or beveled at an angle of 30 degrees maximum from the vertical.
5. Risers shall be permitted to slope or curve under the tread provided the permitted projection of the *nosing* is not exceeded.
6. The permitted projection of the *nosing* shall be 1-1/4 inches (32 mm) maximum over the tread or floor below.

### Figure 505.9 (A)

#### NOSINGS – VERTICAL RISER – CURVE OR BEVEL AT LEADING EDGE

### Figure 505.9 (B)

#### NOSINGS – VERTICAL RISER

## CURVED NOSING OR CURVED RISER

### Figure 505.9 (C)

NOSINGS – VERTICAL RISER

BEVELED NOSING OR SLOPED RISER

### Figure 505.9 (D)

NOSINGS –SLOPED RISER

SLOPED RISER

## Proposal 05-10-2021 AM; 05-11-2021 AM/AM PC1; 05-13-2021 D/AM PC2, PC4, PC5, PC6, PC7

**505.10 Visual contrast marking.** Visual contrast markings shall comply with either 1 or 2:

1. The leading 1 to 2 inches (25 to 51 mm) of every tread and *landing*, measured horizontally from the leading edge of the *nosing*, shall consist of a solid color contrasting marking complying with Section 504.6.1. The visual contrast marking shall be uniform at each tread and *landing*, and consistent throughout the *stairway*. The contrasting marking shall be durable and shall extend from one side of each tread to the other side of each tread.
2. Distinctive warning markings including, but not limited to, photoluminescent markings as approved by the *administrative authority*.

## Proposal 05-13-2021 D/AM PC2, PC4, PC5, PC6, PC7; editorial coord with definitions

**505.10.1 Contrast.** The percentage of visual contrast between the marking and its background shall be 65% minimum as determined by the following equation:

$$\text{Contrast} = [(B1 - B2)/B1] \times 100$$

where B1 = *light reflectance value (LRV)* of the *light* surface; and

B2 = *light reflectance value (LRV)* of the *dark* surface.

**Exceptions:** The following shall be permitted to have markings that have a contrast of dark-on-light or light-on-dark from its background:

1. Exterior *stairways*.
2. *Stairways* where the *LRV* of a background material cannot be accurately measured, including, but not limited to a naturally variegated material.

## Proposal 05-13-2021 D/AM PC2, PC4, PC5, PC6, PC7

**505.10.1.1 Compliance.** Compliance with the Section 505.10.1 shall be determined by at least one of the following:

1. Documentation provided by the *stair* manufacturer or builder.
2. Documentation of compliance by a testing agency.
3. Field measurement.

**505.11 Handrails.** *Stairs* shall have *handrails* complying with Section 506.

**505.12 Wet conditions.** Stair treads and *landings* subject to wet conditions shall be designed to prevent the accumulation of water.

**505.13 Curved stairways.** Curved *stairways* shall comply with Section 1011.9 of the International Building Code listed in Section 106.2.4.

**505.14 Spiral stairways.** *Spiral stairways* shall comply with Section 1011.9 of the International Building Code listed in Section 106.2.4.

**505.15 Lighting.** Lighting for interior *stairways* shall comply with Section 505.15.

**505.15.1 Illumination level.** Lighting *facilities* shall be capable of providing illuminance of *stairs* measured at the center of tread surfaces and on *landing* surfaces within 24 inches (610 mm) of step *nosings* as follows:

1. A 1-foot-candle (10.8 lux) minimum illumination at times other than conditions of stair use
2. A 10-foot-candle (108 lux) minimum illumination during conditions of stair use
3. The transition from 1 foot candle (10.8 lux) to 10-foot candle (108 lux) under conditions of stair use shall be permitted to be achieved by automatic, motion sensor-type lighting switches provided the switch controllers comply with all of the following:
  - 3.1 The switch controllers are equipped for fail-safe operation and evaluated for this purpose
  - 3.2 The motion sensor is activated by occupant movement on the *stair* or *stair landings*
  - 3.3 The illumination timers are set for a minimum 15-minute duration.

**505.15.2 Lighting controls.** Where provided, occupancy-sensing automatic controls shall activate the stairway lighting so the illuminance level required by Section 505.15.1 is provided on the entrance *landing*, each stair *flight* adjacent to the entrance *landing*, and on the *landings* above and below the entrance *landing* prior to any step being used.

**505.16 Tactile signage within the stairway or ramp enclosure.** Floor level identification signs in raised *characters* and braille complying with Sections 703.1.4, 703.3 and 703.4 shall be located at each floor level *landing* in all enclosed exit *stairways* or *ramps*. Such *sign* shall be located adjacent to the door leading from the enclosed exit *stairway* or *ramp* into the corridor to identify the floor level. The exit door discharging to the outside or to the level of exit discharge shall have a *sign* with raised *characters* and braille stating "EXIT."

**505.17 Tactile signage at exits.** A *sign* stating EXIT in raised *characters* and Braille and complying with Sections 703.1.4, 703.3 and 703.4 shall be provided adjacent to each door to an area of refuge providing direct access to a *stairway*, an exit *stairway*, an exit *ramp*, an exit passageway, an exterior area for assisted rescue, and the exit discharge.

## SECTION 506 HANDRAILS

**506.1 General.** *Handrails* required by Section 405.8 for *ramps*, Section 505.11 for *stairs*, Section 1009.3.3 for pool sloped entries and Section 1009.6.2 for pool stairs shall comply with Section 506.

**506.2 Location.** *Handrails* shall be provided on both sides of stairs and *ramps*.

**Exceptions:**

1. In assembly seating areas, *handrails* shall not be required on both sides along aisle stairs provided with a *handrail* either at the side or within the aisle.

2. In assembly seating areas, *handrails* shall not be required on the sides of ramped aisles serving seats.

**506.3 Continuity.** *Handrails* shall be continuous within the full length of each stair *flight* or ramp run. Inside *handrails* on switchback or dogleg stairs or ramps shall be continuous between *flights* or runs. Other *handrails* shall comply with *protruding objects* and Section 506.10.

**Exception:** *Handrails* shall not be required to be continuous in aisles serving seating where *handrails* are discontinuous to allow access to seating and to permit crossovers within the aisles.

**506.4 Height.** Top of gripping surfaces of *handrails* shall be 34 inches (865 mm) minimum and 38 inches (965 mm) maximum vertically above stair *nosings*, ramp surfaces and walking surfaces. *Handrails* shall be at a consistent height above stair *nosings*, ramp surfaces, and walking surfaces.

**Figure 506.4 (A)**

HANDRAIL HEIGHT – STAIRS

**Figure 506.4 (B)**

HANDRAIL HEIGHT - RAMPS

**506.5 Clearance.** Clearance between handrail gripping surface and adjacent surfaces shall be 1½ inches (38 mm) minimum.

**Figure 506.5**

HANDRAIL CLEARANCE

**506.6 Gripping surface.** Gripping surfaces shall be continuous, without interruption by newel posts, other construction *elements*, or obstructions.

**Exceptions:**

1. Handrail brackets or balusters attached to the bottom surface of the *handrail* shall not be considered obstructions, provided the brackets or balusters comply with the following criteria:

1.1. Not more than 20 percent of the *handrail* length is obstructed,

1.2. Horizontal projections beyond the sides of the *handrail* occur 1½ inches (38 mm) minimum below the bottom of the *handrail*, and provided that for each ½ inch (12.7 mm) of additional *handrail* perimeter dimension above 4 inches (100 mm), the vertical clearance dimension of 1½ inches (38 mm) shall be permitted to be reduced by ⅛ inch (3.2 mm), and

1.3. Edges shall be rounded.

2. Where *handrails* are provided along walking surfaces with slopes not steeper than one unit vertical in 20 units horizontal (5 percent slope), 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.

**506.7 Cross section.** *Handrails* shall have a cross section complying with Section 506.7.1 or 506.7.2.

**Figure 506.7 (A)**

HANDRAIL CROSS SECTION – CIRCULAR

**Figure 506.7 (B)**

HANDRAIL CROSS SECTION – NONCIRCULAR

**Figure 506.7 (C)**

HANDRAIL CROSS SECTION - NONCIRCULAR

**506.7.1 Circular cross section.** *Handrails* with a circular cross section shall have an outside diameter of 1¼ inches (32 mm) minimum and 2 inches (51 mm) maximum.

**506.7.2 Noncircular cross sections.** *Handrails* with a noncircular 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.

**506.8 Surfaces.** *Handrails*, and any wall or other surfaces adjacent to them, shall be free of any sharp or abrasive *elements*. Edges shall be rounded.

**506.9 Fittings.** *Handrails* shall not rotate within their fittings.

**Proposal 05-19-2021 AM; 05-21-2021 D/AM PC1**

**506.10 Handrail extensions.** *Handrail* extensions shall comply with Section 506.10 and shall extend not less than the minimum required distance beyond and in the same direction of stair *flights* and ramp runs without any change in direction or a decrease in clearances required by Sections 506.5 and 506.6.

**Exceptions:**

1. Continuous *handrails* at the inside turn of *stairs* to another *stair* and ramps to another ramp.
2. *Handrail* extensions shall not be required in aisles serving seating where the *handrails* are discontinuous to allow access to seating and to permit crossovers within the aisle.
3. In alterations, full extensions of *handrails* shall not be required where such extensions would be hazardous due to plan configuration.

**Proposal 05-21-2021 D/AM PC1**

**506.10.1 Top and bottom extension at ramps.** Ramp *handrails* shall extend horizontally above the *landing* 12 inches (305 mm) minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or floor, or shall be continuous to the *handrail* of an adjacent ramp run or continuous to the *handrail* extension of an adjacent *flight* of stairs.

**Figure 506.10.1**

TOP AND BOTTOM HANDRAIL EXTENSION AT RAMPS

**Proposal 05-21-2021 D/AM PC1**

**506.10.2 Top extension at stairs.** At the top of a stair *flight*, *handrails* shall extend horizontally above the *landing nosing* for 12 inches (305 mm) minimum. Extensions shall return to a wall, guard, or the *landing* surface, or shall be continuous to the *handrail* of an adjacent stair *flight* or continuous to the *handrail* extension of an adjacent ramp run.

**Figure 506.10.2**

TOP HANDRAIL EXTENSION AT STAIRS

**Proposal 05-21-2021 D/AM PC1**

**506.10.3 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 equal to one tread depth beyond the bottom tread *nosing*. Extensions shall return to a wall, guard, or the *landing* surface, or shall be continuous to the *handrail* of an adjacent stair *flight* or continuous to the *handrail* extension of an adjacent ramp run.

**Figure 506.10.3**

BOTTOM HANDRAIL EXTENSION AT STAIRS

## SECTION 507

### WINDOWS

**507.1 General.** Where operable windows are provided in an *accessible* room or space, at least one shall comply with Section 507. Where operable windows are required to provide natural ventilation or operable windows are required to provide an emergency escape and rescue opening, that window shall be the operable window that complies with Section 507.

**Exceptions:**



1. Operable windows that are operated only by employees shall not be required to comply with Section 507.
2. Operable windows in Type A units that comply with Section 1103.13.
3. Operable skylights shall not be required to comply with Section 507.

**507.2 Operating force.** The operating force for windows includes forces for opening, closing, locking or latching, and unlocking or unlatching and shall comply with AAMA 513 listed in Section 106.2.15. Hardware for locking or latching and unlocking or unlatching shall comply with *operable parts*. The operating force for opening and closing operable windows shall be as follows:

1. 8.5 pounds (37.7 N) maximum for vertical or horizontal sliding windows.
2. 5 pounds (22.2N) maximum for all other types of operating windows.

## **SECTION 508 ACCESSIBLE ROUTES THROUGH PARKING**

**508.1 General.** Where *accessible* routes pass through parking *facilities*, they shall be physically protected from vehicular traffic.

### **Exceptions:**

1. *Accessible* routes crossing drive aisles shall not be required to comply with Section 508.
2. *Accessible* routes only from parking spaces complying with Section 502 and passenger loading zones complying with Section 503 to *accessible* entrances shall not be required to comply with Section 508.

**CHAPTER 6**  
**PLUMBING ELEMENTS AND FACILITIES**

**SECTION 601**  
**GENERAL**

**601.1 Scope.** Plumbing *elements* and *facilities* required to be *accessible* by scoping provisions adopted by the *administrative authority* shall comply with the applicable provisions of Chapter 6. Where *building blocks* are required in this chapter, they shall comply with the applicable provisions of Chapter 3.

**SECTION 602**  
**DRINKING FOUNTAINS AND BOTTLE FILLING STATIONS**

**602.1 General.** Drinking fountains for persons using wheelchairs shall comply with *protruding objects* and Section 602.2. Drinking fountains for persons who are standing shall comply with *protruding objects* and Section 602.3.

**602.2 Drinking fountains for persons using wheelchairs.** Drinking fountains for persons using wheelchairs shall comply with Sections 602.2.

**602.2.1 Clear floor space.** A *clear floor space* positioned for a forward approach to the drinking fountain shall be provided. *Knee and toe clearance* shall be provided. The *clear floor space* shall be centered on the drinking fountain.

**Exception:** Drinking fountains primarily for *children's use* shall be permitted where a *clear floor space* provides a parallel approach and is centered on the drinking fountain.

**Figure 602.2.1 (A)**

CLEAR FLOOR SPACE AT WHEELCHAIR DRINKING FOUNTAINS

**Figure 602.2.1 (B)**

CLEAR FLOOR SPACE AT WHEELCHAIR DRINKING FOUNTAINS – PRIMARILY FOR CHILDREN'S USE

EXCEPTION

**602.2.2 Operable parts.** Controls shall comply with *operable parts*.

**602.2.3 Spout outlet height.** Spout outlets of drinking fountains shall be 36 inches (915 mm) maximum above the floor.

**Exception:** At drinking fountains primarily for *children's use*, the spout outlet shall be 30 inches (760 mm) maximum above the floor.

**Figure 602.2.3**

WHEELCHAIR DRINKING FOUNTAIN SPOUT HEIGHT AND LOCATION

**602.2.4 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 drinking fountain, including bumpers.

**Exception:** At drinking fountains primarily for *children's use*, the spout shall be located 3<sup>1</sup>/<sub>2</sub> inches (90 mm) maximum from the front edge of the drinking fountain, including bumpers.

**Figure 602.2.4**

WHEELCHAIR DRINKING FOUNTAIN SPOUT LOCATION

**602.2.5 Water flow.** The spout shall provide a flow of water 4 inches (100 mm) minimum in height. The angle of the water stream from spouts within 3 inches (75 mm) of the front of the drinking fountain shall be 30 degrees maximum, and 3 inches (75 mm) minimum and 5 inches (125 mm) maximum spouts to the front of the drinking fountain shall be 15 degrees maximum, measured horizontally relative to the front face of the drinking fountain.

**602.3 Drinking fountains for persons who are standing.** Drinking fountains for persons who are standing shall comply with Sections 602.3.

**602.3.1 Operable parts.** Controls shall comply with the *operable parts* requirements in Sections 309.3 and 309.4.

**602.3.2 Spout outlet height.** Spout outlets of drinking fountains shall be 38 inches (965 mm) minimum and 43 inches (1090 mm) maximum above the floor.

**Exception:** Drinking fountains primarily for *children's use* shall be permitted where the spout outlet is 30 inches (760 mm) minimum and 43 inches (1090 mm) maximum above the floor.

**Figure 602.3.2**

STANDING USE DRINKING FOUNTAIN SPOUT  
HEIGHT AND LOCATION

**602.3.3 Spout location.** The spout shall be located 5 inches (125 mm) maximum from the front edge of the drinking fountain, including bumpers.

**Figure 602.3.3**

STANDING USE DRINKING FOUNTAIN SPOUT LOCATION

**602.3.4 Water flow.** The spout shall provide a flow of water 4 inches (100 mm) minimum in height. The angle of the water stream from spouts within 3 inches (75 mm) of the front of the drinking fountain shall be 30 degrees maximum, and 3 inches (75 mm) minimum and 5 inches (125 mm) maximum spouts to the front of the drinking fountain shall be 15 degrees maximum, measured horizontally relative to the front face of the drinking fountain.

**602.4 Bottle filling stations.** Bottle filling stations shall comply with Sections 602.4.1 and 602.4.2.

**Exception:** Where bottle filling stations are part of the drinking fountain for persons who are standing, the bottle filling station is not required to comply with Section 602.4 provided a bottle filling station is located at the drinking fountain for persons using wheelchairs.

**602.4.1 Clear floor space.** A *clear floor space* positioned for a forward or side approach shall be provided.

**602.4.2 Controls.** Controls for bottle filling stations shall be hand operated or automatic. Hand operated controls shall comply with *operable parts*. Automatic controls shall allow for bottle filling within the *operable parts* requirements in Section 309.3.

## **SECTION 603 TOILET AND BATHING ROOMS**

**603.1 General.** Toilet and bathing rooms shall comply with Section 603.

### **603.2 Clearances.**

**603.2.1 Turning space.** A *turning space* shall be provided within the room. The required *turning space* shall not be provided within a toilet compartment.

**603.2.2 Door swing.** Doors shall not swing into the *clear floor space* or *maneuvering clearance* for any fixture.

#### **Exceptions:**

1. Doors to a toilet 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*, provided the swing of the door can be reversed to comply with Section 603.2.2.
2. Where the room is intended for individual use, family or companion, and a *clear floor space* complying with Section 305.3 is provided within the room outside the arc of a door swing, such a door shall not be required to comply with Section 603.2.2.

**603.3 Mirrors.** Where mirrors are located above lavatories, a mirror shall be located over the lavatory complying with Section 606 and shall be mounted with the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the floor. Where mirrors are located above counters that do not contain lavatories, the mirror shall be mounted with the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the floor.

**Exception:** Other than within *Accessible dwelling units* or *sleeping units*, mirrors shall not be required over the lavatories or counters if a mirror is located within the same toilet or bathing room and mounted with the bottom edge of the reflecting surface 35 inches (890 mm) maximum above the floor.

**603.4 Coat hooks and shelves.** Coat hooks shall be located within one of the *reach ranges*. Shelves shall be 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the floor.

### **Proposal 06-05-2021 AS/AM BC1; 06-06-2021 AM/D; E7 and E11 coordination**

**603.5 Diaper changing tables.** Diaper changing tables shall comply with *operable parts* and Section 902. Diaper changing tables where located in toilet compartments shall not overlap the *maneuvering clearance* around the water closet or the *accessible* route to the transfer space when in the useable position.

**Exception:** Self-closing diaper changing tables shall be permitted to be measured in the stowed position.

**603.6 Operable parts.** *Operable parts* on towel dispensers and hand dryers serving lavatories complying with Section 606 shall comply with Table 603.6.

**TABLE 603.6  
MAXIMUM REACH DEPTH AND HEIGHT**

<b>Maximum Reach Depth (inches)</b>	0.5	2	5	6	9	11
<b>Maximum Reach Height (inches)</b>	48	46	42	40	36	34

For SI: 1 inch = 25.4 mm

06-10-2021 AS/AMPC1; E11 coordination

**603.7 Dispensers for Accessories.** Where provided, at least one of each type of dispenser for accessories shall be located on an *accessible* route and shall comply with *operable parts*.

**Proposal 06-11-2021 AS/AM BC1**

**603.8 Changing space.** Where shower compartments include adjacent space for changing clothes, the changing space serving the *accessible* shower compartment shall comply with Section 803.

**SECTION 604  
WATER CLOSETS AND TOILET COMPARTMENTS**

**604.1 General.** Water closets and toilet compartments shall comply with Section 604. Compartments containing more than one plumbing fixture shall comply with Section 603. Wheelchair *accessible* compartments shall comply with Section 604.9. Ambulatory *accessible* compartments shall comply with Section 604.10.

**Exception:** Water closets and toilet compartments primarily for *children's use* shall be permitted to comply with Section 604.11 as applicable.

**604.2 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 16 inches (405 mm) minimum and 18 inches (455 mm) maximum from the side wall or partition. Water closets located in ambulatory *accessible* toilet compartments specified in Section 604.10 shall have the centerline of the water closet 17 inches (430 mm) minimum and 19 inches (485 mm) maximum from the side wall or partition.

**Figure 604.2**

WATER CLOSET LOCATION

**604.3 Maneuvering clearance.** *Maneuvering clearance* around a water closet shall comply with Section 603.4.

**Figure 604.3**

SIZE OF CLEARANCE FOR WATER CLOSET

**604.3.1 Maneuvering clearance width.** *Maneuvering clearance* around a water closet shall be 60 inches (1525 mm) minimum in width, measured perpendicular from the sidewall.

**604.3.2 Maneuvering clearance depth.** *Maneuvering clearance* around the water closet shall be 56 inches (1420 mm) minimum in depth, measured perpendicular from the rear wall.

**Proposal 06-15-2021 AM/BC1 AM and PC1 AS; 6-16-2021 AS/D**

**604.3.3 Maneuvering clearance overlap.** The required *maneuvering clearance* around the water closet shall be permitted to overlap the water closet, associated grab bars, *accessible routes*, *clear floor space* or *maneuvering clearances* at other fixtures and the *turning space*. In addition, paper dispensers, trash receptacles, coat hooks, shelves, and emergency alert devices shall be permitted to overlap 6 inches (150 mm) maximum into the *maneuvering clearance* around the water closet. No other fixtures or obstructions shall be located within the required *maneuvering clearance* around the water closet.

**Proposal 06-18-2021 AM/D/AM Reconsideration 1 and 2**

**604.4 Height.** The height of water closet seats shall be 17 inches (430 mm) minimum and 20 inches (510 mm) maximum above the floor, measured to the top of the seat. Seats shall not be sprung to return to a lifted position.

**Exceptions:**

1. A water closet which is adjustable in height by the user within the range specified in Section 604.4.
2. 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 Section 604.4.

**Figure 604.4**

**WATER CLOSET SEAT HEIGHT**

**604.5 Grab bars.** Grab bars for water closets shall comply with Section 609 and shall be provided in accordance with Sections 604.5.1 and 604.5.2. Grab bars shall be provided on the rear wall and on the side wall closest to the water closet.

**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 reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with Section 604.5.
2. In detention or correction *facilities*, grab bars shall not be required to be installed in housing or holding cells or rooms that are specially designed without protrusions for purposes of suicide prevention.

**604.5.1 Fixed side-wall grab bars.** Fixed side-wall grab bars shall include a horizontal bar complying with Section 604.5.1.1 and a vertical grab bar complying with Section 604.5.1.2. The vertical grab bar at water closets primarily for *children's use* shall comply with Section 609.4.3.

**Figure 604.5.1**

**SIDE-WALL GRAB BAR FOR WATER CLOSET**

**604.5.1.1 Horizontal grab bar.** A horizontal grab bar 42 inches (1065 mm) minimum in length shall be located 12 inches (305 mm) maximum from the rear wall and extend 54 inches (1370 mm) minimum from the rear wall.

**604.5.1.2 Vertical grab bar.** A vertical grab bar 18 inches (455 mm) minimum in length shall be mounted with the bottom of the bar located 39 inches (990 mm) minimum and 41 inches (1040 mm) maximum above the floor, and located 39 inches (990 mm) minimum and 41 inches (1040 mm) maximum from the rear wall.

**604.5.2 Rear-wall grab bars.** The fixed rear-wall grab bar shall

1. Be 36 inches (915 mm) minimum in length.
2. Be located 6 inches (150 mm) maximum from the side wall.
3. Extend 42 inches (1065 mm) minimum from the side wall.

**Exceptions:**

1. The rear grab bar shall be permitted to be 24 inches (610 mm) minimum in length, centered on the water closet, where wall space does not permit a grab bar 36 inches (915 mm) minimum in length due to the location of a recessed fixture adjacent to the water closet.
2. Where an *administrative authority* permits flushing devices and controls to be located in a position that conflicts with the location of the rear grab bar, that 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 FOR WATER CLOSET**

**604.6 Flush controls.** Flush controls shall be hand-operated or automatic. Where only hand operated flush controls are provided, they shall comply with *operable parts*. Hand-operated flush controls shall be located on the open side of the centerline of the water closet.

**Exceptions:**

1. In ambulatory *accessible* toilet compartments complying with Section 604.10, flush controls shall be permitted to be located on either side of the water closet.
2. Hand-operated flush controls shall be permitted to cross the centerline of the water closet, provided that the portion of the control that is located to the open side of the centerline independently complies with the *operable parts* requirements in Section 309.4.

**604.7 Dispensers.** Toilet paper dispensers shall comply with the *operable parts* requirements in Sections 309.4 and 609.3. Dispensers shall not be of a type that control delivery or do not allow continuous paper flow.

**604.7.1 Location.** Where the dispenser is located above the grab bar, the outlet of the dispenser shall be located within an area 24 inches (610 mm) minimum and 36 inches (915 mm) maximum from the rear wall. Where the dispenser is located below the grab bar, the outlet of the dispenser shall be located within an area 24 inches (610 mm) minimum and 42 inches (1065 mm) maximum from the rear wall. The outlet of the dispenser shall be located 18 inches (455 mm) minimum and 48 inches (1220 mm) maximum above the floor.

**Exception:** Toilet paper dispensers that accommodate a maximum of 2 toilet paper rolls of not more than 5-inch (125 mm) diameter each shall be permitted to be located 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front the 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 floor.

**Figure 604.7.1 (A)**

DISPENSER OUTLET LOCATION – PROTRUDING DISPENSER BELOW GRAB BAR

**Figure 604.7.1 (B)**

DISPENSER OUTLET LOCATION

PROTRUDING DISPENSER ABOVE GRAB BAR

**Figure 604.7.1 (C )**

DISPENSER OUTLET LOCATION

RECESSED DISPENSER

**Figure 604.7.1 (D)**

DISPENSER OUTLET LOCATION

DISPENSER IN FRONT OF WATER CLOSET - EXCEPTION

**604.8 Coat hooks and shelves.** Coat hooks provided within toilet compartments shall be 48 inches (1220 mm) maximum above the floor. Shelves shall be 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the floor.

**604.9 Wheelchair accessible toilet compartments.** Wheelchair *accessible* toilet compartments shall comply with Section 604.9.

**604.9.1 Size.** Wheelchair *accessible* toilet compartments shall comply with Section **604.9.1.1**, **604.9.1.2** or **604.9.1.3** as applicable.

**Figure 604.9.1 (A)**

WHEELCHAIR TOILET COMPARTMENTS

WALL HUNG CLOSET, ADULT

**Figure 604.9.12 (B)**

WHEELCHAIR TOILET COMPARTMENTS



## FLOOR MOUNTED WATER CLOSET, ADULT – WALL HUNG AND FLOOR MOUNTED WATER CLOSET, CHILDREN

**604.9.1.1 Minimum area.** The minimum area of a wheelchair *accessible* toilet compartment shall be 60 inches (1525 mm) minimum in width measured perpendicular to the side wall, and 56 inches (1420 mm) minimum in depth for wall hung water closets, and 59 inches (1500 mm) minimum in depth for floor mounted water closets measured perpendicular to the rear wall.

**604.9.1.2 Compartment for children’s use.** The minimum area of a wheelchair *accessible* toilet compartment primarily for *children’s use* shall be 60 inches (1525 mm) minimum in width measured perpendicular to the side wall, and 59 inches (1500 mm) minimum in depth for wall hung and floor mounted water closets measured perpendicular to the rear wall.

**604.9.1.3 Alternate wheelchair accessible toilet compartments.** Where an alternate wheelchair *accessible* toilet compartment is provided, the minimum area of the compartment shall be 60 inches (1525 mm) minimum in width, measured perpendicular to the side wall, and 84 inches (2135 mm) minimum in depth, measured perpendicular to the rear wall.

### Figure 604.9.1.3

#### WHEELCHAIR TOILET COMPARTMENTS

#### ALTERNATE WHEELCHAIR TOILET COMPARTMENT

### Proposal 06-23-2021 AS; 06-24-2021 AS; 06-25-2021 AM/AFM BC2

**604.9.2 Doors.** Doors for wheelchair *accessible* toilet compartments shall comply with Sections 404.2.2, 404.2.3.2, 404.2.4 and 404.2.9. The door shall be self-closing with a balanced door or spring hinges. Door hardware shall comply with Section 404.2.6. In addition a door pull complying with Section 404.2.6 shall be placed on both sides of the door near the latch. Wheelchair *accessible* toilet compartment doors shall not swing into the required minimum area of the compartment.

#### Exceptions:

1. Outside of the compartment, the door is not required to comply with Section 404.2.3.2 where the approach is to the latch side of the wheelchair *accessible* toilet compartment door, clearance between the door side of the compartment and any obstruction is 42 inches (1065 mm) minimum.
2. Within the wheelchair *accessible* toilet compartment, *maneuvering clearances* at the door shall not be required to comply with Section 404.2.3.2.
3. In an alternate wheelchair *accessible* toilet compartment, complying with Section 604.9.1.3, a door located in the front wall or partition shall be permitted to swing into the compartment where the compartment is 90 inches (2286 mm) minimum in depth.
4. In wheelchair *accessible* toilet compartment, the door shall be permitted to swing into the minimum area of the compartment where a *clear floor space* is provided past the swing of the door and a *turning space* is provided within the compartment.

### Figure 604.9.2 (A)

WHEELCHAIR TOILET COMPARTMENT DOORS  
DOOR SWINGING INTO THE WHEELCHAIR TOILET COMPARTMENT

**Figure 604.9.2 (B)**

WHEELCHAIR TOILET COMPARTMENT DOORS  
EXCEPTION 3 – ALTERNATE WHEELCHAIR COMPARTMENT

**604.9.2.1 Door opening location.** The farthest edge of the wheelchair *accessible* toilet compartment door opening shall be located in the front wall or partition or in the side wall or partition as required by Table 604.9.2.1. Hinge and latch side of the doors are permitted to be oriented so that the door opens in the direction of the approach.

**TABLE 604.9.2.1—DOOR OPENING LOCATION**

Door Opening Location	Measured From	Dimension (inches)
Front Wall or Partition	From the side wall or partition closest to the water closet	56 minimum
	<b>or</b>	
	From the side wall or partition farthest from the water closet	4 maximum
Side Wall or Partition Wall-Hung Water Closet	From the rear wall	52 minimum
	<b>or</b>	
	From the front wall or partition	4 maximum
Side Wall or Partition Floor-Mounted Water Closet	From the rear wall	55 minimum
	<b>or</b>	
	From the front wall or partition	4 maximum

For SI: 1 inch = 25.4 mm

**Figure 604.9.2.1 (A)**

WHEELCHAIR TOILET COMPARTMENT DOOR OPENING LOCATION – DOOR SWINGING IN ON FRONT WALL OF PARTITION

**Figure 604.9.2.1 (B)**

WHEELCHAIR TOILET COMPARTMENT DOOR OPENING LOCATION  
DOOR SWINGING IN ON SIDE WALL OF PARTITIONS

**604.9.3 Approach.** Wheelchair *accessible* toilet compartments shall be arranged for left-hand or right-hand approach to the water closet.

**604.9.4 Toe clearance.** *Toe clearance* for wheelchair *accessible* toilet compartments primarily for *children's use* shall comply with Section 604.9.4.2. *Toe clearance* for other wheelchair *accessible* toilet compartments shall comply with Section 604.9.4.1.

**Figure 604.9.4 (A)**

TOE CLEARANCE – ELEVATION

**Figure 604.9.4 (B)**

TOE CLEARANCE - PLAN

**604.9.4.1 Toe clearance at wheelchair accessible toilet compartments and alternate wheelchair accessible toilet compartments.** The front partition and at least one side partition of wheelchair *accessible* toilet compartments and alternate wheelchair *accessible* toilet compartments shall provide a *toe clearance* of 12 inches (305 mm) minimum above the floor and extending 8 inches (205 mm) beyond the compartment side face of the partition, exclusive of partition support members.

**Exceptions:**

1. *Toe clearance* at the front partition is not required in a wheelchair *accessible* toilet compartment or alternate wheelchair *accessible* toilet compartments greater than 64 inches (1625 mm) in depth with a wall-hung water closet, or greater than 67 inches (1700 mm) in depth with a floor-mounted water closet.
2. *Toe clearance* at the side partition is not required in a wheelchair *accessible* toilet compartment or alternate wheelchair *accessible* toilet compartments greater than 68 inches (1725 mm) in width.
3. *Toe clearance* is not required in a wheelchair *accessible* compartment that includes a *turning space*.

**604.9.4.2 Toe clearance at wheelchair accessible toilet compartments for children's use.** The front partition and at least one side partition of wheelchair *accessible* toilet compartments primarily for *children's use* shall provide a *toe clearance* of 12 inches (305 mm) minimum above the floor and extending 8 inches (205 mm) beyond the wheelchair *accessible* toilet compartment side face of the partition, exclusive of partition support members.

**Exceptions:**

1. *Toe clearance* at the front partition is not required in a wheelchair *accessible* toilet compartment greater than 67 inches (1700 mm) in depth.
2. *Toe clearance* at the side partition is not required in a wheelchair *accessible* toilet compartment greater than 68 inches (1725 mm) in width.
3. *Toe clearance* is not required in a wheelchair *accessible* compartment that includes a *turning space*.

**604.9.5 Grab bars.** Grab bars shall comply with Section 609. Side wall grab bars complying with Section 604.5.1 located on the wall closest to the water closet, and a rear wall grab bar complying with Section 604.5.2, shall be provided.

#### **Proposal 06-28-2021 AS/AMPC1; E10-24 AS**

**604.9.6 Identification.** The wheelchair *accessible* compartment shall be identified with the International Symbol for Accessibility complying with Section 703.6.2.1.

**604.10 Ambulatory accessible toilet compartments.** Ambulatory *accessible* toilet compartments shall comply with Section 604.10.

#### **Figure 604.10**

##### **AMBULATORY COMPARTMENT**

**604.10.1 Size.** The minimum area of an ambulatory *accessible* toilet compartment shall be 60 inches (1525 mm) minimum in depth and a width of 35 inches (890 mm) minimum and 37 inches (940 mm) maximum.

**604.10.2 Doors.** Doors for ambulatory *accessible* toilet compartments shall comply with Sections 404.2.2, 404.2.3.2, 404.2.4 and 404.2.9. The door shall be self-closing with a balanced door or spring hinges. Door hardware shall comply with Section 404.2.6. In addition a door pull complying with Section 404.2.6 shall be placed on both sides of the door near the latch. Compartment doors shall not swing into the required minimum area of the compartment. Hinge and latch side of the doors are permitted to be oriented so that the door opens in the direction of the approach.

#### **Exceptions:**

1. Outside of the ambulatory *accessible* toilet compartment, the door is not required to comply with Section 404.2.3.2 where the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction is 42 inches (1065 mm) minimum.
2. Within the ambulatory *accessible* toilet compartment, *maneuvering clearances* at the door shall not be required to comply with Section 404.2.3.2.

**604.10.3 Grab bars.** Grab bars shall comply with Section 609. Side wall grab bars complying with Section 604.5.1 shall be provided on both sides of the compartment.

#### **Proposal 06-29-2021 AS/AS BC1**

**604.10.4 Location.** The location of the water closet shall comply with Section 604.2.

#### **Proposal 06-29-2021 AS/AS BC1**

**604.10.5-Height.** The height of water closet seats shall comply with Section 604.4.

#### **Proposal 06-29-2021 AS/AS BC1**

**604.10.6 Flush controls.** Flush controls shall comply with Section 604.6.

**Proposal 06-29-2021 AS/AS BC1**

**604.10.7 Dispensers.** Toilet paper dispensers shall comply with Section 604.7.

**Proposal 06-30-2021 D/AM PC1; E10-24 AS**

**604.10.8 Identification.** The ambulatory *accessible* toilet compartment shall be identified with the Symbol for Injured Person complying with Section 703.6.2.2.

**604.11 Water closets and toilet compartments for children's use.** Water closets and wheelchair and ambulatory *accessible* toilet compartments primarily for *children's use* shall comply with Section 604.11.

**604.11.1 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. Water closets located in ambulatory *accessible* toilet compartments specified in Section 604.10 shall be located as specified in Section 604.2.

**Figure 604.11.1**

CHILDREN'S WATER CLOSET LOCATION

**604.11.2 Maneuvering clearance.** A *maneuvering clearance* around the water closet complying with Section 604.3 shall be provided.

**604.11.3 Height.** The height of water closet seats shall be 11 inches (280 mm) minimum and 17 inches (430 mm) maximum above the floor, measured to the top of the seat. Seats shall not be sprung to return to a lifted position.

**Figure 604.11.3**

CHILDREN'S WATER CLOSET HEIGHT

**604.11.4 Grab bars.** Grab bars for water closets shall comply with Section 604.5.

**604.11.5 Flush controls.** Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with the *operable parts* requirements in Sections 309.2 and 309.4 and shall be installed 36 inches (915 mm) maximum above the floor. Flush controls shall be located on the open side of the water closet.

**Exception:** In ambulatory *accessible* toilet compartments complying with Section 604.10, flush controls shall be permitted to be located on either side of the water closet.

**604.11.6 Dispensers.** Toilet paper dispensers shall comply with the *operable parts* requirements in Section 309.4. Dispensers shall not be of a type that control delivery or do not allow continuous paper flow.

**Figure 604.11.6(A)**

CHILDREN'S DISPENSER OUTLET – LOCATION

**Figure 604.11.6 (B)**

CHILDREN'S DISPENSER OUTLET – EXCEPTION

**604.11.6.1 Location.** The outlet of toilet paper dispensers shall be located within an area 24 inches (610 mm) minimum and 42 inches (1065 mm) maximum from the rear wall. The outlet of the dispenser shall be 14 inches (355 mm) minimum and 19 inches (485 mm) maximum above the floor.

**Exception:** Toilet paper dispensers that accommodate a maximum of 2 toilet paper rolls of not more than 5-inch (125 mm) diameter each shall be permitted to be located 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front of the 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 floor.

**604.11.7 Toilet compartments.** Wheelchair and ambulatory *accessible* toilet compartments shall comply with Sections 604.9 and 604.10, as applicable.

## SECTION 605 URINALS

**605.1 General.** Urinals shall comply with Section 605.

**605.2 Height and depth.** Urinals shall be of the stall type or shall be of the wall hung type with the rim at 17 inches (430 mm) maximum above the floor. Urinals shall be 13<sup>1</sup>/<sub>2</sub> inches (345 mm) minimum in depth measured from the outer face of the urinal rim to the finished wall surface.

**Figure 605.2 (A)**

HEIGHT AND DEPTH OF URINAL

WALL HUNG TYPE

**Figure 605.2 (B)**

HEIGHT AND DEPTH OF URINAL

STALL TYPE

**Proposal 06-32-2021 AS/AFM BC2; 06-34-2021 AM/AFM BC2**

**605.3 Clear floor space.** A *clear floor space* complying with Section 305.3, positioned for forward approach, shall be provided measured from the front edge of the urinal rim. *Clear floor space* confined on opposing sides shall comply with Section 305.7.2.

**605.4 Flush controls.** Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with *operable parts*.

**Proposal 06-33-2021 D/AS**

**605.5 Urinal compartments.** Where provided, urinal compartments, shall comply with Section 605.5.

**Proposal 06-33-2021 D/AS**

**605.5.1 Size.** The minimum area of a urinal compartment shall be 60 inches (1525 mm) minimum in depth and a width of 35 inches (890 mm) minimum and 37 inches (940 mm) maximum.

## Proposal 06-33-2021 D/AS

**605.5.2 Doors.** Doors for urinal compartments shall comply with Sections 404.2.2, 404.2.3.2, 404.2.4 and 404.2.9. The door shall be self-closing with a balanced door or spring hinges. Door hardware shall comply with Section 404.2.6. In addition, a door pull complying with Section 404.2.6 shall be placed on both sides of the door near the latch. Compartment doors shall not swing into the required minimum area of the compartment.

### Exceptions:

1. Outside of the urinal compartment, the door shall not be required to comply with Section 404.2.3.2 where the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction is 42 inches (1065 mm) minimum. Hinge and latch side of the doors are permitted to be oriented so that the door opens in the direction of the approach.
2. Within the ambulatory *accessible* toilet compartment, *maneuvering clearances* at the door shall not be required to comply with Section 404.2.3.2.

## Proposal 06-33-2021 D/AS

**605.5.3 Grab bars.** Grab bars shall comply with Section 609. Horizontal side wall grab bars complying with Section 604.5.1.1 shall be provided on both sides of the compartment.

## SECTION 606 LAVATORIES AND SINKS

**606.1 General.** Lavatories and sinks shall comply with Section 606.

**606.2 Clear floor space.** A *clear floor space* complying with Section 305.3, positioned for forward approach, shall be provided. *Knee and toe clearance* shall be provided. The dip of the overflow shall not be considered in determining *knee and toe clearances*.

### Exceptions:

1. A *clear floor space* providing a parallel approach shall be permitted at a kitchen sink in a space where a cook top or conventional range is not provided.
2. For other than sinks in kitchens, where a sink requires a deep basin to perform its intended purpose or requires a specialized drain that cannot be located outside of the knee space, a parallel approach shall be permitted to be located adjacent to the sink.
3. The requirement for *knee and toe clearance* shall not apply to 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.
4. A *knee clearance* of 24 inches (610 mm) minimum above the floor shall be permitted at lavatories and sinks used primarily by children ages 6 through 12 where the higher of the rim or counter surface is 31 inches (785 mm) maximum above the floor.

5. A *clear floor space* providing a parallel approach shall be permitted at lavatories and sinks used primarily by children ages 5 and younger.
6. The requirement for *knee and toe clearance* shall not apply to more than one bowl of a multibowl sink.
7. A *clear floor space* providing a parallel approach shall be permitted at wet bars.

**606.3 Height.** The front of lavatories and sinks shall be 34 inches (865 mm) maximum above the floor, measured to the higher of the rim or counter surface.

**Exception:** 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 Section 606.3.

### Figure 606.3

#### HEIGHT OF LAVATORIES AND SINKS

**606.4 Faucets.** Faucets shall comply with *operable parts*. Hand-operated metering faucets shall remain open for 10 seconds minimum.

**Exception:** Automatic faucets shall not be required to comply with *operable parts* where the faucets comply with one of the following:

1. For sinks and lavatories provided with a forward approach, the reach to activate the faucet and the reach to the water flow comply with Section 308.2.2
2. For sinks and lavatories provided with a side approach, the reach to activate the faucets and the reach to the water flow comply with Section 308.3.2.

**606.5 Lavatories with enhanced reach range.** Where enhanced reach range is required at lavatories, faucets and soap dispenser controls shall have a reach depth of 11 inches (280 mm) maximum. Water and soap outlets shall be provided with a reach depth of 11 inches (280 mm) maximum. The lavatory shall be 34 inches (865 mm) maximum above the floor, measured to the higher of the rim or counter surface.

#### Exceptions:

1. Enhanced reach range faucets shall not be required on lavatories provided with automatic faucets where the reach depth to activate the faucets and the reach depth to the water outlet is 11 inches (280 mm) maximum.
2. Enhanced reach range soap dispensers shall not be required on lavatories provided with automatic dispensers where the reach depth to activate the soap dispensers and the reach depth to the soap outlet is 11 inches (280 mm) maximum.

**606.6 Exposed pipes and surfaces.** Water supply and drainpipes 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.

## SECTION 607 BATHTUBS



**607.1 General.** Bathtubs shall comply with Section 607.

**Proposal 06-42-21 AM; 06-45-21 AM/AM BC1 & PC1; 06-40-21 AM/BC3 & PC1**

**607.2 Maneuvering clearance.** A *maneuvering clearance* at bathtubs extending the length of the bathtub and 30 inches (760 mm) minimum in depth shall be provided. Where a transfer platform or folding in-tub seat is provided at the head end of the bathtub, the *maneuvering clearance* at the bathtub shall extend 12 inches (305 mm) minimum beyond the wall at the head end of the bathtub.

**Exception:** In an existing bathtub where the bathroom is not reconfigured and a folding in-tub seat is installed, the additional 12 inches (305 mm) *maneuvering clearance* at the bathtub beyond the wall at the head end of the bathtub is not required where it would result in a reconfiguration of the space.

**Proposal 06-42-21 AM; 06-40-21 AM/BC3 & PC1; 06-45-21 AM/AM BC1 & PC1**

**Figure 607.2 (A)**

**MANEUVERING CLEARANCE AT BATHTUBS WITH REMOVABLE IN TUB SEATS**

**Proposal 06-42-21 AM; 06-40-21 AM/BC3 & PC1; 06-45-21 AM/AM BC1 & PC1**

**FIGURE 607.2(B)**

**MANEUVERING CLEARANCE AT BATHTUBS WITH TRANSFER PLATFORMS AT HEAD END OF TUB**

**Proposal 06-45-21 AM/AM BC1 & PC1**

**FIGURE 607.2(C)**

**MANEUVERING CLEARANCE FOR BATHTUBS WITH FOLDING IN-TUB SEAT AT HEAD END OF TUB**

**Proposal 06-40-21 AM/BC3 & PC1**

**607.2.1 Clear floor space at the controls.** A *clear floor space* shall be provided at the bathtub controls. The *toe clearance* portion of the *clear floor space* shall extend 6 inches (152 mm) minimum beyond the control end wall.

**Exception:** The control wall shall be permitted to overlap the *clear floor space* 4 inches (102 mm) maximum measured horizontally from the outside face of the bathtub.

**Proposal 06-40-21 AM/BC3 & PC1**

**FIGURE 607.2.1**

**CLEAR FLOOR SPACE FOR BATHTUB CONTROLS**

**607.3 Seats.** A folding in-tub seat at the head end of the tub or a removable in-tub seat shall be provided. Removable in-tub seats, folding in-tub, and transfer platforms shall comply with Section 610.

**607.3.1 Bathtub rim.** The height of the bathtub rim shall not exceed the height of the bathtub seat required by Section 607.3.

**607.4 Grab bars.** Grab bars shall comply with Section 609 and shall be provided in accordance with Section 607.4.1 or 607.4.2.

**Exception:** Grab bars shall not be required to be installed in a bathing *facility* for a single occupant accessed only through a private office and not for *common use* or public use, provided reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with Section 607.4.

**607.4.1 Bathtubs with transfer platforms.** For bathtubs with transfer platforms, grab bars complying with Section 607.4.1 shall be provided.

**Figure 607.4.1 (A)**

GRAB BARS FOR BATHTUBS WITH TRANSFER PLATOFRM AT HEAD END OF TUB – ELE-  
VATION

**Figure 607.4.1 (B)**

GRAB BARS FOR BATHTUBS WITH TRANSFER PLATOFRM AT HEAD END OF TUB – PLAN

**607.4.1.1 Back wall.** Two horizontal grab bars shall be provided on the back wall, one complying with Section 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 located 15 inches (380 mm) maximum from the head end wall and extend to 12 inches (305 mm) maximum from the control end wall.

**607.4.1.2 Control end wall.** Control end wall grab bars shall comply with Section 607.4.1.2.

**Exception:** An L-shaped continuous grab bar of equivalent dimensions and positioning shall be permitted to serve the function of separate vertical and horizontal grab bars.

**607.4.1.2.1 Horizontal grab bar.** A horizontal grab bar 24 inches (610 mm) minimum in length shall be provided on the control end wall beginning 4 inches (100 mm) maximum from the front edge of the bathtub and extending toward the inside corner of the bathtub.

**607.4.1.2.2 Vertical grab bar.** A vertical grab bar 18 inches (455 mm) minimum in length shall be provided on the control end wall 3 inches (75 mm) minimum and 6 inches (150 mm) maximum above the horizontal grab bar, and 4 inches (100 mm) maximum inward from the front edge of the bathtub.

**607.4.2 Bathtubs with removable in-tub seats.** For bathtubs with removable in-tub seats, grab bars complying with Section 607.4.2 shall be provided.

**Figure 607.4.2 (A)**

GRAB BARS FOR BATHTUBS WITH REMOVABLE IN-TUB SEATS – ELEVATION

**Figure 607.4.2 (B)**

GRAB BARS FOR BATHTUBS WITH REMOVABLE IN-TUB SEATS – PLAN

**607.4.2.1 Back wall.** Two horizontal grab bars shall be provided on the back wall, one complying with Section 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 24 inches (610 mm) minimum in length, located 24 inches (610 mm) maximum from the head end wall and extend to 12 inches (305 mm) maximum from the control end wall.

**607.4.2.2 Control end wall.** Control end wall grab bars shall comply with Section 607.4.1.2.

**607.4.2.3 Head end wall.** A horizontal grab bar 12 inches (305 mm) minimum in length shall be provided on the head end wall beginning 4 inches (100 mm) maximum from the front edge of the bathtub.

**607.4.3 Bathtubs with folding in-tub seats.** For bathtubs with folding in-tub seats at the head end of the tub, grab bars complying with Section 607.4.3 shall be provided.

**607.4.3.1 Back wall.** Two horizontal grab bars shall be provided on the back wall, one complying with Section 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 30 inches (610mm) minimum in length, located 18 inches (610 mm) maximum from the head end wall and extend to 12 inches (305 mm) maximum from the control end wall.

**607.4.3.2 Control end wall.** Control end wall grab bars shall comply with Section 607.4.3.2.

**Exception:** An L-shaped continuous grab bar of equivalent dimensions and positioning shall be permitted to serve the function of separate vertical and horizontal grab bars.

**607.4.3.2.1 Horizontal grab bar.** A horizontal grab bar 24 inches (610 mm) minimum in length shall be provided on the control end wall beginning near the front edge of the bathtub and extending toward the inside corner of the bathtub.

**607.4.3.2.2 Vertical grab bar.** A vertical grab bar 18 inches (455 mm) minimum in length shall be provided on the control end wall 3 inches (75 mm) minimum and 6 inches (150 mm) maximum above the horizontal grab bar, and 4 inches (100 mm) maximum inward from the front edge of the bathtub.

## FIGURE 607.4.3(A) GRAB BARS FOR BATHTUBS WITH FOLDING IN-TUB SEATS – ELEVATION

## FIGURE 607.4.3(B) GRAB BARS FOR BATHTUBS WITH FOLDING IN-TUB SEATS –PLAN

**607.5 Controls.** The controls for on/off water flow, temperature, and diverter controls, shall be provided on an end wall, located between the bathtub rim and grab bar, and between the open side of the bathtub and the centerline of the width of the bathtub. Such controls shall comply with the *operable parts* requirements in Section 309.4.

### Figure 607.5

#### LOCATION OF BATHTUB CONTROLS

#### Proposal 06-53-21 AM/PC1, BC1 modification of exceptions

**607.6 Hand shower.** A hand shower with a hose 59 inches (1500 mm) minimum in length, that can be used as both a fixed shower head and as a hand shower, shall be provided. The hand shower shall have a nonpositive shut-off feature that complies with the *operable parts* requirements in Section 309.4. A fixed shower head, in addition to the hand shower shall be permitted.

**Exception:** In Accessible units, a fixed shower head located at not greater than 48 inches (1220 mm) above the tub floor shall be permitted in lieu of a hand shower where there are security or safety concerns that the shower hose poses a hazard.

A mount to hold the hand shower shall be provided and located in accordance with Section 607.6.1 or 607.6.2 as applicable.

**607.6.1 Bathtubs with removable in-tub seats.** For a bathtub with a moveable in-tub seat, the mount to hold the hand shower shall be located in accordance with to the following:

1. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the bathtub floor.
2. Located on the control wall opposite the seat and located within 15 inches (380 mm) maximum from the centerline of the seat.

**Exception:** The mount to hold the hand shower shall be permitted to be located on a vertical bar provided that the mount is adjustable in height and can be located within the area specified for the fixed mount.

### Figure-607.6.1

#### LOCATION OF BATHTUB HAND SHOWER MOUNT LOCATION

**607.6.2 Bathtubs with folding seats.** For a bathtub with a folding seat, the mount to hold the hand shower shall be located in accordance with to the following:

1. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.
2. Located on the back wall 16 inches (405 mm) minimum and 27 inches (685 mm) maximum from the wall behind the seat.

**Exception:** The mount to hold the hand shower shall be permitted to be located on a vertical bar provided that the mount is adjustable in height and can be located within the area specified for the fixed mount.

#### **FIGURE 607.6.2 LOCATION OF MOUNT FOR BATHTUB WITH FOLDING SEAT**

**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 bathtub.

### **SECTION 608 SHOWER COMPARTMENTS**

**608.1 General.** Shower compartments shall comply with Section 608.

**608.2 Size, maneuvering clearance and seat.** Shower compartments shall have sizes, *maneuvering clearances* and seats complying with Section 608.2.

**608.2.1 Transfer-type shower compartments.** Transfer-type shower compartments shall comply with Section 608.2.1.

#### **Proposal 06-58-21 AM/AMBC2 and BC3**

**608.2.1.1 Size.** Transfer-type shower compartments shall have a clear inside dimension of 35 inches (899 mm) minimum to 37 inches (940 mm) maximum in width measured at the center point of opposing side walls and 35 inches (899 mm) minimum to 37 inches (940 mm) maximum in depth measured from the center point of the back wall to the plane in line with the front face of the shower enclosure. The shower clear inside dimensions shall be measured at a height of 17 minimum to 37 inches maximum (432-940 mm) from the shower floor. An entry 35 inches (899 mm) minimum to 37 inches (940 mm) maximum in width shall be provided.

#### **Figure 608.2.1.1**

TRANSFER-TYPE SHOWER COMPARTMENT SIZE

**608.2.1.2 Maneuvering clearance.** *Maneuvering clearances* shall comply with Section 608.2.1.2.1 or 608.2.1.2.2 as applicable.

#### **Figure 608.2.1.2 (A)**

MANEUVERING CLEARANCE AT THE TRANSFER-TYPE SHOWER COMPARTMENT  
NEW BUILDINGS – OPTION 1

#### **Figure 608.2.1.2 (B)**

MANEUVERING CLEARANCE AT THE TRANSFER-TYPE SHOWER COMPARTMENT  
NEW BUILDINGS – OPTION 2

**Figure 608.2.1.2 (C)**

MANEUVERING CLEARANCE AT THE TRANSFER-TYPE SHOWER COMPARTMENT  
EXISTING BUILDINGS

**608.2.1.2.1 New buildings and facilities.** In new buildings and *facilities*, a *maneuvering clearance* at the shower compartment of 52 inches (1320 mm) minimum in length and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment. The length of the *maneuvering clearance* at the shower compartment shall be measured perpendicular from either the control wall or from 4 inches (100 mm) behind the control wall. Where the *maneuvering clearance* is located in an alcove, the alcove shall comply with Section 305.7.

**608.2.1.2.2 Existing buildings and facilities.** In *existing buildings* and *facilities*, a *maneuvering clearance* at the shower compartment of 48 inches (1220 mm) minimum in length measured perpendicular from the control wall, and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment. Where the *maneuvering clearance* is located in an alcove, the alcove shall comply with Section 305.7.

**608.2.1.3 Seat.** A folding or non-folding seat complying with Section 610 shall be provided on the wall opposite the control wall.

**Exception:** A seat is not required to be installed in a shower for a single occupant, accessed only through a private office and not for *common use* or public use, provided reinforcement has been installed in walls and located so as to permit the installation of a shower seat.

**608.2.2 Alternate transfer shower compartments.** In *existing buildings* and *facilities*, alternate transfer shower compartments shall comply with Section 608.2.2.

**Proposal 06-61-21 AM/AM BC1, BC3. PC1**

**608.2.2.1 Size.** Alternate transfer shower compartments shall have a clear inside dimension of 57 inches (1448 mm) minimum in width and 30 inches (760 mm) minimum in depth, measured at the center point of opposing sides. An entry 57 inches (1448 mm) minimum in width shall be provided.

**608.2.2.2 Maneuvering Clearance.** A *maneuvering clearance* at the shower compartment of 60 inches (1525 mm) minimum in length adjacent to the 60-inch (1525 mm) width of the open face of the shower compartment, and 30 inches (760 mm) minimum in depth, shall be provided.

**Exception:** A lavatory complying with Section 606 shall be permitted at the end of the *maneuvering clearance* at the shower compartment opposite the seat.

**608.2.2.3 Seat.** A seat complying with Section 610 shall be provided that can be secured at varying distances from the control wall. At least one of the positions will locate the back of the seat 35 and inches (889 mm) minimum 37 inches (940 mm) maximum from the control wall.

**Exception:** A seat is not required to be installed in a shower for a single occupant accessed only through a private office and not for *common use* or public use, provided reinforcement has been installed in walls and located so as to permit the installation of a shower seat.

**608.2.3 Standard roll-in-type shower compartments.** Standard roll-in-type shower compartments shall comply with Section 608.2.3.

### Proposal 06-64-2021 AS/AM BC1

**608.2.3.1 Size.** Standard roll-in-type shower compartments shall have a clear inside dimension of 60 inches (1525 mm) minimum in width and 30 inches (760 mm) minimum in depth, measured at the center point of opposing sides. An entry 60 inches (1525 mm) minimum in width shall be provided.

**Exception.** Where an existing bathtub is replaced by a roll-in-type shower, the width of the shower shall be permitted to be 57 inches (1448 mm) minimum, provided that compliance with Section 608.2.3.1 would require an expansion in the overall size of the bathroom or would disturb the structural reinforcement of the floor slab.

#### Figure 608.2.3.1(A)

STANDARD ROLL-IN-TYPE SHOWER WITH A SEAT COMPARTMENT SIZE

#### FIGURE 608.2.3.1(B)

STANDARD ROLL-IN-TYPE SHOWER WITH NO SEAT  
COMPARTMENT SIZE

**608.2.3.2 Maneuvering Clearance.** A *maneuvering clearance* at the shower compartment of 60 inches (1525 mm) minimum in length adjacent to the 60-inch (1525 mm) width of the open face of the shower compartment, and 30 inches (760 mm) minimum in depth, shall be provided.

#### Exceptions:

1. A lavatory complying with Section 606 shall be permitted at the end of the *maneuvering clearance* at the shower compartment opposite the seat.
2. Where no seat is provided, the lavatory complying with Section 606 shall be permitted at either end of the *maneuvering clearance* at the shower compartment.

#### Figure 608.2.3.2(A)

MANEUVERING CLEARANCE AT THE STANDARD ROLL-IN-TYPE SHOWER COM-  
PARTMENT WITH A SEAT

#### FIGURE 608.2.3.2(B)

MANEUVERING CLEARANCE AT THE STANDARD ROLL-IN-TYPE SHOWER  
COMPARTMENT WITH NO SEAT

**608.2.3.3 Seat.** A folding seat complying with Section 610 shall be provided on an end wall.

**Exceptions:**

1. A seat is not required to be installed in a shower for a single occupant accessed only through a private office and not for *common use* or public use, provided reinforcement has been installed in walls and located so as to permit the installation of a shower seat.
2. A fixed seat shall be permitted where the seat does not overlap the minimum clear inside dimension required by Section 608.2.3.1.
3. A seat is not required in bathrooms serving individual *dwelling unit* or *sleeping units* that are not transient lodging *facilities*.

**608.2.4 Alternate roll-in-type shower compartments.** Alternate roll-in-type shower compartments shall comply with Section **608.2.4**.

**608.2.4.1 Size.** Alternate roll-in shower compartments shall have a clear inside dimension of 60 inches (1525 mm) minimum in width, and 36 inches (915 mm) in depth, measured at the center point of opposing sides. An entry 36 inches (915 mm) minimum in width shall be provided at one end of the 60-inch (1525 mm) width of the compartment. A seat wall, 24 inches (610 mm) minimum and 36 inches (915 mm) maximum in length, shall be provided on the entry side of the compartment.

**Figure 608.2.4.1**

ALTERNATE ROLL-IN-TYPE SHOWER COMPARTMENT SIZE

**608.2.4.2 Maneuvering Clearance.** A *maneuvering clearance* at doors complying with in Table 404.2.3.4 shall be provided outside the entry to an alternate roll-in type shower.

**608.2.4.3 Seat.** A folding seat complying with Section 610 shall be provided on the seat wall opposite the back wall.

**Exception:** A seat is not required to be installed in a shower for a single occupant, accessed only through a private office and not for *common use* or public use, provided reinforcement has been installed in walls and located so as to permit the installation of a shower seat.

**608.3 Grab bars.** Grab bars shall comply with Section 609 and shall be provided in accordance with Section 608.3. Where multiple grab bars are used, required horizontal grab bars shall be installed at the same height above the floor.

**Exception:** Grab bars shall not be required to be installed in a shower for a single occupant, accessed only through a private office and not for *common use* or public use, provided reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with Section 608.3.

**608.3.1 Transfer-type showers.** Grab bars for transfer type showers shall comply with Section 608.3.1.

**Figure 608.3.1 (A)**

GRAB BARS IN TRANSFER-TYPE SHOWER – ELEVATION

**Figure 608.3.1 (B)**

GRAB BARS IN TRANSFER-TYPE SHOWER - PLAN

**608.3.1.1 Horizontal grab bars.** Horizontal grab bars shall be provided across the control wall beginning 4 inches (100 mm) maximum from the front edge of the shower compartment and on the back wall to a point 18 inches (455 mm) from the control wall.



**608.3.1.2 Vertical grab bar.** A vertical grab bar 18 inches (455 mm) minimum in length shall be provided on the control end wall 3 inches (75 mm) minimum and 6 inches (150 mm) maximum above the horizontal grab bar, and 4 inches (100 mm) maximum inward from the front edge of the shower.

**608.3.2 Alternate transfer type shower.** Grab bars in alternate transfer type showers shall comply with Section 609 and be provided in accordance with Sections 608.3.2.

**608.3.2.1 Back-wall grab bar.** In alternate transfer showers, a grab bar shall be provided on the back wall. The back-wall grab bar shall extend the length of the wall and extend within 6 inches (150 mm) maximum from the adjacent side walls.

**608.3.2.2 Side-wall grab bars.** A grab bar shall be provided on the side-wall opposite the seat. The side wall grab bar shall extend the length of the wall and extend within 6 inches (150 mm) maximum from the adjacent back wall.

**608.3.2.3 Vertical grab bar.** A vertical grab bar 18 inches (455 mm) minimum in length shall be provided on the end wall 3 inches (75 mm) minimum and 6 inches (150 mm) maximum above the horizontal grab bar, and 4 inches (100 mm) maximum inward from the front edge of the shower.

**608.3.3 Standard roll-in-type showers.** Grab bars in standard roll-in showers shall comply with Sections 608.3.3.1 through 608.3.3.3. Grab bars in standard roll-in showers with no seat shall comply with Section 608.3.3.4 through 608.3.3.6.

**Figure 608.3.3 (A)**

GRAB BARS IN STANDARD ROLL-IN-TYPE SHOWER WITH A SEAT  
ELEVATION

**Figure 608.3.3 (B)**

GRAB BARS IN STANDARD ROLL-IN-TYPE SHOWER WITH A SEAT  
PLAN

**FIGURE 608.3.3(C)**

GRAB BARS IN STANDARD ROLL-IN-TYPE SHOWER WITH NO SEAT  
ELEVATION

**FIGURE 608.3.3(D)**

GRAB BARS IN STANDARD ROLL-IN-TYPE SHOWER WITH NO SEAT  
PLAN

**608.3.3.1 Back-wall grab bar.** In standard roll-in type showers with a seat, a grab bar shall be provided on the back wall beginning at the edge of the seat. The grab bars shall not be provided above the seat. The back-wall grab bar shall extend the length of the wall and extend within 6 inches (150 mm) maximum from the adjacent side wall opposite the seat.

**Exceptions:**

1. The back wall grab bar shall not be required to exceed 48 inches (1220 mm) in length.
2. The back-wall grab bar is not required to extend within 6 inches (150 mm) of the adjacent side wall opposite the seat where it would require the grab bar length to exceed 48 inches (1220 mm) in length.

**608.3.3.2 Side-wall grab bars.** Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall, a grab bar shall be provided on the side-wall opposite the seat. The side wall grab bar shall extend the length of the wall beginning 4 inches (100 mm) maximum from the front edge of the shower compartment and extend within 6 inches (150 mm) maximum from the adjacent back wall.

**Exception:** The side-wall grab bar shall not be required to exceed 30 inches (760 mm) in length and shall be located with one end within 6 inches of the adjacent back wall.

**608.3.3.3 Vertical grab bar.** Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall a vertical grab bar shall be provided. A vertical grab bar 18 inches (455 mm) minimum in length shall be provided on the end wall 3 inches (75 mm) minimum and 6 inches (150 mm) maximum above the horizontal grab bar, and 4 inches (100 mm) maximum inward from the front edge of the shower.

**608.3.3.4 Back-wall grab bar.** In standard roll-in type showers with no seat, a grab bar shall be provided on the back wall. The back-wall grab bar shall extend the length of the wall and extend within 6 inches (150 mm) maximum from the adjacent side walls.

**Exception:** The back wall grab bar shall not be required to exceed 48 inches (1220 mm) in length and shall be located with one end within 6 inches (150 mm) of the adjacent side walls that also has a horizontal grab bar.

**608.3.3.5 Side-wall grab bars.** A grab bar shall be provided on the side-walls. The side wall grab bar shall extend the length of the wall beginning 4 inches (100 mm) maximum from the front edge of the shower compartment and extend within 6 inches (150 mm) maximum from the adjacent back wall.

**Exceptions:**

1. The side-wall grab bar shall not be required to exceed 30 inches (760 mm) in length and shall be located with one end within 6 inches of the adjacent back wall.
2. Where the side walls are greater than 72 inches apart, one of the side wall grab bars is not required.

**608.3.3.6 Vertical grab bar.** A vertical grab bar 18 inches (455 mm) minimum in length shall be provided on the end wall 3 inches (75 mm) minimum and 6 inches (150 mm) maximum above the horizontal grab bar, and 4 inches (100 mm) maximum inward from the front edge of the shower.

**608.3.4 Alternate roll-in-type showers.** In alternate roll-in type showers, grab bars shall be provided on the back wall and the side wall adjacent to the seat. Grab bars shall not be provided above the seat. Grab bars shall be 6 inches (150 mm) maximum from the adjacent wall.

**Figure 608.3.4 (A)**

GRAB BARS IN ALTERNATIVE TOLL-IN-TYPE SHOWER – ELEVATION

### **Figure 608.3.4 (B)**

#### **GRAB BARS IN ALTERNATE ROLL-IN-TYPE SHOWER - PLAN**

**608.4 Controls.** The controls for the on/off water flow, temperature and diverter. controls shall comply with the *operable parts* requirements in Section 309.4 and Sections 608.4.1, 608.4.2, 608.4.3 or 608.4.4 as applicable.

**608.4.1 Controls in Transfer-type showers.** In transfer-type showers, the *operable parts* for the on/off water flow, temperature, and diverter controls shall be located in accordance with all of the following:

1. On the control wall opposite the seat.
2. At a height of 27 inches (686 mm) minimum and 48 inches (1220 mm) maximum above the shower floor-
3. 15 inches (380 mm) maximum, from the centerline of the control wall toward the shower opening.

### **Figure 608.4.1**

#### **TRANSFER-TYPE SHOWER CONTROLS LOCATION**

**608.4.2 Controls in alternate transfer-type showers.** In alternate transfer-type showers, the *operable parts* for the on/off water flow, temperature and diverter controls shall be located in accordance with the following:

1. On the control wall opposite the seat.
2. At a height of 27 inches (686 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.
3. 15 inches (380 mm) maximum, from the centerline of the control wall toward the shower opening.

### **Figure 608.4.2**

#### **ALTERNATE TRANSFER-TYPE SHOWER CONTROLS LOCATION**

**608.4.3 Controls in Standard roll-in showers with seats.** In standard roll-in showers with seats, the *operable parts* for the on/off water flow, temperature, and diverter controls shall be located in accordance with all of the following:

1. On the back wall.
2. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.
3. 16 inches (405 mm) minimum and 27 inches (685 mm) maximum from the wall behind the seat.

### **Figure 608.4.3**

#### **STANDARD ROLL-IN-TYPE SHOWER WITH SEAT CONTROLS LOCATION**

**608.4.4 Controls in Standard roll-in showers with no seat.** In standard roll-in showers with no seat, the *operable parts* for the on/off water flow, temperature and diverter controls shall be located in accordance with the following:

1. On the back wall or side walls.

2. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.

**FIGURE 608.4.4**  
**STANDARD ROLL-IN-TYPE SHOWER WITH NO SEAT**  
**CONTROLS LOCATION**

**608.4.5 Controls in Alternate roll-in showers.** In alternate roll-in showers, the *operable parts* for the on/off water flow, temperature and diverter controls shall be located in accordance with one of the following:

1. Where the controls are located on the end wall adjacent to the seat, the controls and hand shower shall be located:
  - 1.1. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.
  - 1.2 16 inches (405 mm) minimum and 27 inches (685 mm) maximum from the wall behind the seat wall.
2. Where the controls are located on the back wall opposite the seat, the controls shall be located:
  - 2.1. At a height of 27 inches (686 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.
  - 2.2 within 15 inches (380 mm) maximum from the centerline of the seat toward the transfer space.

**Figure 608.4.5 (A)**

ALTERNATE ROLL-IN-TYPE SHOWER CONTROLS LOCATION – SIDE WALL – ELEVATION

**Figure 608.4.5(B)**

ALTERNATE ROLL-IN-TYPE SHOWER CONTROLS LOCATION – BACK WALL – ELEVATION

**608.5 Hand showers.** A hand shower with a hose 59 inches (1500 mm) minimum in length, that can be used both as a fixed shower head and as a hand shower, shall be provided. The hand shower shall have a nonpositive shut-off feature that complies with the *operable parts* requirements in Section 309.4. A fixed shower head, in addition to the hand shower shall be permitted.

**Exception:** In Accessible units, a fixed shower head located at not greater than 48 inches (1220 mm) above the tub floor shall be permitted in lieu of a hand shower where there are security or safety concerns that the shower hose poses a hazard.

A mount to hold the hand shower shall be provided and located in accordance with Sections 608.5.1, 608.5.2 or 608.5.3 as applicable.

**608.5.1 Hand shower mounts in transfer-type showers.** In transfer-type showers, the mount to hold the hand shower shall be located in accordance with the following:

1. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.
2. Where the mount is located on the back wall, the mount shall be 16 inches (405 mm) minimum and 27 inches (685 mm) maximum from the wall behind the seat.

3. Where the mount is located on the control wall opposite the seat, the mount shall be located within 15 inches (380 mm) maximum from the centerline of the seat.  
**Exception:** The mount to hold the hand shower shall be permitted to be located on a vertical bar provided that the mount is adjustable in height and can be located within the area specified for the fixed mount.

**FIGURE 608.5.1  
TRANSFER-TYPE SHOWER HAND SHOWER MOUNT LOCATION**

**608.5.2 Hand shower mounts in alternate transfer-type showers.** In alternate transfer-type showers, the mount to hold the hand shower shall be located in accordance with the following:

1. On the control wall opposite the seat.
2. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.
3. The mount shall be located within 15 inches (380 mm) maximum from the centerline of the seat.  
**Exception:** The mount to hold the hand shower shall be permitted to be located on a vertical bar provided that the mount is adjustable in height and can be located within the area specified for the fixed mount.

**FIGURE 608.5.2  
ALTERNATE TRANSFER-TYPE SHOWER HAND SHOWER MOUNT LOCATION**

**608.5.3 Hand showers mounts in standard roll-in showers with seats.** In standard roll-in showers with seats, the mount to hold the hand shower shall be located in accordance with the following:

1. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.
2. Located on the back wall 16 inches (405 mm) minimum and 27 inches (685 mm) maximum from the wall behind the seat.

**Exception:** The mount to hold the hand shower shall be permitted to be located on a vertical bar provided that the mount is adjustable in height and can be located within the area specified for the fixed mount.

**FIGURE 608.5.3  
STANDARD ROLL-IN-TYPE SHOWER WITH SEATS HAND SHOWER MOUNT LOCATION**

**608.5.4 Hand shower mounts in standard roll-in showers with no seat.** In standard roll-in showers with no seats, the mount to hold the hand shower shall be located in accordance with the following:

1. On the back wall or side walls.
2. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.  
**Exception:** The mount to hold the hand shower shall be permitted to be located on a vertical bar provided that the mount is adjustable in height and can be located within the area specified for the fixed mount.

**FIGURE 608.5.4  
STANDARD ROLL-IN-TYPE SHOWER WITH NO SEAT HAND SHOWER MOUNT LOCATION**

**608.5.5 Hand shower mounts in alternate roll-in showers.** In alternate roll-in showers, the mount to hold the hand shower shall be located in accordance with the following:

1. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.
2. Where the mount is located on the end wall adjacent to the seat, the mount shall be 16 inches (405 mm) minimum and 27 inches (685 mm) maximum from the wall behind the seat.
3. Where the mount is located on the back wall opposite the seat, the mount shall be located within 15 inches (380 mm) maximum from the centerline of the seat.

**Exception:** The mount to hold the hand shower shall be permitted to be located on a vertical bar provided that the mount is adjustable in height and can be located within the area specified for the fixed mount.

**FIGURE 608.5.5(A) ALTERNATE ROLL-IN TYPE SHOWER HAND SHOWER MOUNT LOCATION - END WALL – ELEVATION**

**FIGURE 608.5.5(B)  
ALTERNATE ROLL-IN TYPE SHOWER HAND SHOWER MOUNT LOCATION -  
CONTROL WALL – ELEVATION**

**608.6 Thresholds.** Thresholds in roll-in-type shower compartments shall be  $\frac{1}{2}$  inch (12.7 mm) maximum in height in accordance with Section 303. In transfer-type shower compartments, thresholds  $\frac{1}{2}$  inch (12.7 mm) maximum in height shall be beveled, rounded, or vertical.

**Exception:** In *existing facilities*, in transfer-type shower compartments where provision of a threshold  $\frac{1}{2}$  inch (12.7 mm) in height would disturb the structural reinforcement of the floor slab, a threshold 2 inches (51 mm) maximum in height shall be permitted.

**608.7 Shower enclosures.** Shower compartment enclosures for shower compartments shall not obstruct controls or obstruct transfer from wheelchairs onto shower seats.

## **SECTION 609 GRAB BARS**

**609.1 General.** Grab bars in toilet or bathing *facilities* shall comply with Section 609.

**609.2 Cross section.** Grab bars shall have a cross section complying with Section 609.2.1 or 609.2.2.

### **Figure 609.2**

#### **SIZE OF GRAB BARS**

**609.2.1 Circular cross section.** Grab bars with a circular cross section shall have an outside diameter of  $1\frac{1}{4}$  inch (32 mm) minimum and 2 inches (51 mm) maximum.

**609.2.2 Noncircular cross section.** Grab bars with a noncircular cross section 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.

### **Proposal 06-47-21 AM; 06-77-21 AM/AM PC1**

**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 of the grab bar shall be 1½ inches (38 mm) minimum. The space between the grab bar and projecting objects above the grab bar shall be 12 inches (305 mm) minimum.

**Exceptions:**

1. The space between the grab bars and *operable parts* for the on/off water flow, temperature and diverter controls, shower or bathtub fittings, including the vertical bar for the adjustable mount for the hand shower, and other grab bars above the grab bar shall be permitted to be 1½ inches (38 mm) minimum.
2. Recessed dispensers projecting from the wall ¼ inch (6.4 mm) maximum measured from the face of the dispenser and complying with Section 604.7 shall be permitted within the 12-inch (305 mm) space above and the 1½-inch (38 mm) spaces below and at the ends of the grab bar.
3. Automatic and push button flushing device cover plates and controls projecting from the wall up to 1 inch (25 mm) maximum shall be permitted to be 4 inch (100 mm) minimum above the grab bar.
4. Automatic flushing device cover plates and maintenance controls projecting from the wall up to ¼ inch (6.4 mm) maximum shall be permitted within the 12-inch (305 mm) space above and the 1½-inch (38 mm) spaces below the grab bar.

**Figure 609.3**

SPACING OF GRAB BARS

**609.4 Position of grab bars.** Grab bars shall be positioned in accordance with Section 609.4.1, 609.4.2, or 609.4.3 as applicable.

**609.4.1 Horizontal grab bars.** Grab bars required to be installed in a horizontal position shall be 33 inches (840 mm) minimum and 36 inches (915 mm) maximum above the floor measured to the top of the gripping surface.

**Exception:** The height of the lower grab bar on the back wall of a bathtub shall comply with Section 607.4.1.1, 607.4.2.1 or 607.4.3.1.

**609.4.2 Vertical grab bars.** Grab bars required to be installed in the vertical position shall comply with Sections 604.5.1.2, 607.4.1.2.2, 607.4.2.2, 607.4.3.2.2, and 608.3.1.2 as applicable. The location of vertical grab bars shall be measured horizontally to the center-line of the grab bar.

**609.4.3 Position of children’s grab bars.** At water closets primarily for *children’s use* complying with Section 604.11, grab bars required to be installed in a horizontal position shall be 18 inches (455 mm) minimum and 27 inches (685 mm) maximum above the floor measured to the top of the gripping surface. A vertical grab bar shall be mounted with the bottom of the bar located 21 inches (535 mm) minimum and 30 inches (760 mm) maximum above the floor and with the centerline of the bar located 34 inches (865 mm) minimum and 36 inches (915 mm) maximum from the rear wall.

**Figure 609.4.3 (A)**

POSITIONS OF CHILDREN’S GRAB BARS

SIDE-WALL VIEW

**Figure 609.4.3 (B)**  
POSITIONS OF CHILDREN’S GRAB BARS  
REAR-WALL VIEW

**609.5 Surface hazards.** Grab bars and any wall or other surfaces adjacent to grab bars shall be free of sharp or abrasive *elements*. Edges shall be rounded.

**609.6 Fittings.** Grab bars shall not rotate within their fittings.

**609.7 Installation and configuration.** Grab bars shall be installed in any manner that provides a gripping surface at the locations specified in this standard and does not obstruct the *maneuvering clearance*. Horizontal and vertical grab bars shall be permitted to be separate bars, a single piece bar, or combination thereof.

**609.7.1 Length of grab bar.** The required length of a horizontal grab bar shall be measured horizontally to the center-line of the grab bar return. The required length of a vertical grab bar shall be measured vertically to the center -line of the grab bar return.

**Exception:** Where the grab bar extends past the wall supports, the required length of the grab bar shall be measured to the end of the grab bar.

Figure 609.7.2(A)  
Grab bar length - Center-line of grab bar return

Figure 609.7.2(B)  
Grab bar length - Example or exception

**609.8 Structural strength.** Allowable stresses shall not be exceeded for materials used where 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.

**Proposal 06-13-2021 AM Part 4/AM PC2**

**609.9 Durability in presence of water.** All components of grab bars shall be designed and installed to not collect or hold moisture, and the mounting shall be designed and installed to protect against water intrusion into the grab bars, fasteners, mounting components and building cavities. Fasteners shall be of a material compatible with the grab bar mounting components.

**SECTION 610**  
**SEATS**

**610.1 General.** Seats in bathtubs and shower compartments shall comply with Section 610.

**Proposal 06-18-2021 AM/D/AM Reconsideration 1 and 2 (see 604.4)**



**610.2 Bathtub seats.** The height of bathtub seats shall be 17 inches (430 mm) minimum and 20 inches (510 mm) maximum above the bathroom floor, measured to the top of the seat. Bathtub seats shall be rectangular in shape.

**Exception:** A bathtub seat which is adjustable in height by the user within the range specified in Section 610.2.

**610.2.1 Removable in-tub seats.** Removable in-tub seats shall be 15 inches (380 mm) minimum and 16 inches (405 mm) maximum in depth. Removable in-tub seats shall be capable of secure placement with the rear edge of the seat surface positioned 36 inches (914 mm) maximum from the control wall.

### Figure 610.2.1

#### REMOVABLE IN-TUB SEATS

**610.2.2 Bathtubs with transfer platforms.** Transfer platforms shall be 15 inches (380 mm) minimum in depth and shall extend from the back wall to or beyond the outer edge of the bathtub. Transfer platforms shall be positioned at the head end of the bathtub.

### Figure 610.2.2

#### TRANSFER PLATFORM PROVIDED AT HEAD END OF TUB

**610.2.3 Folding in-tub seats.** Folding in-tub seats shall be mounted on the head wall. The rear edge of a seat shall be 2-1/2 inches (64 mm) maximum and the seat shall be 15 inches (380 mm) minimum and 16 inches (405 mm) maximum in depth. The side edge of the seat shall be 1-1/2 inches (38 mm) maximum from the back wall.

### FIGURE 610.2.3 BATHTUB SEATS FOLDING IN-TUB SEAT PROVIDED AT HEAD END OF TUB

#### Proposal 06-61-21 AM/AM BC1 mod, BC3. PC1; 06-82-21 AM PC1 and PC2 (see 604.4)

**610.3 Shower compartment seats.** The height of shower compartment seats shall be 17 inches (430 mm) minimum and 20 inches (510 mm) maximum above the bathroom floor, measured to the top of the seat. In transfer-type and alternate roll-in-type showers, the seat shall extend along the seat wall to a point within 3 inches (75 mm) of the compartment entry. In standard roll-in-type showers and in alternate transfer type showers, the seat shall extend from the control wall to a point within 3 inches (75 mm) of the compartment entry. Seats shall comply with Section 610.3.1 or 610.3.2. In alternate transfer type showers the seat shall also have a seat back complying with Section 610.3.3.

**Exception:** A shower compartment seat which is adjustable in height by the user within the range specified in Section 610.3.

**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 1½ inches (38 mm) maximum from the back wall of a transfer-type shower and 1½ inches (38 mm) maximum from the control wall of a roll-in-type shower.

**Figure 610.3.1**

RECTANGULAR SHOWER COMPARTMENT SEATS

**610.3.2 L-shaped seats.** The rear edge of an L-shaped 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 rear edge of the “L” portion of the seat shall be 1½ 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 (585 mm) maximum from the main seat wall.

**Figure 610.3.2**

L-SHAPED SHOWER COMPARTMENT SEATS

**610.3.3 Seat backs.** In alternate transfer type showers the seat shall be provided with a back support that is the length of the seat and that 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.

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

**SECTION 611  
ASSISTED TOILET AND BATHING ROOMS**

**611.1 General.** Individual use bathrooms for assisted toileting and bathing shall comply with Section 611.

**611.2 Clearances.**

**611.2.1 Turning Space.** A *turning space* shall be provided within the room.

**611.2.2 Door Swing.** Doors shall not swing into the bathroom.

**Exception:** Where a *clear floor space* complying with Section 305.3 is provided in the room beyond the arc of the door and emergency rescue door hardware that allows the door to be swung out of the room, is provided.

**Proposal 06-84-2021 AS/PC1 AS, PC2 AM**

**611.3 Mirrors.** Where provided, a mirror shall be mounted with the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the floor.

**Proposal 06-84-2021 AS/PC1 AS, PC2 AM**

**611.4 Coat Hooks.** Where provided, coat hooks shall be located within one of the *reach ranges*.

**611.5 Water Closets.** Water closets for assisted toileting shall comply with Section 611.5.

**FIGURE 611.5**  
**ASSISTED USE WATER CLOSET**

**Proposal 06-84-2021 AS/PC1 AS, PC2 AM**

**611.5.1 Maneuvering clearance width.** *Maneuvering clearance* width around the water closet shall have a minimum dimension of 24 inches (609 mm), on one side and a minimum dimension of 42 inches (1066 mm) on the other side, measured from the centerline of the water closet to the side of the clearance or any obstruction.

**611.5.2 Maneuvering clearance depth.** *Maneuvering clearance* around the water closet shall be 78 inches (1981 mm) minimum in depth, measured perpendicular from the rear wall.

**Proposal 06-84-2021 AS/PC1 AS, PC2 AM**

**611.5.3 Maneuvering clearance overlap.** The required *maneuvering clearance* around the water closet shall be permitted to overlap the water closet, associated grab bars, paper dispensers, sanitary napkin receptacles, coat hooks, shelves, *accessible routes, clear floor space or maneuvering clearance* at other fixtures, and the *turning space*. No other obstructions shall be within the required *maneuvering clearance* around the water closet.

**Exceptions:**

1. Towel bars that meet the strength requirements in Section 609.8 shall be permitted to overlap the *maneuvering clearance* around the water closet.
2. Floor mounted support posts for swing up grab bars complying with Section 611.5.6.6.

**611.5.4 Height.** The height of the water closet shall comply with Section 604.4

**611.5.5 Flush Controls.** Flush controls shall comply with Section 604.6

**611.5.6 Grab bars.** Grab bars for assisted toileting shall comply with Sections 609.2 and 611.5.6.

**611.5.6.1 Number.** Swing up grab bars shall be provided at both sides of the water closet.

**611.5.6.2 Location.** Swing up grab bars shall be located 14 to 16 inches (355 to 406 mm) from the centerline of the water closet.

**611.5.6.3 Length.** Swing up grab bars shall extend 36 inches (915 mm) minimum, measured perpendicular from the rear wall to the furthest projection of the bar.

**611.5.6.4 Height.** The height of the swing up grab bar, when in the down position, shall be 30 inches (760 mm) minimum and 34 inches (865 mm) maximum measured from the floor to the topmost portion of the bar.

**611.5.6.5 Strength.** Swing up grab bars shall meet structural strength requirements per Section 609.8.

**Exception:** Swing up bars are not required to resist required forces when being moved upward to the vertical position.

#### **Proposal 06-84-2021 AS/PC1 AS, PC2 AM**

**611.5.6.6 Floor-mounted support post.** Where the supporting structure for the grab bars is a floor mounted post, the post shall be permitted to be located within the *maneuvering clearance* around the water closet provided it meets the following:

1. The floor plate and post shall not extend more than 10 inches (254 mm) in depth measured perpendicular to the back wall.
2. The floor plate and post shall not extend more than 5 inches (127 mm) in width, measured from the centerline of the grab bar to either side.
3. The post location shall not block access to the flush controls.
4. The floor plate and post shall not overlap any other required *maneuvering clearances* at fixtures or *turning space*.

#### **FIGURE 611.5.6 ASSISTED USE WATER CLOSET FLOOR-MOUNTED SUPPORT POSTS**

**611.5.6.7 Dispensers.** Toilet paper dispensers shall be mounted on at least one of the swing up grab bars and shall be located at 24 inches (610 mm) minimum to 36 inches (915 mm) maximum measured perpendicular to the rear wall. Dispensers shall not be of a type that control delivery or do not allow continuous paper flow.

#### **Proposal 06-84-2021 AS/PC1 AS, PC2 AM**

**611.6 Lavatories and Sinks.** The lavatory shall comply with Section 606.

**611.7 Showers.** Roll-in showers for assisted bathing shall comply with Section 611.7.

#### **FIGURE 611.7(A) ROLL-IN SHOWERS FOR ASSISTED BATHING OPTION 1**

#### **FIGURE 611.7(B) ROLL-IN SHOWERS FOR ASSISTED BATHING OPTION 2**

#### **FIGURE 611.7(C) ROLL-IN SHOWERS FOR ASSISTED BATHING OPTION 3**

#### **Proposal 06-84-2021 AS/PC1 AS, PC2 AM**

**611.7.1 Size.** The shower shall have a clear inside dimension of 60 inches (1525 mm) minimum in length and 30 inches (760 mm) minimum in depth, measured at the center point of opposing sides.

**611.7.2 Maneuvering clearance.** A *maneuvering clearance* at the shower area of 60 inches (1525 mm) minimum in length adjacent to the long side of the shower area, and 30 inches (760 mm) minimum in depth, shall be provided.

**Exceptions:**

1. A lavatory complying with Section 606 shall be permitted at one end of the *maneuvering clearance* at the shower area.
2. Where the shower area exceeds minimum sizes, the *maneuvering clearance* at the shower area shall be placed 30 inches (760 mm) minimum from the back wall and the length shall be parallel to the back wall.

**611.7.3 Seat.** A fixed folding or non-folding wall-mounted seat is not required.

**611.7.4 Grab bars.** Grab bars shall comply with Section 609 and shall be provided in accordance with Section 611.7.4.1

**611.7.4.1 Location.** Horizontal grab bars shall be provided on the back wall, end wall, and side wall. Grab bars shall extend within 6 inches (150 mm) maximum from adjacent walls.

**Exceptions:**

1. The back-wall grab bar shall not be required to exceed 48 inches (1220 mm) in length.
2. End-wall and side-wall grab bars shall not be required to exceed 30 inches (760 mm) in length.
3. If the back-wall length is 72 inches (1830 mm) or greater, a side-wall grab bar is not required.

**Proposal 06-84-2021 AS/PC1 AS, PC2 AM**

**611.7.5 Controls.** Controls for the on/off water flow, temperature and diverter controls shall comply with the *operable parts* requirements in Section 309.4 and shall be located in accordance with the following:

1. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.
2. Either on the end wall or side wall, 18 inches (455 mm) minimum and 48 inches (1220 mm) maximum from the back wall.
3. Located to allow access by a caregiver and minimize reaching through the water stream.

**Exception:** Where the back wall length is 72 inches (1830 mm) or greater, controls are permitted to be located on the back wall at a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor and 27 inches (685 mm) minimum and 60 inches (1525 mm) maximum from the end wall.

**Proposal 06-84-2021 AS/PC1 AS, PC2 AM**

**611.7.6 Hand Showers.** A hand shower with a hose 59 inches (1500 mm) minimum in length, that can be used both as a fixed shower head and as a hand shower, shall be provided. The hand shower shall have a nonpositive shut-off feature that complies the *operable parts* requirements of with 309.4. A fixed shower head, in addition to the hand shower shall be permitted.

**Proposal 06-84-2021 AS/PC1 AS, PC2 AM**

**611.7.6.1 Hand shower mounts.** The mount to hold the hand shower shall be located in accordance with the following:

1. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor.
2. On the end wall, back wall or side wall within the shower area.
3. Located to allow access by a caregiver and minimize reaching through the water stream.

**Exception:** The mount to hold the hand shower shall be permitted to be located on a vertical bar provided that the mount is adjustable in height and can be located within the area specified for the fixed mount.

**Proposal 06-84-2021 AS/PC1 AS, PC2 AM**

**611.7.7 Thresholds.** Threshold showers shall comply with the threshold requirements for roll-in type showers in Section 608.6

**Proposal 06-84-2021 AS/PC1 AS, PC2 AM**

**611.7.8 Shower enclosures.** Shower enclosures shall not obstruct access to controls or hand shower mount from outside the shower area. Floor mounted enclosures shall maintain a minimum clear opening width of 41-1/2 inches (1054 mm) with no added threshold.

## SECTION 612 WASHING MACHINES AND CLOTHES DRYERS

**612.1 General.** Washing machines and clothes dryers shall comply with Section 612.

**612.2 Clear floor space.** A *clear floor space* positioned for parallel approach shall be provided. For top loading machines, the *clear floor space* shall be centered on the appliance. For front loading machines, the centerline of the *clear floor space* shall be offset 24 inches (610 mm) maximum from the centerline of the door opening.

**Figure 612.2 (A)**

CLEAR FLOOR SPACE – TOP LOADING

**Figure 612.2 (B)**

CLEAR FLOOR SPACE – FRONT LOADING

**612.3 Operable parts.** Washing machines and clothes dryers shall comply with *operable parts*, including doors, lint screens, detergent and bleach compartments.

**Exceptions:**

1. The height of the obstruction in Section 308.3.2 shall be permitted to be 36 inches (915 mm) maximum above the floor.
2. The *operable part* of the door shall be permitted to be 54 inches (1372 mm) maximum above the floor.

**612.4 Height.** Top loading machines shall not be permitted.

**Figure 612.4 (A)**

HEIGHT OF LAUNDRY EQUIPMENT – TOP LOADING

**Figure 612.4 (B)**

HEIGHT OF LAUNDRY EQUIPMENT – FRONT LOADING

## **SECTION 613 Saunas and Steam Rooms**

**613.1 General.** Saunas and steam rooms shall comply with Section 613.

**613.2 Bench.** Where seating is provided in saunas and steam rooms, at least one bench shall comply with Section 903. Doors shall not swing into the *clear floor space* located adjacent to the bench and required by Section 903.2.

**Exception:** Where the room is for individual use and a *clear floor space* complying with Section 305.3 is provided within the room beyond the arc of the door swing, the door shall not be required to comply with Section 613.2.

**613.3 Turning space.** A *turning space* shall be provided within saunas and steam rooms.

## **SECTION 614 RINSING SHOWERS**

**Proposal 06-76-21 AM/AFM BC2 and PC1 with mods**

**614.1 Rinsing showers.** Rinsing showers shall comply with Section 614.

**Proposal 06-76-21 AM/AFM BC2 and PC1 with mods; E7-2024 AS**

**614.2 Clearance.** A *maneuvering clearance* 60 inches (1525) minimum in depth by 60 inch (1525 mm) minimum in length shall be provided at the shower heads. The *maneuvering clearance* shall be located so that the shower pedestal or wall with the shower head are at the one end of the clearance and centered on the shower head.

**Proposal 06-76-21 AM/AFM BC2 and PC1 with mods**

**614.3 Hand showers.** A hand shower with a hose 59 inches (1500 mm) minimum in length shall be provided. A mount to hold the hand shower shall be located at a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the floor. A fixed shower head, in addition to the hand shower shall be permitted.

**Exceptions:**

1. A fixed shower head located at 48 inches (1220 mm) maximum above the floor shall be permitted in lieu of a hand-shower.
2. The mount to hold the hand shower shall be permitted to be located on a vertical bar provided that the mount is adjustable in height and can be located within the area specified for the fixed mount.

**Proposal 06-76-21 AM/AFM BC2 and PC1 with mods**

**614.4 Controls.** Controls for the water flow shall comply with *operable parts*.

**Proposal 06-90-2021 AM/PC4 & PC5AM – this whole section;**

**SECTION 615  
ADULT CHANGING STATIONS**

**615.1 General.** Adult changing stations shall comply with Section 615. Adult changing stations include an assistive table and the *maneuvering clearances*. The Assistive Table shall comply with IAPMO Z1390 listed in Section 106.2.14.

**615.2 Installation location.** Where provided, adult changing stations shall be installed in accordance with the locations specified in Sections 615.2.1, 615.2.2, or 615.2.3.

**615.2.1 Single-user or family or companion toilet or bathing room.** Where adult changing stations are provided in a toilet room with only one water closet and one lavatory, or in a family or companion toilet or bathing room, the room shall provide all of the following components:

1. A dispenser for soap.
2. A hand towel dispenser or hand dryer complying with Section 603.6.
3. A coat hook located in close proximity to the changing surface.
4. A waste receptacle.
5. Signage indicating “Adult Changing Station” provided at the entrance to the room and complying with the visual character requirements in Section 703.2.
6. Assistive table markings and operating instructions shall comply with IAPMO Z1390 listed in Section 106.2.14.

**615.2.2 Multi-ser toilet or bathing room.** Where adult changing stations are provided in a multiuser toilet or bathing room, the adult changing station shall be located in a compartment that includes all of the following components:

1. Privacy provided by walls, curtains or partitions enclosing the compartment.
2. A *turning space*.
3. A lavatory complying with Section 606.
4. A dispenser for soap.
5. A hand towel dispenser or hand dryer complying with Section 603.6.
6. A coat hook in close proximity to the changing surface.
7. A waste receptacle.
8. Signage indicating “Adult Changing Station” provided at the entrance to the room and complying with the visual character requirements in Section 703.2.
9. Assistive table markings and operating instructions shall comply with IAPMO Z1390 listed in Section 106.2.14.

**615.2.3 Room or space other than a toilet room or bathing room.** Where adult changing stations are provided in a room or space other than a toilet or bathing room and including, but not limited to, nurses’ work areas, therapist work areas, or special education classrooms, the adult changing station shall be located in a compartment or room that includes all of the following components:

1. Privacy provided by walls, curtains, or partitions.



2. A turning space.
3. A lavatory complying with Section 606 or an alcohol-based hand sanitizer dispenser.
4. Where a lavatory is provided in the compartment or room, provide a dispenser for soap.
5. Where a lavatory is provided in the compartment or room, provide a hand towel dispenser or hand dryer complying with Section 603.6.
6. A waste receptacle.
7. Assistive table markings and operating instructions shall comply with IAPMO Z1390 listed in Section 106.2.14.

**615.3 Room configurations.** The assistive table shall not obstruct required *clear floor spaces* and *maneuvering clearances* at fixtures, *maneuvering clearances* at the adult changing stations, *maneuvering clearances* at doors, or the *turning spaces*.

**615.4 Size.** The assistive table shall be 70 inches (1778mm) minimum in length and 30 inches (762mm) minimum in width.

**615.5 Static Load.** The assistive table shall sustain a 400 pounds (182 kg) minimum static load.

**615.6 Height adjustability.** The changing surface height shall be adjustable in accordance with IAPMO Z1390.

**Exception:** Where the adult changing station is not required by the *administrative authority*, a fixed height assistive table shall be permitted and shall comply with IAPMO Z1390 listed in Section 106.2.14.

**615.7 Maneuvering clearances.** *Maneuvering clearances* at the changing surface of the assistive table shall comply with Sections 615.7.1 and 615.7.2. Such *maneuvering clearances* shall be measured when the changing surface is in the operational position.

**615.7.1 Side maneuvering clearance.** A side *maneuvering clearance* 36-inch (914mm) minimum in depth shall be provided along the open long side of the changing surface.

**Exception:** In the raised position, the side rail shall be permitted to overlap the side *maneuvering clearance*.

**615.7.2 End maneuvering clearance.** An end *maneuvering clearance* 36-inch (914mm) minimum in width shall be provided along the depth of one end of the changing surface. The depth of the end *maneuvering clearance* shall extend the depth of the changing surface and the side *maneuvering clearance*.

**Exceptions:**

1. An end *maneuvering clearance* 24-inch (610 mm) minimum in width shall be permitted where a *clear floor space* complying with Section 305.3 is provided within the room beyond the *maneuvering clearances* for the changing surface.
2. End *maneuvering clearances* installed in locations specified in Section 615.2.3, shall not be required to comply with Section 615.7.2.

**Figure 615.7**  
**Size and maneuvering clearances at the changing surface of the assistive table**

**613.8 Safety restraint systems.** Side rails and lap belts or harnesses shall be provided in accordance with IAPMO Z1390, listed in Section 106.2.14.

## **SECTION 616 PET WASHING STATION**

**616.1 Pet washing stations.** Where provided for pet washing, pet washing stations shall comply with Section 616.

**616.2 Pet washing Tubs.** Pet washing tubs shall provide *clear floor space* positioned for a forward or parallel approach.

**616.3 Operable parts.** The controls for on and off water flow, temperature, and diverter shall comply with *operable parts*. Where a hand shower is provided, a mount to hold the hand shower shall be located with *reach ranges*.

## CHAPTER 7

# COMMUNICATION ELEMENTS AND FEATURES

### SECTION 701 GENERAL

**701.1 Scope.** Communications *elements* and features required to be *accessible* by the scoping provisions adopted by the *administrative authority* shall comply with the applicable provisions of Chapter 7. Where *building blocks* are required in this chapter, they shall comply with the applicable provisions of Chapter 3.

### SECTION 702 ALARMS

**702.1 General.** Audible and visible alarms and notification appliances that are part of a building fire alarm system shall be installed in accordance with NFPA-72 listed in Section **106.2.7**, be powered by a commercial light and power source, be permanently connected to the wiring of the premises electric system and be permanently installed.

**Exception:** Audible and visible notification appliances provided within *dwelling unit* or *sleeping units* shall comply with Sections 1106.2 through 1106.4.4.

### SECTION 703 SIGNS

**703.1 General.** Signs shall comply with Section 703. Tactile signs shall contain both raised *characters* and braille. Where signs with 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.

**703.1.1 Designations.** Interior and exterior signs identifying permanent rooms and spaces shall comply with Sections 703.1 and 703.2.

**Exception:** Exterior signs that are not located at the door to the space they serve shall not be required to comply with Section 703.1.4.

**703.1.2 Directional and informational signs.** Signs that provide direction to or information about interior spaces and *facilities* of the *site* shall comply with Section 703.2.

**703.1.3 Pictograms.** Where *pictograms* are provided as designations of permanent interior rooms and spaces, the *pictograms* shall comply with Section 703.5 and shall have text descriptors located directly below the *pictogram* field and complying with Sections 703.1.4 and 703.2.

**Exception:** *Pictograms* depicting occupant logos, and the International Symbol of Accessibility, shall not be required to have text descriptors.

**703.1.4 Tactile Signs.** Tactile signs shall contain both raised *characters* and braille and shall comply with 703.1.4. Raised *characters* shall comply with Section 703.3. Braille shall comply with Section 703.4.

**Proposal 07-09-2021 AM/AMBC2; E10-24 AS**

**703.1.4.1 Location and standing space.** Where a tactile *sign* is provided to designate a permanent room or space, the *sign* shall be located at the doorway to the room or space it identifies and shall be installed in accordance with Table 703.1.4.1. A standing space 18 inches (550 mm) minimum by 18 inches (455 mm) minimum shall be provided and shall be centered on the raised *characters*. The arc of any door swing between the closed position and a 45-degree open position, shall not swing into the standing space.

**Exception:** The standing space shall be permitted to overlap the *flight* of stairs or ramp run where tactile signs are located within the exit *stairway* or *ramp*.

**Table 703.1.4.1  
Tactile Sign Location**

Number of Doors in Doorway	Number of Active Leaves	Sign Location
None	None	to the right of the doorway <sup>1</sup>
1	1	on the latch side <sup>1</sup>
		permitted on the door where the door swings inward, has a closer, and does not have a hold-open device
2	1	on the inactive leaf
2	2	on the right-hand leaf where the door swings inward, has a closer, and does not have a hold-open device
		to the right of the right-hand leaf <sup>1</sup>

<sup>1</sup>. Where there is no wall space signs shall be on the nearest adjacent wall.

**703.1.4.2 Position.** Tactile *characters* on signs shall be positioned so that Braille is below the corresponding raised *characters* and displayed in a horizontal orientation. Where text containing raised *characters* is multilined, braille shall be placed below entire text. Braille shall be separated 3/8-inch (9.5 mm) minimum and 1 inch (25 mm) maximum from any other raised *characters* and 3/8 inch (9.5 mm) minimum from raised borders and decorative *elements*. Braille provided on elevator car

controls shall be separated 3/16-inch (4.8 mm) minimum either directly below or adjacent to the corresponding raised *characters* or symbols.

#### **Figure 703.1.4.2**

POSITION OF BRAILLE (*revise figure to match changes in text*)

#### **Proposal 07-09-2021 AM/AMBC2; E10-24 AS**

**703.1.4.3 Height above floor.** Tactile *characters* on signs shall be 48 inches (1220 mm) minimum above the floor, measured to the baseline of the braille cell and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character.

##### **Exceptions:**

1. Raised *characters* and braille for elevator car controls shall not be required to comply with Section 703.1.4.3.
2. The standing space shall be measured from the *landing of the stairway or ramp* where tactile signs are located within the exit *stairway or ramp*.

#### **Figure 703.1.4.3 Height of Raised Characters and Braille above Floor**

**703.2 Visual characters.** Visual *characters* shall comply with one of the following:

1. Visual *characters* that also serve as raised *characters* shall comply with Section 703.3.
2. Visual *characters* on VMS signage shall comply with Section 703.7.
3. Visual *characters* not covered in items 1 and 2 shall comply with Section 703.2.

**Exception:** The visual and raised requirements of item 1 shall be permitted to be provided by two separate signs that provide corresponding information provided one *sign* complies with Section 703.2 and the second *sign* complies with Section 703.3.

**703.2.1 Case.** *Characters* shall be uppercase, lowercase, or a combination of both.

**703.2.2 Style.** *Characters* shall be conventional in form. *Characters* shall not be italic, oblique, script, highly decorative, or of other unusual forms.

**703.2.3 Text orientation:** The lines of visual text *characters* shall be displayed with the base line of the text in horizontal orientation.

**703.2.4 Character height.** The uppercase letter “I” shall be used to determine the allowable height of all *characters* of a font. The uppercase letter “I” of the font shall have a minimum height complying with Table

703.2.4. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign.

**Exception:** In assembly seating where the maximum viewing distance is 100 feet (30.5 m) or greater, the height of the uppercase “I” of fonts shall be permitted to be 1 inch (25 mm) for every 30 feet (9145 mm) of viewing distance, provided the character height is 8 inches (205 mm) minimum. Viewing distance shall be measured as the horizontal distance between the character and where someone is expected to view the sign.

**TABLE 703.2.4—VISUAL CHARACTER HEIGHT**

<b>Height above Floor to Baseline of Character<sup>a</sup> (inches)</b>	<b>Horizontal Viewing Distance (feet)</b>	<b>Minimum Character Height (inches)</b>
40 to less than or equal to 70	Less than 6	$\frac{5}{8}$
	6 and greater	$\frac{5}{8}$ , plus $\frac{1}{8}$ per foot of viewing distance above 6 feet
Greater than 70 to less than or equal to 120	Less than 15	2
	15 and greater	2, plus $\frac{1}{8}$ per foot of viewing distance above 15 feet
Greater than 120	Less than 21	3
	21 and greater	3, plus $\frac{1}{8}$ per foot of viewing distance above 21 feet

For SI: 1 inch = 25.4 mm; 1 foot = 304.8 mm

a. The vertical height is measured from the floor of the viewing position to the baseline of the highest line of characters.

**703.2.5 Character width.** The uppercase letter “O” shall be used to determine the allowable width of all *characters* of a font. The width of the uppercase letter “O” of the font shall be 55 percent minimum and 110 percent maximum of the height of the uppercase “I” of the font.

**703.2.6 Stroke width.** The uppercase letter “I” shall be used to determine the allowable stroke width of all *characters* of a font. The stroke width shall be 10 percent minimum and 30 percent maximum of the height of the uppercase “I” of the font.

**703.2.7 Character spacing.** Spacing shall be measured between the two closest points of adjacent *characters* within a message, excluding word spaces. Spacing between individual *characters* shall be 10 percent minimum and 35 percent maximum of the character height.

**703.2.8 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.

**Exception:** In assembly seating where the maximum viewing distance is 100 feet (30.5 m) or greater, the spacing between the baselines of separate lines of *characters* within a message shall be permitted to be 120 percent minimum and 170 percent maximum of the character height.

**703.2.9 Height above floor.** Visual *characters* shall be 40 inches (1015 mm) minimum above the floor of the viewing position, measured to the baseline of the character. Heights shall comply with Table 703.2.4, based on the size of the *characters* on the sign.

**Exception:** Visual *characters* indicating elevator car controls shall not be required to comply with Section 703.2.9.

### Proposal 07-08-2021 D/AMPC3

**703.2.10 Finish and contrast.** The finish and contrast for visual *characters* shall comply Sections 703.2.10.

### Proposal 07-08-2021 D/AMPC3

**703.2.10.1 Nonglare finish.** *Characters* and their background shall have a nonglare finish. The glare from coverings, the finish of *characters*, and their background shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

### Proposal 07-08-2021 D/AMPC3

**703.2.10.2 Contrast.** Contrast for signs shall comply with Section 703.2.10.2.1 or 703.2.10.2.2, as applicable.

### Proposal 07-08-2021 D/AMPC3

**703.2.10.2.1 Dark and light signs.** For the following *sign* types, visual *characters* shall contrast with their background, with either *light characters* on a *dark* background, or *dark characters* on a *light* background.

1. Inserts that are placed behind a translucent protective cover or signage graphics applied to the subsurface, also known as the second surface of translucent material.
2. Signage with colors, graphics, and images applied onto the subsurface of transparent or translucent *sign* material.
3. Signage with colors, graphics, and images produced with Cyan Magenta, Yellow, Black (CMYK) or process color printing processes.
4. Maps.
5. Directional signs with color coded information.

### Proposal 07-08-2021 D/AMPC3

**703.2.10.2.2 High contrast signs.** Visual *characters* on all other signs shall have high contrast of 65 percent minimum with their background as determined by the following equation:

$$\text{Contrast} = [(B1 - B2)/B1] \times 100$$

where B1 = *light reflectance value (LRV)* of the *light* surface; and  
B2 = *light reflectance value (LRV)* of the *dark* surface.

### Proposal 07-08-2021 D/AMPC3

**703.2.10.2.2.1 Compliance.** Compliance with the Section 703.2.10.2.2 shall be determined by at least one of the following:

1. Documentation provided by the signage manufacturer based on information from the supplier of the material.
2. Documentation of compliance by a testing agency
3. Field measurement.

**703.3 Raised characters.** Raised *characters* shall comply with Section 703.3 and shall be duplicated below the corresponding text in braille complying with Section 703.4.

**703.3.1 Depth.** Raised *characters* shall be raised  $\frac{1}{32}$  inch (0.8 mm) minimum above their background.

**703.3.2 Case.** *Characters* shall be uppercase.

**703.3.3 Style.** *Characters* shall be sans serif. *Characters* shall not be italic, oblique, script, highly decorative, or of other unusual forms.

**703.3.4 Text orientation:** Raised *characters* shall be displayed in a horizontal orientation.

**703.3.5 Character height.** The uppercase letter “I” shall be used to determine the allowable height of all *characters* of a font. The height of the uppercase letter “I” of the font, measured vertically from the baseline of the character, shall be  $\frac{5}{8}$  inch (16 mm) minimum, and 2 inches (51 mm) maximum.

**Exception:** Where separate raised and visual *characters* with the same information are provided, the height of the raised uppercase letter “I” shall be permitted to be  $\frac{1}{2}$  inch (12.7 mm) minimum.

#### Figure 703.3.5

#### CHARACTER HEIGHT

**703.3.6 Character width.** The uppercase letter “O” shall be used to determine the allowable width of all *characters* of a font. The width of the uppercase letter “O” of the font shall be 55 percent minimum and 110 percent maximum of the height of the uppercase “I” of the font.

**703.3.7 Stroke width.** Raised character stroke width shall comply with Section 703.3.7. The uppercase letter “I” of the font shall be used to determine the allowable stroke width of all *characters* of a font.

**703.3.7.1 Maximum.** The stroke width shall be 15 percent maximum of the height of the uppercase letter “I” measured at the top surface of the character, and 30 percent maximum of the height of the uppercase letter “I” measured at the base of the character.



**703.3.7.2 Minimum.** Where *characters* are both visual and raised, the stroke width shall be 10 percent minimum of the height of the uppercase letter “I”.

**703.3.8 Character spacing.** Character spacing shall be measured between the two closest points of adjacent raised *characters* within a message, excluding word spaces. Spacing between individual raised *characters* shall be 1/8 inch (3.2 mm) minimum measured at the top surface of the *characters*, 1/16 inch (1.6 mm) minimum measured at the base of the *characters*, and four times the raised character stroke width maximum. *Characters* shall be separated from raised borders and decorative *elements* 3/8 inch (9.5 mm) minimum.

**703.3.9 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.

**Proposal 07-08-2021 D/AMPC3**

**703.3.10 Finish and contrast.** Where raised *characters* also serve as visual *characters*, they shall comply with Section 703.2.10.2.

**703.4 Braille.** Braille shall be contracted (Grade 2) braille and shall comply with Section 703.4.

**703.4.1 Uppercase letters.** 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, or acronyms.

**703.4.2 Dimensions.** Braille dots shall have a domed or rounded shape and shall comply with Table 703.4.3.

**TABLE 703.4.2 — BRAILLE DIMENSIONS**

Measurement range	Minimum to Maximum (inches)
Dot base diameter	0.059 to 0.063
Distance between two dots in the same cell	0.090 to 0.100
Distance between corresponding dots in adjacent cells <sup>a</sup>	0.241 to 0.300
Dot height	0.025 to 0.037
Distance between corresponding dots from one cell directly below <sup>a</sup>	0.395 to 0.400

For SI: 1 inch = 25.4 mm

a. Measured center to center

**Figure 703.4.2**

**BRAILLE MEASUREMENT**

**703.5 Pictograms.** *Pictograms* shall comply with Section 703.5.

**Figure 703.5**

## PICTOGRAM FIELD

**703.5.1 Pictogram field.** *Pictograms* shall have a field 6 inches (150 mm) minimum in height. *Characters* or braille shall not be located in the *pictogram* field.

**703.5.2 Finish and contrast.** *Pictograms* and their fields shall have a nonglare finish. *Pictograms* shall contrast with their fields, with either a *light pictogram* on a *dark* field or a *dark pictogram* on a *light* field.

**703.5.2.1 Nonglare finish.** The glare from coverings and the finish of *pictograms* and their fields shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

**703.6 Symbols of accessibility.** Symbols of accessibility shall comply with Section 703.6.

**703.6.1 Finish and contrast.** Symbols of accessibility and their backgrounds shall have a nonglare finish. Symbols of accessibility shall contrast with their backgrounds, with either a *light* symbol on a *dark* background or a *dark* symbol on a *light* background.

**703.6.1.1 Nonglare finish.** The glare from coverings and the finish of symbols of accessibility and their backgrounds shall not exceed 19 gloss units (gu) as measured on a 60-degree gloss meter.

**703.6.2 Symbols.** Symbols shall comply with Section 703.6.2.

**703.6.2.1 International symbol of accessibility.** The International Symbol of Accessibility shall comply with Figure 703.6.2.1.

### Figure 703.6.2.1

#### INTERNATIONAL SYMBOL FOR ACCESSIBILITY

### Proposal 06-30-2021 D/AM PC1; E6-2024 AS; E10-24 AS

**703.6.2.2 Symbol for injured persons.** The Symbol for the Injured Persons shall comply with Figure 703.6.2.2.



**FIGURE 703.6.2.2**

**SYMBOL FOR INJURED PERSONS**

**703.6.2.3 Assistive listening systems.** *Assistive listening systems* that provide hearing loops (induction loop-type assistive listening) shall be identified by the International Symbol for Hearing Access with a “T” complying with Figure 703.6.2.3 (A) and with the text descriptor located below the symbol meeting the visual character requirement in Section 703.2 and stating “Hearing Loop”. *Assistive listening systems* that do not provide hearing loops shall be identified by the International Symbol of Access for Hearing Loss complying with Figure 703.6.2.3 (B) and with the text descriptor located below the symbol meeting the visual character requirement in Section 703.2 and stating “Assistive Listening System”.

**FIGURE 703.6.2.3 (A)**

**International Symbol of Access for Hearing Loss with a “T” to indicate a hearing loop**

**FIGURE 703.6.2.3 (B)**

**International Symbol of Access for Hearing Loss**

**Proposal 07-14-2021 AS/AM BC1; E6-2024 AS; E10-24 AS**

**703.6.2.4 Sign language facilities.** The International Symbol for Sign Language shall comply with Figure 703.6.2.4.



**FIGURE 703.6.2.4**  
**International Symbol for Sign Language**

**703.6.2.5 International symbol of TTY.** The International Symbol of *TTY* shall comply with Figure 703.6.2.5.

**Figure 703.6.2.5**

INTERNATIONAL TTY SYMBOL

**703.6.2.6 Volume-controlled telephones.** The *pictogram* for volume-controlled telephones shall comply with Figure 703.6.2.6.

**Figure 703.6.2.6**

VOLUME-CONTROLLED TELEPHONE

**703.7 Variable message signs.** High resolution *variable message sign (VMS) characters* shall comply with Sections 703.2 and 703.7.12 through 703.7.13. Low resolution *variable message sign (VMS) characters* shall comply with Section 703.7.

**Exception:** Theatrical performance-related VMS signs, including but not limited to, text and translation delivery systems, surtitles and subtitles, shall not be required to comply with Section 703.7.

**703.7.1 Case.** Low resolution VMS *characters* shall be uppercase.

**703.7.2 Style.** Low resolution VMS *characters* shall be conventional in form, shall be sans serif, and shall not be italic, oblique, script, highly decorative, or of other unusual forms.

**703.7.3 Character height.** The uppercase letter “I” shall be used to determine the allowable height of all low resolution VMS *characters* of a font. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign. The uppercase letter “I” of the font shall have a minimum height complying with Table 703.7.3.

**Exception:** In assembly seating where the maximum viewing distance is 100 feet (30.5 m) or greater, the height of the uppercase “I” of low resolution VMS fonts shall be permitted to be 1 inch (25 mm) for every 30 feet (9145 mm) of viewing distance, provided the character height is 8 inches (205 mm) minimum. Viewing distance shall be measured as the horizontal distance between the character and where someone is expected to view the sign.

**TABLE 703.7.3 —LOW RESOLUTION VMS CHARACTER HEIGHT**

Height above Floor to Baseline of Character <sup>a</sup> (inches)	Horizontal Viewing Distance (feet)	Minimum Character Height (inches)
40 to less than or equal to 70	Less than 10	2
	10 feet greater	2, plus 1/5 per foot of viewing distance above 10 feet
Greater than 70 to less than or equal to 120	Less than 15	3
	15 feet and greater	3, plus 1/5 per foot of viewing distance above 15 feet)
Greater than 120	Less than 20	4
	20 and greater	4, plus 1/5 per foot of viewing distance above 20 feet

For SI: 1 inch = 25.4 mm; 1 foot = 304.8 mm

a. The vertical height is measured from the floor of the viewing position to the baseline of the highest line of characters.

**703.7.4 Character width.** The uppercase letter “O” shall be used to determine the allowable width of all low resolution VMS *characters* of a font. Low resolution VMS *characters* shall comply with the pixel count for character width in Table 703.7.4.

**TABLE 703.7.4 PIXEL COUNT FOR LOW RESOLUTION VMS SIGNAGE<sup>a</sup>**

Character Height	Character Width Range	Stroke Width Range	Character Spacing Range
7	5-6	1	2
8	6-7	1-2	2-3
9	6-8	1-2	2-3
10	7-9	2	2-4
11	8-10	2	2-4
12	8-11	2	3-4
13	9-12	2-3	3-5
14	10-13	2-3	3-5

15	11-14	2-3	3-5
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a. Measured in pixels.

**Figure 703.7.4**

**LOW RESOLUTION VMS SIGNAGE CHARACTERS**

**703.7.5-Stroke width.** The uppercase letter “I” shall be used to determine the allowable stroke width of all low resolution VMS *characters* of a font. Low resolution VMS *characters* shall comply with the pixel count for stroke width in Table 703.7.4.

**703.7.6 Character spacing.** Spacing shall be measured between the two closest points of adjacent low resolution VMS *characters* within a message, excluding word spaces. Low resolution VMS character spacing shall comply with the pixel count for character spacing in Table 703.7.4.

**703.7.7 Line spacing.** Low resolution VMS *characters* shall comply with Section 703.2.8.

**703.7.8 Height above floor.** Low resolution VMS *characters* shall be 40 inches (1015 mm) minimum above the floor of the viewing position, measured to the baseline of the character. Heights of low resolution *variable message sign (VMS) characters* shall comply with Table 703.7.3, based on the size of the *characters* on the sign.

**703.7.9 Finish.** The background of low resolution VMS *characters* shall have a nonglare finish.

**703.7.10 Contrast.** Low resolution VMS *characters* shall be lighter *characters* on a darker background.

**703.7.11 Protective covering.** Where a protective layer is placed over VMS *characters* through which the VMS *characters* must be viewed, the protective covering shall have a nonglare finish.

**703.7.12 Brightness.** The brightness of *variable message signs* in exterior locations shall automatically adjust in response to changes in ambient light levels.

**703.7.13 Rate of change.** Where a VMS message can be displayed in its entirety on a single screen, it shall be displayed on a single screen. The message shall remain motionless on the screen for a minimum 3 seconds or one second minimum for every 7 *characters* of the message including spaces whichever is longer.

**703.8 Pedestrian signals.** *Accessible* pedestrian signals shall comply with Section 4E.09 through 4E.13- of MUTCD listed in Section 106.2.5.

**Exception:** Pedestrian signals shall not be required to comply with the requirement for choosing audible tones.

## SECTION 704 TELEPHONES

**704.1 General.** Public telephones shall comply with Section 704.

**704.2 Wheelchair accessible telephones.** Wheelchair *accessible* public telephones shall comply with Section 704.2.

**704.2.1 Clear floor space.** A *clear floor space* shall be provided. The *clear floor space* shall not be obstructed by bases, enclosures, or seats.

**Exception:** A *clear floor space* is not required at drive-up only public telephones.

**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 shall be 10 inches (255 mm) maximum.

### Figure 704.2.1.1

CLEAR FLOOR SPACE FOR TELEPHONES

PARALLEL APPROACH

**704.2.1.2 Forward approach.** Where a forward approach is provided, the distance from the front edge of a counter within the enclosure to the face of the telephone shall be 20 inches (510 mm) maximum.

### Figure 704.2.1.2

CLEAR FLOOR SPACE FOR TELEPHONES

FORWARD APPROACH

**704.2.2 Operable parts.** Controls shall comply with *operable parts*. Telephones shall have push button controls where service for such equipment is available.

**704.2.3 Telephone directories.** Where provided, telephone directories shall comply with *operable parts*.

**704.2.4 Cord length.** The telephone handset cord shall be 29 inches (735 mm) minimum in length. •

**704.3 Volume-control telephones.** Public telephones required to have volume controls shall be equipped with a receiver volume control that provides a gain adjustable up to 20 dB minimum. Incremental volume controls shall provide at least one intermediate step of gain of 12 dB minimum. An automatic reset shall be provided.

**704.3.1 Signage.** Volume-controlled telephones shall be identified by the symbol complying with Figure 703.6.2.6.

**704.4 TTY.** *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 of sufficient length to allow connection of the *TTY* and the telephone receiver.

**704.4.1 Height.** When in use, the touch surface of *TTY* keypads shall be 34 inches (865 mm) minimum above the floor.

**Exception:** Where seats are provided, *TTYs* shall not be required to comply with Section 704.4.1.

**704.4.2 TTY shelf.** Where public pay telephones designed to accommodate a portable *TTY* are provided, they 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 inch (150 mm) minimum clearance above the area where the *TTY* is to be placed.

**704.4.3 Signage.** *TTYs* shall be identified by the International *TTY* symbol complying with Figure 703.6.3.5.

**704.5 Visual relay service booth.** Each public visual relay service booth shall accommodate one user with a seating and privacy enclosure, a two-way video communication system, and diffuse lighting with a lighting level of 20 foot candles (215 lux) minimum. The background of the seating area, and within range of the two-way video communication system, shall have a flat, non-textured surface and finish color in the bright green or blue range.

**704.5.1 Signage.** The visual relay service booth shall be identified by the International Symbol for Sign Language complying with Section 703.6.2.4.

## SECTION 705 DETECTABLE WARNING SURFACES

**705.1 General.** *Detectable warning surfaces* shall comply with Section 705.

**705.2 Standardization.** *Detectable warning surfaces* shall be standard within a building, *facility*, *site*, or complex of buildings.

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**705.3 Color.** *Detectable warning surfaces* shall be yellow and Color ID 33538 (Yellow International) of SAE AMS-STD-595A listed in Section 106.2.1 to the maximum extent practicable.

**705.4 Interior locations.** *Detectable warning surfaces* in interior locations shall differ from adjoining walking surfaces in resiliency or sound-on-cane contact.



**705.5 Truncated domes.** *Detectable warning surfaces* shall have truncated domes complying with Section 705.5.

**Figure 705.5 (A)**

TRUNCATED DOME SIZE AND SPACING

**Figure 705.5 (B)**

ELEVATION (ENLARGED)

**705.5.1 Size.** Truncated domes shall have a base diameter of 0.9 inch (23 mm) minimum and 1.4 inch (36 mm) maximum, and a top diameter of 50 percent minimum and 65 percent maximum of the base diameter.

**705.5.2 Height.** Truncated domes shall have a height of 0.2 inch (5.1 mm).

**705.5.3 Spacing.** Truncated domes 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 (16.5 mm) minimum, measured between the most adjacent domes on the grid.

**705.5.4 Alignment.** Truncated domes shall be aligned in a square or radial grid pattern.

**705.6 Depth and width of detectable warning surfaces.** *Detectable warning surfaces* shall comply with the following:

1. *Detectable warning surfaces* shall extend 24 inches (610 mm) minimum in the direction of pedestrian travel.
2. At *curb ramps* and *blended transitions*, *detectable warning surfaces* shall extend the full width of the curb ramp run excluding any flared sides or *blended transition*.
3. At pedestrian at-grade rail crossings not located within a street or highway, *detectable warning surfaces* shall extend the full width of the crossing.
4. At *boarding platforms* for buses and rail vehicles, *detectable warning surfaces* shall extend the full length of the public use areas of the platform.
5. At boarding and alighting areas at sidewalk or street level transit stops for rail vehicles, *detectable warning surfaces* shall extend the full length of the transit stop.

**Figure 705.6 (A)**

EXTENT OF DETECTABLE WARNING SURFACES— PERPENDICULAR

**Figure 705.6 (B)**

EXTENT OF DETECTABLE WARNING SURFACES – RETURNED CURB

**Figure 705.6 (C)**

EXTENT OF DETECTABLE WARNING SURFACES - PARALLEL

**705.7 Placement.** The placement of *detectable warning surfaces* shall comply with Section 705.7.

**705.7.1 Perpendicular curb ramps.** On perpendicular *curb ramps*, *detectable warning surfaces* shall be placed as follows:

1. Where the ends of the bottom *grade break* are in front of the back of curb, *detectable warning surfaces* shall be placed at the back of curb.

2. Where the ends of the bottom *grade break* are behind the back of curb and the distance from either end of the bottom *grade break* to the back of curb is 60 inches (1525 mm) or less, *detectable warning surfaces* shall be placed on the ramp run within one dome spacing of the bottom *grade break*.
3. Where the ends of the bottom *grade break* are behind the back of curb and the distance from either end of the bottom *grade break* to the back of curb is more than 60 inches (1525 mm), *detectable warning surfaces* shall be placed on the lower *landing* at the back of curb.

#### **Figure 705.7.1**

##### PERPENDICULAR CURB RAMPS

**705.7.2 Parallel curb ramps.** On parallel *curb ramps*, *detectable warning surfaces* shall be placed on the *turning space* at the flush transition between the street and sidewalk.

#### **Figure 705.7.2**

##### PARALLEL CURB RAMPS

**705.7.3 Blended transitions.** On *blended transitions*, *detectable warning surfaces* shall be placed at the back of curb. Where raised pedestrian street crossings, depressed corners or other level pedestrian street crossings are provided, *detectable warning surfaces* shall be placed at the flush transition between the street and the sidewalk.

#### **Figure 705.7.3**

##### BLENDED TRANSITIONS

**705.7.4 Pedestrian refuge islands.** At cut-through pedestrian refuge islands, *detectable warning surfaces* shall be placed at the edges of the pedestrian island and shall be separated by 24 inches (610 mm) minimum length of surface without *detectable warning surfaces*.

#### **Figure 705.7.4**

##### PEDESTRIAN REFUGE ISLANDS

**705.7.5 Pedestrian at-grade rail crossings.** At pedestrian at-grade rail crossings not located within a street or highway, *detectable warning surfaces* shall be placed on each side of the rail crossing. The edge of the *detectable warning surface* nearest the rail crossing shall be 6 feet (1830 mm) minimum and 15 feet (4680 mm) maximum from the centerline of the nearest rail. Where pedestrian gates are provided, *detectable warning surfaces* shall be placed on the side of the gates opposite the rail.

#### **Figure 705.7.5**

##### PEDESTRIAN AT-GRADE RAIL CROSSINGS

**705.7.6 Boarding platforms.** At *boarding platforms* for buses and rail vehicles, *detectable warning surfaces* shall be placed at the boarding edge of the platform.

**705.7.7 Boarding and alighting areas.** At boarding and alighting areas at sidewalk or street-level transit stops for rail vehicles, *detectable warning surfaces* shall be placed at the side of the boarding and alighting area facing the rail vehicles.

## **SECTION 706 ASSISTIVE LISTENING SYSTEMS**

**706.1 General.** Where installed, *assistive listening systems* shall comply with Section 706.

**706.2 Receiver jacks.** Receivers required for use with an *assistive listening system* shall include a 1/8 inch (3.2 mm) standard monaural (monophonic) jack.

**706.3 Induction loop systems.** Where induction hearing loop systems are provided, they shall comply with IEC-60118-4 as listed in Section 106.2.3.

**706.4 Receiver hearing-aid compatibility.** Receivers required to be compatible with hearing aids shall interface with telecoils in hearing aids through the provision of neck loops.

**706.5 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.

**706.6 Signal-to-noise ratio.** The signal-to-noise ratio for internally generated noise in *assistive listening systems* shall be 18 dB minimum.

**706.7 Peak clipping level.** Peak clipping shall not exceed 18 dB of clipping relative to the peaks of speech.

**706.8 Signs.** Where signs are provided indicating the availability of *assistive listening systems*, signs shall be located adjacent to and outside of the entrance to the room or space indicating the form of hearing access provided. *Pictograms* shall comply with Section 703.6.2.3.

**Exception:** Where signs are provided at the ticket office or window, signs are not required to be provided at the entrance to the room.

## SECTION 707

### AUTOMATIC TELLER MACHINES (ATMS) AND FARE MACHINES

**707.1 General.** Automatic teller machines and fare machines shall comply with Section 707.

**707.2 Clear floor space.** A *clear floor space* shall be provided in front of the machine.

**Exception:** *Clear floor space* is not required at drive up only automatic teller machines and fare machines.

**707.3 Operable parts.** Automatic teller machines and fare machines shall comply with *operable parts*. 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 the *operable parts* requirements in Section 309.2 or 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.

**707.5 Numeric keys.** Numeric keys shall be arranged in a 12-key ascending or descending telephone keypad layout. The number Five key shall have a single raised dot.

#### Figure 707.5 (A)

NUMERIC KEY LAYOUT – 12-KEY ASCENDING

#### Figure 707.5 (B)

## NUMERIC KEY LAYOUT – 12-KEY DESCENDING

**707.6 Function keys.** Function keys shall comply with Section 707.6.

**707.6.1 Raised symbols.** Function *key surfaces* shall have raised symbols as shown in Table 707.6.1.

**707.6.2 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:** Raised symbols required by Section 707.6.1 shall not be required to comply with Section 707.6.2.

**707.7 Display screen.** The display screen shall comply with Section 707.7.

**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.

**Exception:** Drive up only automatic teller machines and fare machines shall not be required to comply with Section 707.7.1.

**707.7.2 Characters.** *Characters* displayed on the screen shall be in a sans serif font. The uppercase letter “I” shall be used to determine the allowable height of all *characters* of the font. The uppercase letter “I” of the font shall be  $\frac{3}{16}$  inch (4.8 mm) minimum in height. *Characters* shall contrast with their background with either lighter *characters* on a darker background, or darker *characters* on a lighter background.

**707.8 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 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 in lieu 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 is used in the transaction being conducted.
3. Where speech synthesis is not supported, dynamic alphabetic output shall not be required to be audible.

**707.8.1 User control.** Speech shall be capable of being repeated and interrupted by the user. There shall be a volume control for the speech function.

**Exception:** Speech output for any single function shall be permitted to be automatically interrupted when a transaction is selected.

**707.8.2 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 audible 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.

**707.9 Input controls.** At least one tactually 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 tactually discernible from surrounding surfaces and adjacent keys.

**707.10 Braille instructions.** Braille instructions for initiating the speech mode shall be provided. Braille shall comply with Section 703.4.

## **SECTION 708 TWO-WAY COMMUNICATION SYSTEMS**

**708.1 General.** Two-way communication systems shall comply with Section 708.

**708.2 Audible and visual indicators.** The system shall provide both visual and audible signals.

**708.3 Handsets.** Where provided, handset cords, shall be 29 inches (735 mm) minimum in length.

**708.4 Telephone entry systems.** Telephone entry systems shall comply with ANSI/DASMA 303 listed in Section 106.2.8.

**CHAPTER 8**  
**SPECIAL ROOMS AND SPACES**

**SECTION 801**  
**GENERAL**

**801.1 Scope.** Special rooms and spaces required to be *accessible* by the scoping provisions adopted by the *administrative authority* shall comply with the applicable provisions of Chapter 8. Where *building blocks* are required in this chapter, they shall comply with the applicable provisions of Chapter 3.

**SECTION 802**  
**ASSEMBLY AREAS**

**802.1 General.** *Wheelchair spaces* and *wheelchair space locations* in *assembly areas* with spectator seating shall comply with Section 802. Where tiered seating includes dining surfaces or work surfaces, *wheelchair spaces* and *wheelchair space locations* shall comply with Section 802.6, 802.7, 802.9, 802.10, and 902. Team and player seating shall comply with Sections 802.2 through 802.7.

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**802.2 Floor surfaces.** The *floor surface* of *wheelchair space locations* shall not have *running slope* and *cross slope* steeper than one unit vertical in 48 inches horizontal (2 percent slope).

**802.3 Width.** A single *wheelchair space* shall be 36 inches (915 mm) minimum in width. Where two adjacent *wheelchair spaces* are provided, each *wheelchair space* shall be 33 inches (840 mm) minimum in width.

**Figure 802.3 (A)**

WIDTH OF WHEELCHAIR SPACE IN ASSEMBLY AREA  
SINGLE SPACE

**Figure 802.3 (B)**

WIDTH OF WHEELCHAIR SPACE IN ASSEMBLY AREA  
MULTIPLE ADJACENT SPACES

**802.4 Depth.**

**Figure 802.4 (A)**

DEPTH OF WHEELCHAIR SPACE IN ASSEMBLY AREA  
FRONT OR REAR ACCESS – NEW BUILDINGS

**Figure 802.4 (B)**

DEPTH OF WHEELCHAIR SPACE IN ASSEMBLY AREA

## FRONT OR REAR ACCESS – EXISTING BUILDINGS

### Figure 802.4 (C)

#### DEPTH OF WHEELCHAIR SPACE IN ASSEMBLY AREA

## SIDE ACCESS – NEW AND EXISTING BUILDINGS

**802.4.1 New buildings and facilities.** In new buildings and *facilities*, where a *wheelchair space* is entered from the front or rear, the *wheelchair space* shall be 52 inches (1320 mm) minimum in depth. Where a *wheelchair space* is only entered from the side, the *wheelchair space* shall be 60 inches (1525 mm) minimum in depth.

**802.4.2 Existing buildings and facilities.** In *existing buildings* and *facilities*, where a *wheelchair space* is entered from the front or rear, the *wheelchair space* shall be 48 inches (1220 mm) minimum in depth. Where a *wheelchair space* is only entered from the side, the *wheelchair space* shall be 60 inches (1525 mm) minimum in depth.

**802.5 Approach.** *Wheelchair spaces* shall adjoin an *accessible route*. The *accessible route* shall not overlap a *wheelchair space*.

**802.5.1 Overlap.** A *wheelchair space* shall not overlap the required width of an aisle.

**Exception:** In new buildings and *facilities*, the depth of a *wheelchair space* shall be permitted to overlap the required aisle width 4 inches (100 mm) maximum.

### Figure 802.5.1 (A)

#### WHEELCHAIR SPACE LOCATION OVERLAP – REAR APPROACH – NEW AND EXISTING BUILDINGS

### Figure 802.5.1 (B)

#### WHEELCHAIR SPACE LOCATION OVERLAP – SIDE APPROACH

**802.6 Integration of wheelchair space locations.** *Wheelchair space locations* shall be an integral part of seating areas.

**802.7 Companion seat.** A companion seat, complying with Section 802.7, shall be provided beside each *wheelchair space*.

**802.7.1 Companion seat type.** The companion seat shall be equivalent in size, quality, comfort and amenities to the seats in the immediate area to the *wheelchair space location*. Companion seats shall be permitted to be moveable.

**802.7.2 Companion seat alignment.** In row seating, the companion seat shall be located to provide shoulder alignment with the *wheelchair space* occupant. The shoulder of the *wheelchair space* occupant is 36 inches (915 mm) minimum from the front and 12 inches (305 mm) minimum from the rear of the *wheelchair space*. The floor surface for the companion seat shall be at the same elevation as the *wheelchair space floor surface*.

**Exception:** Companion seat alignment shall not be required in tiered seating that includes dining surfaces or work surfaces.

### Figure 802.7.2 (A)

#### COMPANION SEAT ALIGNMENT – ELEVATION

**Figure 802.7.2 (B)**

COMPANION SEAT ALIGNMENT

FRONT OR REAR APPROACH – EXISTING BUILDINGS

**Figure 802.7.2 (C)**

COMPANION SEAT ALIGNMENT

FRONT OR REAR APPROACH – NEW BUILDINGS

**Figure 802.7.2 (D)**

COMPANION SEAT ALIGNMENT

SIDE APPROACH

**802.8 Designated aisle seats.** Designated aisle seats shall comply with Section 802.8.

**802.8.1 Armrests.** Where armrests are provided on seating in the immediate area of designated aisle seats, folding or retractable armrests shall be provided on the aisle side of the designated aisle seat.

**802.8.2 Identification.** Each designated aisle seat shall be identified by a *sign* or marker.

**802.9 Lines of sight.** Where spectators are expected to remain seated for purposes of viewing events, spectators in *wheelchair space locations* shall be provided with a line of sight in accordance with Section 802.9.1. Where spectators in front of the *wheelchair space locations* are expected to stand at their seats for purposes of viewing events, spectators in *wheelchair space locations* shall be provided with a line of sight in accordance with Section 802.9.2.

**802.9.1 Line of sight over seated spectators.** Where spectators are expected to remain seated during events, spectators seated in a *wheelchair space* shall be provided with lines of sight to the performance area or playing field comparable to that provided to seated spectators in closest proximity to the *wheelchair space location*. Where seating provides lines of sight over heads, spectators in *wheelchair space locations* shall be afforded lines of sight complying with Section 802.9.1.1. Where *wheelchair space locations* provide lines of sight over the shoulder and between heads, spectators in *wheelchair space locations* shall be afforded lines of sight complying with Section 802.9.1.2.

**802.9.1.1 Lines of sight over heads.** Spectators seated in a *wheelchair space* shall be afforded lines of sight over the heads of seated individuals in the first row in front of the *wheelchair space location*.

**Figure 802.9.1.1**

LINES OF SIGHT OVER THE HEADS OF SEATED SPECTATORS

**802.9.1.2 Lines of sight between heads.** Spectators seated in a *wheelchair space* shall be afforded lines of sight over the shoulders and between the heads of seated individuals in the first row in front of the *wheelchair space location*.

**Figure 802.9.1.2**

LINES OF SIGHT BETWEEN THE HEADS OF SEATED SPECTATORS

**802.9.2 Line of sight over standing spectators.** *Wheelchair spaces* required to provide a line of sight over standing spectators shall comply with Section 802.9.2.

**Figure 802.9.2**

LINES OF SIGHT OVER STANDING SPECTATORS



**802.9.2.1 Distance from adjacent seating.** The front of the *wheelchair space* in a *wheelchair space location* shall be 12 inches (305 mm) maximum from the back of the chair or bench in front.

**802.9.2.2 Height.** The height of the *floor surface* at the *wheelchair space location* shall comply with Table 802.9.2.2. Interpolations shall be permitted for riser heights that are not listed in the table.

**TABLE 802.9.2.2<sup>e</sup>**  
**REQUIRED WHEELCHAIR SPACE LOCATION ELEVATION OVER STANDING SPECTATORS**

Riser height (inches)	Minimum height of the wheelchair space location based on row spacing <sup>a</sup>		
	Rows less than 33 inches <sup>b</sup> (inches)	Rows 33 inches to 44 inches <sup>b</sup> (inches)	Rows over 44 inches <sup>b</sup> (inches)
0	16	16	16
4	22	21	21
8	31	30	28
12	40	37	35
16	49	45	42
20 <sup>c</sup>	58	53	49
24	N/A	61	56
28 <sup>d</sup>	N/A	69	63
32	N/A	N/A	70
36 and higher	N/A	N/A	77

- a. The height of the wheelchair space location is the vertical distance from the tread of the row of seats directly in front of the wheelchair space location to the tread of the wheelchair space location.
- b. The row spacing is the back-to-back horizontal distance between the rows of seats in front of the wheelchair space location.
- c. Seating treads less than 33 inches (840 mm) in depth shall not be permitted with risers greater than 18 inches (455 mm) in height.
- d. Seating treads less than 44 inches (1120 mm) in depth shall not be permitted with risers greater than 27 inches (685 mm) in height.
- e. Table 802.9.2.2 is based on providing a spectator in a wheelchair a line of sight over the head of a spectator two rows in front of the wheelchair space location using average anthropometrical data. The table is based on the following calculation:  $[(2X+34)(Y-2.25)/X]+(20.2-Y)$  where Y is the riser height of the rows in front of the wheelchair space location and X is the tread depth of the rows in front of the wheelchair space location. The calculation is based on the front of the wheelchair space location being located 12 inches from the back of the seating tread directly in front and the eye of the standing spectator being set back 8 inches from the riser.

**802.10 Wheelchair space dispersion.** The minimum number of *wheelchair space locations* shall be in accordance with Table 802.10. *Wheelchair space locations* shall be dispersed in accordance with Sections 802.10.1, 802.10.2, and 802.10.3. In addition, *wheelchair space locations* shall be dispersed in accordance with Section 802.10.4 in spaces utilized primarily for viewing motion picture projection. Once the required number of *wheelchair space locations* has been met, further dispersion shall not be required.

**TABLE 802.10  
WHEELCHAIR SPACE LOCATION DISPERSION**

Total seating in Assembly Areas	Minimum required number of wheelchair space locations
Up to 150	1
151 to 500	2
501 to 1000	3
1001 to 5,000	3, plus 1 additional space for each 1,000 seats or portions thereof above 1,000
5,001 and over	7, plus 1 additional space for each 2,000 seats or portions thereof above 5,000

**802.10.1 Horizontal dispersion.** *Wheelchair space locations* shall be dispersed horizontally to provide viewing options. Where seating encircles the stage or field, in whole or in part, horizontal dispersion shall include the entire seating area. Two *wheelchair spaces* shall be permitted to be located side-by-side.

**Exception:** Horizontal dispersion shall not be required in *assembly areas* with 300 or fewer seats where the *wheelchair space locations* are located within the 2nd and 3rd quartile of the row length. Intermediate aisles shall be included in determining the total row length. Where the row length in the 2nd and 3rd quartile of the 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 extend into the 1st and 4th quartile of the row.

**802.10.2 Dispersion for variety of distances from the event.** *Wheelchair space locations* shall be dispersed at a variety of distances from the event to provide viewing options.

**Exceptions:**

1. In bleachers, *wheelchair space locations* provided only in rows at points of entry to bleacher seating shall be permitted.
2. *Assembly areas* utilized for viewing motion picture projections with 300 seats or less shall not be required to comply with Section 802.10.2.
3. *Assembly areas* with 300 seats or less other than those utilized for viewing motion picture projections shall not be required to comply with Section 802.10.2 where all *wheelchair space locations* are within the front 50 percent of the total rows.

**802.10.3 Dispersion by type.** Where assembly seating has multiple distinct seating areas with amenities that differ from other distinct seating areas, *wheelchair space locations* shall be provided within each distinct seating area.

**802.10.3.1 Charging stations.** Where charging stations are provided at *wheelchair space locations*, they shall comply with Section 906.

**802.10.4 Spaces utilized primarily for viewing motion picture projections.** In spaces utilized primarily for viewing motion picture projections, *wheelchair space locations* shall comply with Section 802.10.4.

**802.10.4.1 Spaces with seating on risers.** Where tiered seating is provided, *wheelchair space locations* shall be integrated into the tiered seating area on a riser or a cross-aisle.

**802.10.4.2 Distance from the screen.** *Wheelchair space locations* shall be located in accordance with one of the following:

1. Within the rear 60 percent of the seats provided.
2. 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).

## **802.11 Sign language interpreter stations.**

**802.11.1 General.** Sign language interpreter stations shall comply with Section 802.11.

**802.11.2 Area.** A sign language interpreter station shall provide a level and clear floor of a minimum size of 24 inches (610 mm) deep and 36 inches (915 mm) wide that is located to provide a direct line of sight from the seating area identified in Section 802.11.3.

**802.11.3 Location.** Sign language interpreter stations shall be located so that seating within an arc from the station and measured to the left and to the right 60 degrees 65 feet (19.8 m) minimum horizontal distance from the station is provided with sight lines providing a view of the sign language station 36 inches (915 mm) minimum to 72 inches (1830 mm) maximum in height above the floor of the station.

**802.11.4 Illumination.** The sign language interpreter station shall have lighting *facilities* capable of providing 10 footcandles (108 lux) of illuminance while signing is underway measured at the center of the floor of the sign language station at a height of 48 inches (1220 mm) above the floor.

**802.11.5 Backdrop.** Where a sign language interpreter station is located with a permanent wall 10 feet (3050 mm) maximum behind the sign language interpreter station, the permanent wall 96 inches (2440 mm) minimum in height from the finish floor shall be considered as a backdrop. The backdrop shall provide a flat, smooth surface with a monochromatic, low-luster finish treatment.

**Exception:** The wall shall not be required to comply with Section 802.11.5 where a backdrop with a monochromatic, low luster finish treatment is provided.

## **SECTION 803 DRESSING, FITTING AND LOCKER ROOMS**

**803.1 General.** Dressing, fitting and locker rooms shall comply with Section 803.

**803.2 Turning space.** A *turning space* shall be provided within the room.

**803.3 Door swing.** Doors shall not swing into the room unless a *clear floor space* complying with Section 305.3 is provided within the room, beyond the arc of the door swing.

**803.4 Benches.** A bench complying with Section 903 shall be provided within the room.

**803.5 Coat hooks and shelves.** Coat hooks provided within the room be located within *reach ranges*. Where provided, a shelf shall be 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the floor.

## **SECTION 804 KITCHENS**

**804.1 General.** Kitchens shall comply with Section 804.

**804.2 Clearance.** Where a pass-through kitchen is provided, clearances shall comply with Section 804.2.1. Where a U-shaped kitchen is provided, clearances shall comply with Section 804.2.2. Kitchens where a cook top or conventional range is not provided shall comply with Section 804.2.3.

**Exception:** Circulation routes into kitchens that do not serve as access to counters, appliances or cabinets shall comply with Section 403.4.

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**804.2.1 Pass-through kitchens.** 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, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles. Pass-through kitchens shall have two entries.

**Figure 804.2.1 (A)**

PASS-THROUGH KITCHEN CLEARANCE

**Figure 804.2.1 (B)**

PASS-THROUGH KITCHEN CLEARANCE

### **Proposal 11-14-2021 AS/AMBC1**

**804.2.2 U-shaped kitchens.** In kitchens enclosed on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 60 inches (1525 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles.

**Exception:** U-shaped kitchens with an island complying with Section 804.2.1.

**Figure 804.2.2 (A)**

U-SHAPED KITCHEN CLEARANCE

**Figure 804.2.2 (B)**

U-SHAPED KITCHEN CLEARANCE

**Figure 804.2.2 (C)**

U-SHAPED KITCHEN CLEARANCE - EXCEPTION

## Proposal 11-14-2021 AS/AMBC1

**804.2.3 Spaces where a cook top or conventional range is not provided.** In a kitchen space where a cooktop or conventional range is not provided, clearance between all opposing base cabinets, countertops, appliances, and walls within kitchen work areas shall be 40-inch (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles.

## Proposal 08-06-21 AM/AM BC1

**804.3 Work surface.** At least one *accessible* work surface 30 inches (760 mm) minimum in length shall be provided in accordance with Section 902. The work surface shall be located in accordance with Section 804.5.5.2 or 804.5.5.3. Vertical clearance above the work surface to any obstruction shall be 14 inches (355 mm) minimum.

**Exception:** Spaces that do not provide a cooktop or conventional range shall not be required to provide an *accessible* work surface.

**804.4 Sinks.** The sink shall comply with Section 606.

**804.5 Appliances.** Where provided, kitchen appliances shall comply with Section 804.5.

**804.5.1 Clear floor space.** A *clear floor space* shall be provided at each kitchen appliance.

**804.5.2 Operable parts.** All appliance controls shall comply with *operable parts*.

### Exceptions:

1. Appliance doors and door latching devices shall not be required to comply with the *operable parts* requirements in Section 309.4.
2. Bottom-hinged appliance doors, when in the open position, shall not be required to comply with the *operable parts* requirements in Section 309.3.

**804.5.3 Dishwasher.** A *clear floor space* positioned adjacent to the dishwasher door, shall be provided. The dishwasher door in the open position shall not obstruct the *clear floor space* for the dishwasher or an adjacent sink.

**804.5.4 Cooktop.** Cooktops shall comply with Section 804.5.4.

**804.5.4.1 Approach.** A *clear floor space*, positioned for a parallel or forward approach to the cooktop, shall be provided.

**804.5.4.2 Forward approach.** Where the *clear floor space* is positioned for a forward approach, *knee and toe clearance* shall be provided. The underside of the cooktop shall be insulated or otherwise configured to prevent burns, abrasions, or electrical shock.

**804.5.4.3 Parallel approach.** Where the *clear floor space* is positioned for a parallel approach, the *clear floor space* shall be centered on the appliance.

**804.5.4.4 Controls.** The location of controls shall not require reaching across burners.

**804.5.5 Oven.** Ovens shall comply with Section 804.5.5.

**804.5.5.1 Clear floor space.** A *clear floor space* shall be provided. The oven door in the open position shall not obstruct the *clear floor space* for the oven or the *clear floor space* for a work surface complying with Section 804.3.

**804.5.5.2 Side-hinged door ovens.** Side-hinged door ovens shall have a work surface complying with Section 804.3 positioned adjacent to the latch side of the oven door.

**804.5.5.3 Bottom-hinged door ovens.** Bottom-hinged door ovens shall have a work surface complying with Section 804.3 positioned adjacent to one side of the door.

**804.5.5.4 Controls.** The location of controls shall not require reaching across burners.

**804.5.6 Refrigerator/freezer.** Refrigerators and freezers comply with Section 804.5.6.

**804.5.6.1 Clear floor space.** A clear floor space, positioned for a parallel approach to the refrigerator/freezer, shall be provided. The centerline of the clear floor space shall be offset 24 inches (610 mm) maximum from the centerline of the appliance.

**804.5.6.2 Shelves.** Combination refrigerators and freezers shall have at least 50 percent of the freezer compartment shelves, including the bottom of the freezer, 54 inches (1370 mm) maximum above the floor when the shelves are installed at the maximum heights possible in the compartment.

### Proposal 03-10-2021 AM/AFM Combined PC

**804.6 Receptacle Outlets Serving Counters in Kitchens.** In kitchens, at least one receptacle outlet serving counters shall comply with *operable parts*. Where two or more receptacle outlets serving counters are provided, at least two shall comply with *operable parts*. Where a work surface is required by Section 804.3, at least one such receptacle outlet shall serve the work surface. The *operable parts* of each additional receptacle outlet serving the counters shall not be required to comply with the *operable parts* requirements in Sections 309.2 and 309.3 where complying with at least one of the following:

1. They shall be 44 inches (1120 mm) maximum above the floor.
2. Where located on the side wall over the counter, they shall be 48 inches (1220 mm) maximum above the floor and 15 inches (380 mm) maximum from front edge of the counter.
3. Where located at the face of the upper cabinets, they shall be 54 inches (1370 mm) maximum from the floor and 15 inches (380 mm) maximum from the front edge of the counter and with a forward plug insertion.

### Proposal 08-08-2021 AM/AMPC2 replacement

**804.7 Kitchen storage.** In kitchens within Accessible and Type A dwelling units or sleeping units, and kitchens accessory to Accessible or Type A sleeping units without kitchens, kitchen storage shall comply with Section 905.4 and 905.5.

**Exception:** In spaces that do not provide a cooktop or conventional range, kitchen storage shall not be required to comply with Section 905.5.

## SECTION 805 TRANSPORTATION FACILITIES

**805.1 General.** Transportation *facilities* shall comply with Section 805.

**805.2 Bus boarding and alighting areas.** Bus boarding and alighting areas shall comply with Section 805.2.

**805.2.1 Surface.** Bus stop boarding and alighting areas shall have a firm, stable surface.

**805.2.2 Dimensions.**

**Figure 805.2.2 (A)**

SIZE OF BUS BOARDING AND ALIGHTING AREA – NEW BUILDINGS

**Figure 805.2.2 (B)**

SIZE OF BUS BOARDING AND ALIGHTING AREA – EXISTING BUILDINGS

**805.2.2.1 New buildings and facilities.** In new buildings and *facilities*, bus stop boarding and alighting areas shall have a 100-inch (2540 mm) minimum clear length, measured perpendicular to the curb or vehicle roadway edge, and a 60-inch (1525 mm) minimum clear width, measured parallel to the vehicle roadway.

**805.2.2.2 Existing buildings and facilities.** In *existing buildings* and *facilities*, bus stop boarding and alighting areas shall have a 96-inch (2440 mm) minimum clear length, measured perpendicular to the curb or vehicle roadway edge, and a 60-inch (1525 mm) minimum clear width, measured parallel to the vehicle roadway.

**805.2.3 Slope.** The slope of the bus stop boarding and alighting area parallel to the vehicle roadway shall be the same as the roadway, to the maximum extent practicable. The slope of the bus stop boarding and alighting area perpendicular to the vehicle roadway shall be one unit vertical in 48 inches horizontal (2 percent slope) maximum.

**805.2.4 Connection.** Bus stop boarding and alighting areas shall be connected to streets, sidewalks, or pedestrian paths by an *accessible* route complying with Section 402.

### Proposal 08-09-2021 AS/AMPC1

**805.2.5 Boarding platform edges.** *Boarding platform* edges not protected by platform screens or guards shall have a *detectable warning* surface complying with Section 705 extending the full length of the public use areas of the platform.

**805.3 Bus shelters.** Bus shelters shall provide a *clear floor space* entirely within the shelter. Bus shelters shall be connected by an *accessible* route complying with Section 402 to a boarding and alighting area complying with Section 805.2.

**Figure 805.3**

BUS SHELTERS

**805.4 Bus signs.** Bus route identification signs shall have visual *characters* complying with Sections 703.2.1, 703.2.2, and 703.2.5 through 703.2.8. In addition, bus route identification numbers shall be visual *characters* complying with Section 703.2.4.

**Exception:** Bus schedules, timetables, and maps that are posted at the bus stop or bus bay shall not be required to comply with Section 805.4.

**805.5 Rail platforms.** Rail platforms shall comply with Section 805.5.

### **Proposal 03-04-21 D/BC2 AM**

**805.5.1 Slope.** Rail platforms shall not have *running slope* and *cross slope* steeper than one unit vertical in 48 inches horizontal (2 percent slope).

**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.

### **Proposal 08-09-2021 AS/AMPC1**

**805.5.2 Detectable warnings.** *Boarding platform* edges not protected by platform screens or guards shall have *detectable warning surfaces* complying with Section 705.

**805.6 Rail station signs.** Rail station signs shall comply with Section 805.6.

**805.6.1 Entrances.** Where signs identify a station or a station entrance, at least one *sign* with raised *characters* and braille complying with Sections 703.1.4, 703.3 and 703.4 shall be provided at each entrance.

**805.6.2 Routes and destinations.** Lists of stations, routes and destinations served by the station that are located on boarding areas, platforms or mezzanines shall have visual *characters* complying with Section 703.2. A minimum of one *sign* with raised *characters* and braille complying with Sections 703.3 and 703.4 shall be provided on each platform or boarding area to identify the specific station.

**Exception:** Where *sign* space is limited, *characters* shall not be required to exceed 3 inches (75 mm) in height.

**805.6.3 Station names.** Stations covered by Section 805.6.3 shall have identification signs with visual *characters* complying with Section 703.2. The signs shall be clearly visible and within the sight lines of a standing or sitting passenger from within the vehicle on both sides when not obstructed by another vehicle.

**805.7 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.

**805.8 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 be visual *characters* complying with Section 703.2.



**805.9 Escalators.** Where provided, escalators shall have a 32-inch (815 mm) minimum clear width, and shall comply with Requirements 6.1.3.5.6-Step Demarcations, and 6.1.3.6.5-Flat Steps of ASME A17.1/CSA B44 listed in Section 106.2.11.

**Exception:** Existing escalators shall not be required to comply with Section 805.9.

**805.10 Track crossings.** Where a *circulation path* crosses tracks, it shall comply with Section 402 and shall have a *detectable warning surface* complying with Section 705.

**Exception:** Openings for wheel flanges shall be permitted to be 2<sup>1</sup>/<sub>2</sub> inches (64 mm) maximum.

### Figure 805.10

#### TRACK CROSSING

## SECTION 806 HOLDING CELLS AND HOUSING CELLS

**806.1 General.** Holding cells and housing cells shall comply with Section 806.

**806.2 Features for people using wheelchairs or other mobility aids.** Cells required to have features for people using wheelchairs or other mobility aids shall comply with Section 806.2.

**806.2.1 Turning space.** *Turning space* shall be provided within the cell.

**806.2.2 Benches.** Where benches are provided, at least one bench shall comply with Section 903.

**806.2.3 Beds.** Where beds are provided, a *clear floor space* 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.

**806.2.4 Toilet and bathing facilities.** Toilet *facilities* or bathing *facilities* provided as part of a cell shall comply with Section 603.

**806.3 Communication features.** Cells required to have communication features shall comply with Section 806.3.

**806.3.1 Alarms.** Where audible emergency alarm systems are provided to serve the occupants of cells, visible alarms complying with Section 702 shall be provided.

**Exception:** In cells where inmates or detainees are not allowed independent means of egress, visible alarms shall not be required.

**806.3.2 Telephones.** Where provided, telephones within cells shall have volume controls complying with Section 704.3.

## SECTION 807 COURTROOMS

**807.1 General.** Courtrooms shall comply with Section 807.

**807.2 Turning space.** Where provided, each area that is raised or depressed shall provide a *turning space*.

**Exception:** Levels of jury boxes not required to contain a *wheelchair space* shall not be required to comply with Section 807.2.

**807.3 Wheelchair space.** A *wheelchair space* shall be provided within the defined area of each jury box and witness stand.

**Exception:** In alterations, *wheelchair spaces* shall not be 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 *ramps* or platform lifts restrict or project into the means of egress required by the *administrative authority*.

**807.4 Courtroom stations.** Judges' benches, clerks' stations, bailiffs' stations, deputy clerks' stations, court reporters' stations, and litigants' and counsel stations shall comply with Section 902.

**807.5 Gallery seating.** Gallery seating shall comply with Section 802.

## SECTION 808 ENHANCED ACOUSTICS FOR CLASSROOMS

**808.1 General.** Classrooms with volumes 20,000 cubic feet (565 m<sup>3</sup>) or less and required to provide enhanced acoustics shall comply with Section 808.

**808.2 Reverberation time.** Classroom reverberation times shall comply with either Section 808.2.1 or Section 808.2.2, depending on the volume of the classroom. Classrooms with volumes 10,000 cubic feet (285 m<sup>3</sup>) or less shall also comply with Section 808.2.3.

**Exception:** Classrooms with reverberation times (T<sub>60</sub>) of 0.4 seconds or less, calculated in accordance with Section 808.2.1, are not required to comply with Section 808.2.3.

**808.2.1 Performance method.** For each of the octave frequency bands with center frequencies of 500, 1000, and 2000 Hz, the reverberation time (T<sub>60</sub>) shall not exceed the times specified below:

1. 0.6 seconds in classrooms with volumes of 10,000 cubic feet (285 m<sup>3</sup>) or less.
2. 0.7 seconds in classrooms with volumes greater than 10,000 cubic feet (285 m<sup>3</sup>), and 20,000 cubic feet (566 m<sup>3</sup>) or less.

Reverberation times shall apply to fully-furnished, unoccupied classrooms. Reverberation times shall be field verified via measurements over a minimum 20 dB decay in each octave frequency band in accordance with ASTM E2235 listed in Section 106.2.17.

**808.2.2 Prescriptive method.** The Noise Reduction Coefficient (NRC) ratings for floor, wall, and ceiling surface finishes shall conform to the following equations:

For a classroom with a volume of 10,000 cubic feet (285 m<sup>3</sup>) or less:

$$(NRC_{Floor} \times SFloor) + (NRC_{Ceiling} \times SCeiling) + (NRC_{Wall} \times SWall) \geq Volume/12$$

For a classroom with a volume greater than 10,000 cubic feet (285 m<sup>3</sup>) and 20,000 cubic feet (565 m<sup>3</sup>) or less:

$$(NRC_{Floor} \times SFloor) + (NRC_{Ceiling} \times SCeiling) + (NRC_{Wall} \times SWall) \geq Volume/14$$

Where:

NRC<sub>Floor</sub> = NRC rating of the floor finish material

S<sub>Floor</sub> = floor area in square feet

NRC<sub>Ceiling</sub> = NRC rating of the ceiling finish material

S<sub>Ceiling</sub> = ceiling area in square feet

NRC<sub>Wall</sub> = NRC rating of the wall acoustical treatment

$S_{Wall}$  = wall treatment area in square feet

Volume = room volume in cubic feet

Where a floor, ceiling or wall has multiple surface finishes, the  $NRC \times S$  product for each surface finish shall be added to the left side of the equation.

**808.2.3 Adaptability.** Classrooms with volumes of 10,000 cubic feet or less shall comply with Sections 808.2.3.1 or 808.2.3.2.

**808.2.3.1 Performance method.** The classroom shall be configured such that the reverberation time (T60) can be reduced to 0.4 seconds maximum, calculated in accordance with Section 808.2.1, with the future installation of acoustic treatments.

**808.2.3.2 Prescriptive method.** A wall surface area 30 percent or greater than the classroom's floor area shall be free of permanent fixtures and casework. This wall surface area shall be distributed on at least two wall surfaces that are not parallel. These wall surfaces shall be capable of supporting the future installation of acoustic wall treatments with an NRC rating of 0.80 or greater.

**808.3 Ambient sound level.** Classroom ambient sound levels shall comply with Sections 808.3.1 and 808.3.2. Ambient sound levels from sound sources outside and inside the classroom shall be evaluated individually. The greatest one-hour averaged sound levels shall be evaluated at the loudest usable location in the room at a height of 36 inches (915 mm) to 42 inches (1065 mm) above the floor and no closer than 36 inches (915 mm) from any wall, window, or object. The ambient sound level limits shall apply to fully-furnished, unoccupied classrooms, and with only permanent HVAC, electrical, and plumbing systems functioning. Classroom equipment, including, but not limited to, computers, printers, and fish tank pumps shall be turned off during these measurements.

**808.3.1 Sound sources outside of the classroom.** Classroom ambient sound levels shall not exceed 35 dBA and 55 dBC due to intruding noise from sound sources outside of the classroom, whether from the exterior or from other interior spaces.

**808.3.2 Sound sources inside the classroom.** Classroom ambient sound levels shall not exceed 35 dBA and 55 dBC for noise from sound sources inside the classroom.

**CHAPTER 9**  
**FURNISHINGS AND EQUIPMENT**

**SECTION 901**  
**GENERAL**

**901.1 Scope.** Furnishings and equipment required to be *accessible* by the scoping provisions adopted by the *administrative authority* shall comply with the applicable provisions of Chapter 9. Where *building blocks* are required in this chapter, they shall comply with the applicable provisions of Chapter 3.

**SECTION 902**  
**DINING SURFACES AND WORK SURFACES**

**902.1 General.** *Accessible* dining surfaces and work surfaces shall comply with Section 902.

**Exceptions:**

1. Dining surfaces and work surfaces primarily for *children's use* shall be permitted to comply with Section 902.5.
2. Adult changing surfaces shall not be required to comply Section 902.

**902.2 Clear floor space.** A *clear floor space* positioned for a forward approach shall be provided. *Knee and toe clearance* shall be provided.

**Exceptions:**

1. At drink surfaces 12 inches (305 mm) or less in depth, *knee and toe clearance* shall not be required to extend beneath the surface beyond the depth of the drink surface provided.
2. Dining surfaces that are 15 inches (380 mm) minimum and 24 inches (610 mm) maximum in height are permitted to have a *clear floor space* positioned for a parallel approach.

**902.3 Exposed surfaces.** There shall be no sharp or abrasive surfaces under the exposed portions of dining surfaces and work surfaces.

**902.4 Height.** The tops of dining surfaces and work surfaces shall be 28 inches (710 mm) minimum and 34 inches (865 mm) maximum in height above the floor.

**902.5 Dining surfaces and work surfaces for children's use.** *Accessible* dining surfaces and work surfaces primarily for *children's use* shall comply with Section 902.5.

**Exception:** Dining surfaces and work surfaces used primarily by children ages 5 and younger shall not be required to comply with Section 902.5 where a *clear floor space* is provided and positioned for a parallel approach.

**902.5.1 Clear floor space.** A *clear floor space* positioned for forward approach shall be provided. *Knee and toe clearance* shall be provided.

**Exception:** A *knee clearance* of 24 inches (610 mm) minimum above the floor shall be permitted.

**902.5.2 Height.** The tops of tables and counters shall be 26 inches (660 mm) minimum and 30 inches (760 mm) maximum above the floor.

## SECTION 903 BENCHES

**903.1 General.** Benches shall comply with Section 903.

**903.2 Clear floor space.** A *clear floor space* positioned at the end of the bench seat and parallel to the short access of the bench shall be provided.

### Figure 903.2

BENCHES – BENCH SIZE AND CLEAR FLOOR SPACE

**903.3 Size.** Benches shall have seats 42 inches (1065 mm) minimum in length, and 20 inches (510 mm) minimum and 24 inches (610 mm) maximum in depth.

**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) minimum in length 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 2<sup>1</sup>/<sub>2</sub> inches (64 mm) maximum from the rear edge of the seat measured horizontally.

### Figure 903.4

BENCHES – BENCH BACK SUPPORT AND SEAT HEIGHT

## Proposal 06-18-2021 AM/D/AM Reconsideration 1 and 2 (see 604.4)

**903.5 Height.** The top of the bench seat shall be 17 inches (430 mm) minimum and 20 inches (510 mm) maximum above the floor, measured to the top of the seat.

### Exceptions:

1. Benches primarily for *children's use* shall be permitted to be 11 inches (280 mm) minimum and 17 inches (430 mm) maximum above the floor, measured to the top of the seat.
2. A bench seat which is adjustable in height by the user within the range specified in Section 903.5.

**903.6 Structural strength.** Allowable stresses shall not be exceeded for materials used where 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 provided in wet locations the surface of the seat shall be slip resistant and shall not accumulate water.

## SECTION 904 SALES AND SERVICE COUNTERS AND WINDOWS

**904.1 General.** *Accessible* sales and service counters and windows shall comply with Section 904 as applicable.

**Exception:** Drive-up only sales or service counters and windows are not required to comply with Section 904.

**904.2 Approach.** All portions of counters required to be *accessible* shall be located adjacent to a walking surface complying with Section 403.

**904.3 Sales and service counters and windows.** Sales and service counters and windows shall comply with Section 904.3.1 and either Section 904.3.2 or Section 904.3.3. Where counters are provided, the *accessible* portion of the countertop shall extend the same depth as the public portion of the sales and service countertop provided for standing customers and the surface shall be free of obstructions not related to the processing of transactions.

**Exception:** In alterations, where the provision of a counter complying with Section 904.3 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) minimum in length complying with Section 904.3.2 provided that the required *clear floor space* is centered on the *accessible* length of the counter.

**Figure 904.3 (A)**

SALES AND SERVICE COUNTERS – CROSS SECTION

**Figure 904.3 (B)**

SALES AND SERVICE COUNTERS – ELEVATION

**904.3.1 Vertical barriers.** At service windows or service counters, any vertical barrier between service personnel and customers shall be at a height of 43 inches (1090 mm) maximum above the floor.

**Exception:** Transparent security glazing shall be permitted above the 43 inches (1090 mm) maximum height.

**904.3.2 Parallel approach.** A portion of the public use side of the counter surface 36 inches (915 mm) minimum in length and 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor shall be provided. A *clear floor space* positioned for a parallel approach adjacent to the *accessible* counter shall be provided. The space between the *accessible* counter surface and any projecting objects above the *accessible* counter shall be 12 inches (305 mm) minimum.

**Exception:** Where the counter surface is less than 36 inches (915 mm) in length, the entire counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor.

**904.3.3 Forward approach.** A portion of the public use side of the counter surface 30 inches (760 mm) minimum in length and 36 inches (915 mm) maximum in height above the floor shall be provided. A *clear floor space* positioned for a forward approach to the *accessible* counter shall be provided. *Knee and toe clearance* shall be provided under the *accessible* counter. The space between the *accessible* counter surface and any projecting objects above the *accessible* counter shall be 12 inches (305 mm) minimum.

**904.4 Checkout aisles.** Checkout aisles shall comply with Section 904.4.

**904.4.1 Aisle.** Aisles shall comply with Section 403.

**904.4.2 Cashier serviced check-out counters.** Where cashier serviced check-out counters are provided, the checkout counter surface shall be 34 inches (965 mm) maximum in height above the floor. 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 checkout counter.

**Figure 904.4.2**

**HEIGHT OF CHECKOUT COUNTERS**

**Proposal 09-03-2021 AM/AMBC1**

**904.4.3 Self-service check-out counters.** Where self-service check-out counters are provided, the check-out counter surface and built-in scanner shall be 34 inches (864 mm) maximum in height above the floor. The *operable parts*, and the *operable parts* of touch screens shall be located within the *reach ranges*. Keypads shall comply with Sections 707.5 and 707.6.

**904.4.4 Check Writing Surfaces.** Where provided, check writing surfaces shall comply with Section 902.4.

**904.4.5 Self-bagging surfaces.** Where provided, self-bagging surfaces shall be located within the *reach ranges*.

**904.5 Food service lines.** Counters in food service lines shall comply with Section 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 *reach ranges*.

**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 floor.

**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. Where provided, telephone hand-set devices, shall comply with Section 704.3. Where provided, voice communication system shall comply with *operable parts*.

**SECTION 905  
STORAGE FACILITIES**

**Proposal 08-08-2021 AM/AMPC2 replacement**

**905.1 General.** Built-in storage facilities shall comply with Section 905.

**905.2 Clear floor space.** A *clear floor space* shall be provided.

**905.3 Height.** Storage elements shall comply with at least one of the *reach ranges*.

**Proposal 08-08-2021 AM/AMPC2 replacement; E11 coordination**

**905.4 Operable parts.** Storage facilities, other than kitchen base and upper cabinets, shall comply with *operable parts*. Kitchen base and upper cabinets shall comply with the operable parts requirements in Section 309.4.

**Proposal 08-08-2021 AM/AMPC2 replacement**

**905.5 Shelves in kitchen base cabinets.** Storage shelves in kitchen base cabinets shall provide storage space capable of moving out beyond the face of the cabinet or revolving within the cabinet.

**Exceptions:**

1. Base cabinets designed for vertical storage
2. Base cabinets that are 12 inches (305mm) or less in width.

**SECTION 906  
CHARGING STATIONS**

**906.1 General.** A charging station shall consist of a grounded duplex outlet.

**906.2 Clear floor space.** A *clear floor space* shall be provided at the charging station.

**906.3 Height.** Charging stations shall comply with at least one of the *reach ranges*.

**SECTION 907  
GAMING MACHINES AND TABLES**

**907.1 Clear floor space.** Gaming machines and tables shall have a *clear floor space* positioned for transfer or for use by an individual seated in a wheelchair. *Clear floor spaces* required at gaming machines and tables shall be permitted to overlap.

**SECTION 908  
TRASH OR LINEN CHUTES**

**908.1 General.** Waste, recycling and linen chutes serving are required to be on an *accessible* route and comply with Section 908.

**Proposal 09-05-2021 AS, AMPC3 with reconsideration**

**908.2 Doors.** Doors to rooms that provide access to chutes shall comply with Section 404. Where a corridor door that is not for user passage conceals an access panel for the chute, the door shall comply with Section 404 on the corridor side and, shall have a magnetic hold open that allows for automatic closing upon the detection of smoke.

Figure 908.2 DOOR AND ACCESS PANEL

**Proposal 09-05-2021 AS, AMPC3 with reconsideration**



**908.3 Chute access panels.** Access panels for chutes shall have hardware complying with 404.2.6. The access panel opening forces shall have the minimum opening force allowable by the scoping provisions adopted by the *administrative authority*.

**908.4 Room requirements.** Where there is a room in front of the access panel for waste, recycling or linen chutes, a *turning space* shall be provided in the room and *maneuvering clearances* shall be provided on both sides of the door.

## CHAPTER 10

# RECREATIONAL FACILITIES

### SECTION 1001 GENERAL

**1001.1 Scope.** Recreational *facilities* required to be *accessible* by the scoping provisions adopted by the *administrative authority* shall comply with the applicable provisions of Chapter 10. Where *building blocks* are required in this chapter, they shall comply with the applicable provisions of Chapter 3.

#### **1001.2 Special provisions.**

**1001.2.1 General exceptions.** The following shall not be required to comply with this standard or to be on an *accessible* route:

1. Raised structures used solely for refereeing, judging, or scoring a sport.
2. Water slides.
3. Animal containment areas that are not for public use.
4. Raised boxing or wrestling rings.
5. Raised diving boards and diving platforms.
6. Bowling lanes that are not required to provide *wheelchair spaces* in the associated team or player seating.
7. Mobile or portable *amusement rides*
8. *Amusement rides* that are controlled or operated by the rider.
9. *Amusement rides* designed primarily for children, where children are assisted on and off the ride by an adult.
10. *Amusement rides* that do not provide *amusement ride seats*.
11. Shooting *facilities* with firing positions on free-standing platforms that are elevated above grade 12 feet (3660 mm) minimum provided that the aggregate area of elevated firing positions is 500 square feet (46 m<sup>2</sup>) maximum.

**1001.2.2 Area of sport activity.** *Areas of sport activity* shall be served by an *accessible* route and shall not be required to be *accessible* except as provided in this chapter. Within areas of sports activity exempted in this chapter, the floor and ground surfaces shall not be required to comply with Section 302. Within areas of sports activity exempted in this chapter, changes in level shall not be required to comply with Section 303.

**1001.3 Protruding objects.** *Circulation paths* shall comply with *protruding objects*.

#### **Exceptions:**

1. Within *areas of sport activity*, *circulation paths* shall not be required to comply with *protruding objects*.

2. Within *play areas, circulation paths* shall not be required to comply with *protruding objects* provided that ground level *accessible* routes provide headroom clearance complying with Section 1008.2.

**1001.4 Animal containment areas.** Within animal containment areas not exempted by Section 1001.2.1, floor and ground surfaces shall not be required to be stable, firm, and slip resistant. Animal containment areas not exempted by Section 1001.2.1 shall not be required to comply with Section 303.

## SECTION 1002 AMUSEMENT RIDES

**1002.1 General.** *Amusement rides* shall comply with Section 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 complying with Section 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 Section 403 and required on *ramps* complying with Section 405 shall not be required to comply with Section 506 where complying is not structurally or operationally feasible.

**1002.3 Load and unload areas.** A *turning space* shall be provided in load and unload areas.

**1002.4 Wheelchair spaces in amusement rides.** *Wheelchair spaces* in *amusement rides* shall comply with Section 1002.4.

**1002.4.1 Floor surface.** The *wheelchair spaces* shall comply with *floor surfaces*.

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**1002.4.2 Slope.** The *floor surface* of *wheelchair spaces* shall not have *running slope* and *cross slope* steeper than one unit vertical in 48 inches horizontal (2 percent slope) 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  $\frac{5}{8}$  inch (16 mm) and the horizontal gap shall be 3 inches (75 mm) maximum under normal passenger load conditions.

**Exception:** Where complying is not operationally or structurally feasible, *ramps*, bridge plates, or similar devices complying with the applicable requirements of 36 CFR 1192.83(c), listed in Section 106.2.2, shall be provided. *Handrails* on the *ramps*, bridge plates, or similar devices are permitted to comply with either the requirements in Section 506 or the requirements of 36 CFR 1192.83(c).

**1002.4.4. Wheelchair spaces.** *Wheelchair spaces* for *amusement rides* shall comply with Section 1002.4.4.

**Exceptions:**

1. Where provided, securement devices shall be permitted to overlap required *wheelchair space*.
2. *Wheelchair spaces* shall be permitted to be mechanically or manually repositioned.
3. *Wheelchair spaces* shall not be required to comply with Section 307.4.

**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.

**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 device to enter and exit the ride.

**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 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 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 provide a clear width of 32 inches (815 mm) minimum.

**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, complying with this requirement shall be required to the maximum extent practicable.

**1002.5 Amusement ride transfer devices and seats designed for transfer.** *Amusement ride transfer devices* and seats designed for transfer shall comply with Section 1002.5 when positioned for loading and unloading.

**1002.5.1 Clear floor space.** A *clear floor space* shall be provided in the load and unload area adjacent to the *amusement ride transfer devices* and seats designed for transfer.

**1002.5.2 Transfer height.** The height of *amusement ride transfer devices* and 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 device to the *amusement ride seat*.

**1002.5.4 Wheelchair storage space.** *Clear floor space* for wheelchair storage shall be provided in or adjacent to unload areas for each required *amusement ride transfer devices* and seat designed for transfer and shall not overlap any required means of egress or accessible route.

## SECTION 1003 RECREATIONAL BOATING FACILITIES

**1003.1 General.** Recreational boating *facilities* shall comply with Section 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 Section 1003.2.

**1003.2.1 Boat slips.** An *accessible* route shall serve *boat slips*.

**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 Section 1003.2.
2. *Gangways* shall not be required to comply with the maximum rise specified in Section 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 Section 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 Section 405.2.
5. Where *gangways* connect to *transition plates*, *landings* specified by Section 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 floor.
7. The *cross slope* specified in Sections 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 Sections 303.3 and 303.4 shall be permitted on the surfaces of *gangways* and piers.
9. Cleats and other boat securement devices shall not be required to comply with *reach ranges*.

**1003.2.2 Boarding piers at boat launch ramps.** An *accessible* route shall serve *boarding piers*.

**Exceptions:**

1. *Accessible* routes serving floating *boarding piers* shall be permitted to use Exceptions 1, 2, 5, 6, 7, 8, and 9 in Section 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 Section 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 Section 405.

**1003.3 Clear pier space.** *Boat slips* and *boarding piers* at *boat launch ramps* shall provide clear pier space 60 inches (1525 mm) minimum in width that extend the full length of the *boat slips* or *boarding piers*. Each 10 feet (3050 mm) of linear pier edge serving *boat slips* or *boarding piers* shall contain at least one continuous clear opening 60 inches (1525 mm) minimum in width.

**Exceptions:**

1. Clear pier space shall be permitted to be 36 inches (915 mm) minimum in width and 24 inches (610 mm) maximum in length, provided that multiple 36-inch (915 mm) wide segments are separated by segments that are 60 inches (1525 mm) minimum in width and 60 inches (1525 mm) minimum in length.
2. Edge protection shall be permitted at the continuous clear openings, provided the edge protection is 4 inches (100 mm) maximum in height and 2 inches (51 mm) maximum in width.
3. In existing piers for *boat slips*, 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 Section 1003.3, and further compliance with Section 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.

**Figure 1003.3.1 (A)**

BOAT SLIP AND BOARDING PIER CLEAR PIER SPACE

**Figure 1003.3.1 (B)**

BOAT SLIP AND BOARDING PIER CLEAR PIER SPACE

EXCEPTION 1 – CLEAR PIER SPACE REDUCATION AT BOAT SLIPS AND BOARDING PIERS

**Figure 1003.3.1 (C)**

BOAT SLIP AND BOARDING PIER CLEAR PIER SPACE – EXCEPTION 2 – EDGE PROTECTION AT BOAT SLIPS AND BOARDING PIERS

**SECTION 1004  
EXERCISE MACHINES AND EQUIPMENT**

**1004.1 General.** Exercise machines and equipment shall comply with Section 1004.

**1004.2 Clear floor space.** Exercise machines and equipment shall have a *clear floor space* positioned for transfer or for use by an individual seated in a wheelchair. *Clear floor spaces* required at exercise machines and equipment shall be permitted to overlap.

**1004.3 Operable parts.** Exercise machines and exercise equipment shall not be required to comply with *operable parts*.

**SECTION 1005  
FISHING PIERS AND PLATFORMS**

**1005.1 General.** Fishing piers and platforms shall comply with Section 1005.

**1005.2 Accessible routes.** *Accessible* routes serving fishing piers and platforms 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 Section 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 Section 405.2.

**1005.3 Railings.** Where provided along the perimeter of fishing piers or platforms, railings, guards or *hand-rails* shall comply with Section 1005.3.

**Exception:** Where a guard complying with the applicable building code is provided, the guard, shall not be required to comply with Section 1005.3.

**1005.3.1 Height.** A minimum of 25 percent of the railings shall be 34 inches (865 mm) maximum above the ground or deck surface.

**1005.3.1.1 Dispersion.** Railings required to comply with Section 1005.3.1 shall be dispersed throughout the fishing pier or platform.

**1005.4 Edge protection.** Where railings complying with Section 1005.3 are provided, edge protection complying with Sections 1005.4.1 or 1005.4.2 shall be provided.

**1005.4.1 Curb or barrier.** Curbs or barriers shall be a minimum of 2 inches (51 mm) in height above the surface of the fishing pier or platform.

**1005.4.2 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) minimum in width and 9 inches (230 mm) minimum in height above the ground or deck surface beyond the railing.

#### **Figure 1005.4.2**

#### **EXTENDED GROUND OR DECK SURFACE AT FISHING PIERS OR PLATFORMS**

**1005.5 Clear floor space.** At each location where there are railings complying with Section 1005.3.1, a *clear floor space* shall be provided. Where there are no railings, at least one *clear floor space* shall be provided on the fishing pier or platform.

**1005.6 Turning space.** At least one *turning space* shall be provided on fishing piers and platforms.

## **SECTION 1006 GOLF FACILITIES**

**1006.1 General.** Golf *facilities* shall comply with Section 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. Exterior routes shall be 48 inches (1220 mm) minimum in width. Where guards, barriers or rails are provided, *accessible* routes shall be 60 inches (1525 mm) minimum in clear width.

**Exception:** *Accessible golf car passages* in accordance with Section 1006.3 shall be permitted to be used for all or part of *accessible* routes required by Section 1006.2.

**1006.2.1 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 *teeing ground* closest to the hole 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 *teeing ground* closest to the hole, shall be designed and constructed so that a golf car can enter and exit each *teeing ground*.

**Exception:** Where existing golf courses are being altered, 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.

**1006.2.2 Putting greens.** Putting greens shall be designed and constructed so that a golf car can enter and exit the putting green.

**1006.2.3 Practice putting greens, practice teeing grounds, and teeing stations at driving ranges.** At least 5 percent, but not fewer than 1, 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.

**1006.2.4 Weather shelters.** Where provided, weather shelters shall be designed and constructed so that a golf car can enter and exit the weather shelter. A clear inside dimension of 60 inches (1525 mm) minimum by 96 inches (2440 mm) minimum shall be provided within weather shelters.

**1006.3 Golf car passages.** Golf car passages shall comply with Section 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) minimum in width shall be provided at intervals not to exceed 75 yards (69 m).

## SECTION 1007 MINIATURE GOLF FACILITIES

**1007.1 General.** Miniature golf *facilities* shall comply with Section 1007.

**1007.2 Accessible routes.** *Accessible* routes serving holes on miniature golf courses shall comply with Chapter 4.

**Exception:** *Accessible* routes located on playing surfaces of miniature golf holes shall be permitted to comply with the following:

1. Playing surfaces shall not be required to comply with Section 302.2.
2. Where *accessible* routes intersect playing surfaces of holes, a curb that is 1 inch (25 mm) maximum in height and 32 inches (815 mm) minimum in width shall be permitted.
3. A slope of 1:4 maximum shall be permitted for a rise of 4 inches (100 mm) maximum.
4. Ramp *landing* slopes specified by Section 405.7.1 shall be permitted to be one unit vertical in 20 units horizontal (5 percent slope) maximum.
5. Ramp *landing* length specified by Section 405.7.3 shall be permitted to be 48 inches (1220 mm) minimum.
6. Ramp *landing* size at a change in direction specified by Section 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 along *ramps* located on the playing surface.

**1007.3 Miniature golf holes.** Miniature golf holes shall comply with Section 1007.3.



**1007.3.1 Start of play.** A clearance 48 inches (1220 mm) minimum by 60 inches (1525 mm) minimum with slopes not steeper than one unit vertical in 48 inches horizontal (2 percent slope) shall be provided at the start of play.

**1007.3.2 Golf club reach range area.** Golf club reach ranges shall comply with Section 1007.3.2.1 or 1007.3.2.2 as applicable.

**Figure 1007.3.2 (A)**

GOLF CLUB REACH RANGE AREA – NEW BUILDINGS

**Figure 1007.3.2 (B)**

GOLF CLUB REACH RANGE AREA – EXISTING BUILDINGS

**1007.3.2.1 New buildings and facilities.** In new buildings and *facilities*, areas within holes where golf balls rest shall be within 36 inches (915 mm) maximum of a clearance 36 inches (915 mm) minimum in width and 52 inches (1320 mm) minimum in length having a *running slope* not steeper than one unit vertical in 20 units horizontal (5 percent slope). The clearance shall be served by an *accessible* route.

**1007.3.2.2 Existing buildings and facilities.** In *existing building* and *facilities*, areas within holes where golf balls rest shall be within 36 inches (915 mm) maximum of a clearance 36 inches (915 mm) minimum in width and 48 inches (1220 mm) minimum in length having a *running slope* not steeper than one unit vertical in 20 units horizontal (5 percent slope). The clearance shall be served by an *accessible* route.

## SECTION 1008 PLAY AREAS

**1008.1 Scope.** *Play areas* shall comply with 1008.

**1008.2 Accessible routes for play areas.** *Play areas* shall provide *accessible* routes in accordance with Section 1008.2. *Accessible* routes serving *play areas* shall comply with Chapter 4 except as modified by Section 1008.4.

**1008.2.1 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 Section 1008.3.2.1 and *elevated play components* required to comply with Section 1008.3.2.2, including entry and exit points of the *play components*.

**1008.2.2 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.

**1008.3 Age groups.** *Play areas* for children ages 2 and over shall comply with Section 1008.3. Where separate *play areas* are provided within a *site* for specific age groups, each *play area* shall comply with Section 1008.3.

**Exceptions:**

1. *Play areas* located in family child care *facilities* where the proprietor actually resides shall not be required to comply with Section 1008.3.
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 Section 1008.3.
3. *Amusement attractions* shall not be required to comply with Section 1008.3.
4. Where *play components* are altered and the ground surface is not altered, the ground surface shall not be required to comply with Section 1008.4.1.6 unless required by the *administrative authority*.

**1008.3.1 Additions.** Where *play areas* are designed and constructed in phases, the requirements in Section 1008.3 shall apply to each successive addition so that when the addition is completed, the entire *play area* complies with all the applicable requirements in Section 1008.3.

**1008.3.2 Play components.** Where provided, *play components* shall comply with Section 1008.3.2.

**1008.3.2.1 Ground level play components.** *Ground level play components* shall be provided in the number and types required by Section 1008.3.2.1. *Ground level play components* that are provided to comply with Section 1008.3.2.1.1 shall be permitted to satisfy the additional number required by Section 1008.3.2.1.2 where 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*.

**1008.3.2.1.1 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 Section 1008.4.3.

**1008.3.2.1.2 Additional number and types.** Where *elevated play components* are provided, *ground level play components* shall be provided in accordance with Table 1008.3.2.1.2 and shall comply with Section 1008.4.3.

**Exception:** Where 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 Section 1008.3.2.1.2.

**TABLE 1008.3.2.1.2**

**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

**1008.3.2.2 Elevated play components.** Where *elevated play components* are provided, at least 50 percent shall be on an *accessible* route and shall comply with Section 1008.4.3.

**1008.4 Accessible routes within play areas.** *Accessible* routes within *play areas* shall comply with Section 1008.4.

**1008.4.1 Accessible routes.** *Accessible* routes serving *play areas* shall comply with Chapter 4 and Section 1008.4.1. Where *accessible* routes serve *ground level play components*, the headroom clearance shall be 80 inches (2030 mm) minimum in height.

**Exceptions:**

1. Where 20 or more *elevated play components* are provided, transfer systems complying with Section 1008.4.2 shall be permitted to be used as part of an *accessible* route for a maximum of 25 percent of the *play components*.
2. Where fewer than 20 *elevated play components* are provided, transfer systems complying with Section 1008.4.2 shall be permitted to be used as part of an *accessible* route.
3. 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.
4. *Accessible* routes serving *soft contained play structures* shall be permitted to use transfer systems complying with Section 1008.4.2 as part of an *accessible* route.
5. Where the surface of the *accessible* route, *clear floor spaces*, or *turning spaces* serving water *play components* is submerged, complying with Sections 302, 403.3, 405.2, 405.3, and 1008.4.1.6 shall not be required.
6. *Accessible* routes serving water *play components* shall be permitted to use transfer systems complying with Section 1008.4.2 to connect *elevated play components* in water.

**1008.4.1.1 Clear width.** *Accessible* routes connecting *play components* shall provide a clear width complying with Section 1008.4.1.1.

**1008.4.1.1.1 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 m<sup>2</sup>), the clear width of *accessible* routes shall be permitted to be 44 inches (1120 mm) minimum, where at least one *turning space* 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) minimum in width and 60 inches (1525 mm) minimum in length.

**1008.4.1.1.2 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) minimum in length and 36 inches (915 mm) minimum in width.
2. The clear width of transfer systems connecting *elevated play components* shall be permitted to be 24 inches (610 mm) minimum.

**1008.4.1.2 Ramps.** Within *play areas*, *ramps* connecting *ground level play components* and *ramps* connecting *elevated play components* shall comply with Section 405 except as modified by Section 1008.4.1.2.

**1008.4.1.2.1 Ground level.** Ramp runs connecting *ground level play components* shall have a *running slope* not steeper than one unit vertical in 16 units horizontal (6.2 per cent slope).

**1008.4.1.2.2 Elevated.** The rise for any ramp run connecting *elevated play components* shall be 12 inches (305 mm) maximum.

**1008.4.1.2.3 Handrails.** Where required on *ramps* serving *play components*, the *handrails* shall comply with Section 506 except as modified by Section 1008.4.1.2.3.

**Exceptions:**

1. *Handrails* shall not be required on *ramps* located within ground level *use zones*.
2. *Handrail* extensions shall not be required.

**1008.4.1.2.3.1 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 noncircular, the *handrail* shall provide an equivalent gripping surface.

**1008.4.1.2.3.2 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.

**1008.4.1.3 Ground surfaces.** Ground surfaces on *accessible* routes, *clear floor spaces*, and *turning spaces* shall comply with Section 1008.4.1.3.

**1008.4.1.3.1 Surface condition.** Ground surfaces shall be stable, firm, and slip resistant. Ground surfaces shall be inspected and maintained regularly and frequently to ensure continued compliance

with this requirement. Artificial turf on the *accessible* route shall comply with the *floor surface* requirements in Section 302.2.

**1008.4.1.3.2 Use zones.** Ground surfaces located within *use zones* shall comply with ASTM F 1292 listed in Section 106.2.16.

**1008.4.2 Transfer systems.** Where transfer systems are provided to connect to *elevated play components*, the transfer systems shall comply with Section 1008.4.2.

**1008.4.2.1 Transfer platforms.** Transfer platforms shall be provided where transfer is intended from wheelchairs or other mobility aids. Transfer platforms shall comply with Section 1008.4.2.1.

#### Figure 1008.4.2.1

##### TRANSFER PLATFORMS

**1008.4.2.1.1 Size.** Transfer platforms shall have level surfaces 14 inches (355 mm) minimum in depth and 24 inches (610 mm) minimum in width.

**1008.4.2.1.2 Height.** The top of the transfer platforms shall be 11 inches (280 mm) minimum and 18 inches (455 mm) maximum in height above the floor.

**1008.4.2.1.3 Transfer space.** A transfer space complying with Sections 305.2 and 305.3 shall be provided adjacent to the transfer platform. The 48-inch (1220 mm) minimum length dimension of the transfer space shall be centered on and parallel to the 24-inch (610 mm) minimum length side of the transfer platform. The side of the transfer platform serving the transfer space shall be unobstructed.

**1008.4.2.1.4 Transfer supports.** At least one means of support for transferring shall be provided.

**1008.4.2.2 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 Section 1008.4.2.2.

#### Figure 1008.4.2.2

##### TRANSFER STEPS

**1008.4.2.2.1 Size.** Transfer steps shall have level surfaces 14 inches (355 mm) minimum in depth and 24 inches (610 mm) minimum in width.

**1008.4.2.2.2 Height.** Each transfer step shall be 8 inches (205 mm) maximum in height.

**1008.4.2.2.3 Transfer supports.** At least one means of support for transferring shall be provided.

**1008.4.3 Play components.** *Ground level play components* on *accessible* routes and *elevated play components* connected by *ramps* shall comply with Section 1008.4.3.

**1008.4.3.1 Turning space.** At least one *turning space* 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.

**1008.4.3.2 Clear floor space.** *Clear floor space* complying with Sections 305.2 and 305.3 shall be provided at *play components*.

**1008.4.3.3 Play tables.** Where play tables are provided, *knee clearance* 24 inches (610 mm) minimum in height, 17 inches (430 mm) minimum in depth, and 30 inches (760 mm) minimum in width shall be

provided. The tops of rims, curbs, or other obstructions shall be 31 inches (785 mm) maximum in height.

**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 space* required by Section 1008.4.3.2 is arranged for a parallel approach.

**1008.4.3.4 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 above the adjacent *clear floor space*.

**Exception:** Entry points of slides shall not be required to comply with Section 1008.4.3.4.

**1008.4.3.5 Transfer supports.** Where *play components* require transfer to entry points or seats, at least one means of support for transferring shall be provided.

## Proposal 10-03-2021 AS/AMBC1

### SECTION 1009 SWIMMING POOLS, WADING POOLS AND SPAS

## Proposal 10-03-2021 AS/AMBC1

**1009.1 General.** Swimming pools, wading pools, and *spas* shall comply with Section 1009.

**1009.1.1 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 Section 1009.2; sloped entries complying with Section 1009.3; transfer walls complying with Section 1009.4, transfer systems complying with Section 1009.5; and pool *stairs* complying with Section 1009.6. At least one *accessible* means of entry provided shall comply with Section 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.
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 Section 1009.2, a sloped entry complying with Section 1009.3, or a transfer system complying with Section 1009.5.
3. A *catch pool* or a designated section of a pool used as a terminus for a water slide flume shall not be required to provide an *accessible* means of entry, provided that a portion of the *catch pool* edge is on an *accessible* route or, where the area at the *catch pool* edge is restricted to use by staff and persons exiting the pool, and an *accessible* route serves the gate or area where participants discharge from the activity.

**1009.1.2 Wading pools.** At least one sloped entry complying with Section 1009.3 shall be provided in wading pools.

## Proposal 10-03-2021 AS/AMBC1

**1009.1.3 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 Section 1009.2; transfer walls complying with Section 1009.4; or transfer systems complying with Section 1009.5.

**Exception:** Where *spas* are provided in a cluster, no more than 5 percent, but not less than one *spa* in each cluster shall be required to comply with Section 1009.1.3.

**1009.2 Pool lifts.** Pool lifts shall comply with Section 1009.2.

**1009.2.1 Pool lift location.** Pool lifts shall be fixed when the pool is open for use and 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 Section 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.

## Proposal 10-05-2021 AS/AM; 03-04-21 D/BC2 AM

**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 not have *running slope* and *cross slope* steeper than one unit vertical in 48 inches horizontal (2 percent slope).

**Exception:** Changes in level complying with Section 303.3 shall be permitted between the centerline of the seat and the pool edge to limit water from entering the pool area.

### Figure 1009.2.2

POOL LIFT SEAT LOCATION

### 1009.2.3 Clear deck space.

#### Figure 1009.2.3 (A)

CLEAR DECK SPACE AT POOL LIFTS – NEW BUILDINGS

#### Figure 1009.2.3 (B)

CLEAR DECK SPACE AT POOL LIFTS – EXISTING BUILDINGS

## Proposal 03-04-21 D/BC2 AM

**1009.2.3.1 New buildings and facilities.** In new buildings and *facilities*, 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) minimum in width and shall extend forward 52 inches (1320 mm) minimum from a line located

12 inches (305 mm) behind the rear edge of the seat. The clear deck space shall not have *running slope* and *cross slope* steeper than one unit vertical in 48 inches horizontal (2 percent slope).

### **Proposal 03-04-21 D/BC2 AM**

**1009.2.3.2 Existing buildings and facilities.** In *existing buildings* and *facilities*, 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) minimum in width 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 not have *running slope* and *cross slope* steeper than one unit vertical in 48 inches horizontal (2 percent slope).

**1009.2.4 Seat height.** The height of the lift seat shall be designed to allow a stop at 16 inches (405 mm) minimum and 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.** The seat shall be 16 inches (405 mm) minimum in width, provide a back rest, and be of a firm and stable design.

**1009.2.6 Footrests and armrests.** Footrests shall be provided and shall move with the seat. Where 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 the *operable parts* requirements in Section 309.4.

**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.

**1009.3 Sloped entries.** Sloped entries shall comply with Section 1009.3.

**1009.3.1 Sloped entry route.** Sloped entries shall comply with Sections 402, 403, and 405 except as modified by Section 1009.3.

**Exception:** Where sloped entries are provided, the surfaces shall not be required to be slip resistant.

**1009.3.2 Submerged depth.** Sloped entries for swimming pools shall comply with Section 1009.3.2.1. Sloped entries for wading pools shall comply with Section 1009.3.2.2.

#### **Figure 1009.3.2**

##### SLOPED ENTRY SUBMERGED DEPTH



**1009.3.2.1 Swimming pools.** Sloped entries for swimming pools 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 Section 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.

**1009.3.2.2 Wading pools.** In wading pools, the sloped entry shall extend to the deepest part of the wading pool.

**1009.3.3 Handrails.** At least two *handrails* complying with Section 506 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 Section 506.10.1 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 in Section 1009.3.3.
3. Sloped entries in wading pools shall not be required to provide *handrails* complying with Section 1009.3.3. Where provided, *handrails* on sloped entries in wading pools shall not be required to comply with Section 506.

**Figure 1009.3.3**

HANDRAILS FOR SLOPED ENTRY

**1009.4 Transfer walls.** Transfer walls shall comply with Section 1009.4.

**Proposal 03-04-21 D/BC2 AM**

**1009.4.1 Clear deck space.** A clear deck space of 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum shall be provided at the base of the transfer wall. The clear deck space shall not have *running slope* and *cross slope* steeper than one unit vertical in 48 inches horizontal (2 percent slope). 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 transfer wall shall be 12 inches (305 mm) minimum and 16 inches (405 mm) maximum in depth. The transfer wall shall be 60 inches (1525 mm) minimum in length 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 Sections 609.1 through 609.3 and 609.5 through 609.8 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 the transfer wall. 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.

**Figure 1009.4.5**

GRAB BARS FOR TRANSFER WALLS

**1009.5 Transfer systems.** Transfer systems shall comply with Section 1009.5.

**1009.5.1 Transfer platform.** A transfer platform shall be provided at the head of each transfer system. Transfer platforms shall provide a clear depth of 19 inches (485 mm) minimum and a clear width of 24 inches (610 mm) minimum.

**Figure 1009.5.1**

SIZE OF TRANSFER PLATFORMS

**Proposal 03-04-21 D/BC2 AM**

**1009.5.2 Transfer space.** A transfer space of 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum shall be provided at the base of the transfer platform surface. The transfer space shall not have *running slope* and *cross slope* steeper than one unit vertical in 48 inches horizontal (2 percent slope). The transfer space 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 PLATFORMS

**1009.5.3 Height.** The height of the transfer platform shall comply with Section 1009.4.2.

**1009.5.4 Transfer steps.** Transfer steps shall be 8 inches (205 mm) maximum in height. The surface of the bottom tread shall extend to a water depth of 18 inches (455 mm) minimum below the stationary water level.

**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 Sections 609.1 through 609.3 and 609.5 through 609.8 and be located on at least one side of the transfer system. The grab bar located at the transfer platform shall not obstruct transfer.

**Figure 1009.5.7 (A)**

GRAB BARS – INDIVIDUAL GRAB BARS

**Figure 1009.5.7 (B)**

GRAB BARS – CONTINUOUS GRAB BARS

**1009.6 Pool stairs.** Pool *stairs* shall comply with Section 1009.6.

**1009.6.1 Pool stairs.** Pool *stairs* shall comply with Sections 505.5, 505.6, 505.7 and 505.9.

**Exception:** Pool step risers shall not be required to be 4 inches (100 mm) minimum and 7 inches (180 mm) maximum in height provided that riser heights are uniform.

**1009.6.2 Handrails.** At least two *handrails* complying with Section 506 shall be provided on the pool *stairs*. The width between *handrails* shall be 20 inches (510 mm) minimum and 24 inches (610 mm) maximum.

**Exception:** *Handrail* extensions at the bottom required by 506.10.3 shall not be required on pool *stairs*.

**Proposal 06-76 AM/AMF BC2 and PC1 with mods**

**1009.7 Rising showers.** Rinsing showers shall comply with Section 614.

**SECTION 1010  
SHOOTING FACILITIES WITH FIRING POSITIONS**

**1010.1 General.** Shooting *facilities* with firing positions shall comply with Section 1010.

**1010.2 Turning space.** A circular *turning space* with slopes not steeper than one unit vertical in 48 inches horizontal (2 percent slope) shall be provided at shooting *facility* firing positions.

**1010.3 Firing position counters.** Where a firing position requires shooting over a counter or wall, the top of the counter or wall shall be 34 inches (865 mm) maximum in height above the floor surface. Where counter surfaces are provided at other firing positions of the same type, equivalent counter surfaces shall be provided at the firing position complying with Section 1010.2.

**CHAPTER 11**  
**DWELLING UNITS AND SLEEPING UNITS**

**SECTION 1101**  
**GENERAL**

**1101.1 Scoping.** *Dwelling units and sleeping units* required by the scoping provisions adopted by the *administrative authority* to be Accessible units, Type A units, Type B units, Type C (Visitable) units or units with *accessible* communication features shall comply with the applicable provisions of Chapter 11. Where *building blocks* are required in this chapter, they shall comply with the applicable provisions of Chapter 3.

**SECTION 1102**  
**ACCESSIBLE UNITS**

**1102.1 General.** Accessible units shall comply with Section 1102.

**1102.2 Primary entrance.** The primary entrance shall be on an *accessible* route from public and common areas. The primary entrance shall not be to a bedroom unless it is the only entrance.

**1102.3 Accessible route.** *Accessible* routes within Accessible units shall comply with Section 1102.3.

**1102.3.1 Location.** At least one *accessible* route shall connect all spaces and *elements* that are a part of the unit. *Accessible* routes shall coincide with or be located in the same area as a general *circulation path*.

**Exception:** An *accessible* route is not required to unfinished attics and unfinished basements that are part of the unit.

**1102.3.2 Turning space.** All rooms served by an *accessible* route shall provide a *turning space*.

**Exceptions:**

1. A *turning space* shall not be required in toilet rooms and bathrooms that are not required to comply with Section 1102.11.2.
2. A *turning space* is not required within closets or pantries that are 48 inches (1220 mm) maximum in depth.

**1102.3.3 Components.** *Accessible* routes shall consist of one or more of the following components:

1. Walking surfaces with a running slope not steeper than one unit vertical in 20 units horizontal (5 percent slope).
2. Doors and doorways.
3. *Ramps*.
4. Elevators.
5. Platform lifts.

**1102.4 Walking surfaces.** Walking surfaces that are part of an *accessible* route shall comply with Section 403.

**1102.5 Doors and doorways.** The primary entrance door to the unit, and all other doorways intended for user passage, shall comply with Section 404.

**Exceptions:**

1. Existing doors to hospital patient sleeping rooms shall be exempt from the requirement for space at the latch side provided the door is 44 inches (1120 mm) minimum in width.
2. In toilet rooms and bathrooms not required to comply with Section 1102.11.2, *maneuvering clearances* required by Section 404.2.3 shall not be required on the toilet room or bathroom side of the door.
3. A *turning space* between doors in a series as required by Section 404.2.5 is not required.
4. Storm and screen doors shall not be required to comply with Section 404.2.5.
5. Communicating doors between individual *sleeping units* shall not be required to comply with Section 404.2.5.
6. At other than the primary entrance door, where exterior space dimensions of balconies are less than the required *maneuvering clearance*, *maneuvering clearance* at doors is not required on the exterior side of the door.
7. The *maneuvering clearances* required by Section 404.2.3 shall not be required within a closet or pantry complying with Exception 2 in Section 1102.3.2.

**1102.6 Ramps.** *Ramps* shall comply with Section 405.

**1102.7 Elevators.** Elevators within the unit shall comply with Section 407, 408, or 409.

**1102.8 Platform lifts.** Platform lifts within the unit shall comply with Section 410.

**Proposal 03-10-2021 AM/AFM Combined PC; E11 coordination**

**1102.9 Operable parts.** Lighting controls, electrical panelboards, electrical switches, receptacle outlets, environmental controls, appliance controls, plumbing fixture controls, and user controls for security or intercom systems shall comply with *operable parts*.

**1102.10 Laundry equipment.** Washing machines and clothes dryers shall comply with Section 612.

**1102.11 Toilet and bathing facilities.** At least one toilet and bathing *facility* shall comply with Section 1102.11.2. All other toilet and bathing *facilities* shall comply with Section 1102.11.1.

**1102.11.1 Grab bars and shower seat reinforcement.** At fixtures in toilet and bathing *facilities* not required to comply with Section 1102.11.2, reinforcement in accordance with Section 1104.11.1 shall be provided.

**Exception:** Reinforcement is not required where Type B units are not provided in the structure.

**1102.11.2 Toilet and bathing facility.** At least one toilet and bathing *facility* shall comply with Section 603. At least one lavatory, one water closet, and either a bathtub or shower within the unit shall comply with Sections 604 through 610. These toilet and bathing fixtures shall be in a single toilet/bathing area, such that travel between fixtures does not require travel through other parts of the unit.

**1102.11.2.1 Vanity countertop space.** Where vanity countertop space is provided in *dwelling unit* or *sleeping units* not required to be Accessible units within the same *facility*, equivalent vanity countertop space, in terms of size and proximity to the lavatory, shall also be provided in Accessible units.

**1102.11.2.2 Mirrors.** Mirrors above lavatories required to comply with Section 606 shall have the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the floor.

**1102.12 Kitchens.** Kitchens shall comply with Section 804.

**1102.13 Windows.** Operable windows shall comply with Section 507.

**Exceptions:**

1. Windows in kitchens shall not be required to comply with Section 1102.13.
2. Windows in bathrooms shall not be required to comply with Section 1102.13.

**Proposal 08-08-2021 AM/AMPC2 replacement**

**1102.14 Storage facilities.** Where storage facilities are provided, other than kitchen storage, at least one of each type shall comply with Section 905. Kitchen storage shall comply with Section 804.7.

**1102.15 Beds.** In at least one sleeping area, a minimum of five percent, but not less than one bed shall comply with Section 1102.15.

**1102.15.1 Clear floor space.** A *clear floor space* shall be provided on both sides of the bed. The *clear floor space* shall be positioned for parallel approach to the side of the bed with the entire length of the *clear floor space* positioned next to the mattress.

**Exception:** Where a single *clear floor space* positioned for parallel approach is provided between two beds, a *clear floor space* shall not be required on both sides of the bed.

**1102.15.2 Bed frames.** At least one bed shall be provided with an open bed frame. Where the exception to Section 1102.15.1 is used, both beds shall have open frames.

**1102.15.3 Bed height.** At least one bed shall measure 17 to 23 inches (430 to 585 mm) high from the floor to the top of the uncompressed mattress.

**1102.15.4 Wheelchair charging station.** The *clear floor space* required by Section 1102.15.1 shall also serve as a wheelchair charging station complying with Section 906.

## **SECTION 1103 TYPE A UNITS**

**1103.1 General.** Type A units shall comply with Section 1103.

**1103.2 Primary entrance.** The primary entrance shall be on an *accessible* route from public and common areas. The primary entrance shall not be to a bedroom unless it is the only entrance.

**1103.3 Accessible route.** *Accessible* routes within Type A units shall comply with Section 1103.3.

**1103.3.1 Location.** At least one *accessible* route shall connect all spaces and *elements* that are a part of the unit. *Accessible* routes shall coincide with or be located in the same area as a general *circulation path*.

**Exception:** An *accessible* route is not required to unfinished attics and unfinished basements that are part of the unit.

**1103.3.2 Turning space.** All rooms served by an *accessible* route shall provide a *turning space*.

**Exceptions:**

1. A *turning space* is not required in toilet rooms and bathrooms that are not required to comply with Section 1103.11.2.
2. A *turning space* is not required within closets or pantries that are 48 inches (1220 mm) maximum in depth.

**1103.3.3 Components.** *Accessible* routes shall consist of one or more of the following components:

1. Walking surfaces with a slope not steeper than one unit vertical in 20 units horizontal (5 percent slope).
2. Doors and doorways.
3. *Ramps*.
4. Elevators.
5. Platform lifts.

**1103.4 Walking surfaces.** Walking surfaces that are part of an *accessible* route shall comply with Section 403.

**1103.5 Doors and doorways.** The primary entrance door to the unit, and all other doorways intended for user passage, shall comply with Section 404.

**Exceptions:**

1. Thresholds at exterior sliding doors shall be permitted to be  $\frac{3}{4}$  inch (19 mm) maximum in height, provided they are beveled with a slope not greater than one unit vertical in 2 units horizontal (50 percent slope).
2. In toilet rooms and bathrooms not required to comply with Section 1103.11.2, *maneuvering clearances* required by Section 404.2.3 shall not be required on the toilet room or bathroom side of the door.
3. A *turning space* between doors in a series as required by Section 404.2.5 is not required.
4. Storm and screen doors shall not be required to comply with Section 404.2.5.
5. Communicating doors between individual *sleeping units* shall not be required to comply with Section 404.2.5.

6. At other than the primary entrance door, where exterior space dimensions of balconies are less than the required *maneuvering clearance*, the *maneuvering clearance* required by Section 404.2.3 is not required on the exterior side of the door.
7. The *maneuvering clearances* required by Section 404.2.3 shall not be required within a closet or pantry complying with Exception 2 of Section 1103.3.2.
8. Doors that are part of a shower enclosure are not required to comply with Section 1103.5.

**1103.6 Ramps.** *Ramps* shall comply with Section 405.

**1103.7 Elevators.** Elevators within the unit shall comply with Section 407, 408, or 409.

**1103.8 Platform lifts.** Platform lifts within the unit shall comply with Section 410.

**Proposal 11-07-21 AM; 11-08-21 AM - 03-10-2021 AM/AFM Combined PC**

**1103.9 Operable Parts.** Lighting controls, electrical panelboards, electrical switches, receptacle outlets, environmental controls, appliance controls, plumbing fixture controls, and user controls for security intercom systems shall comply with *operable parts*.

**Exception:** *Operable parts* of receptacle outlets serving counters in kitchens shall be permitted to comply with Section 1103.9.1.

**Proposal 11-07-21 AM; 11-08-21 AM - 03-10-2021 AM/AFM Combined PC**

**1103.9.1 Receptacle Outlets Serving Counters in Kitchens.** In kitchens, at least two receptacle outlets serving counters shall comply with *operable parts*. Where a work surface is required by Section 1103.12.3, at least one such receptacle outlet shall serve the work surface. The *operable parts* of each additional receptacle outlet serving the counters shall comply with at least one of the following:

1. They shall be 44 inches (1120 mm) maximum above the floor.
2. Where located on the side wall over the counter, they shall be 48 inches (1220 mm) maximum above the floor and 15 inches (380 mm) maximum from the front edge of the counter.
3. Where located at the face of the upper cabinets, they shall be 54 inches (1370 mm) maximum from the floor and 15 inches (380 mm) maximum from the front edge of the counter and with a forward plug insertion.

**1103.10 Laundry equipment.** Washing machines and clothes dryers shall comply with Section 612.

**1103.11 Toilet and bathing facilities.** At least one toilet and bathing *facility* shall comply with Section 1103.11.2. All toilet and bathing *facilities* shall comply with Section 1103.11.1.

**1103.11.1 Grab bar and shower seat reinforcement.** Reinforcement shall be provided for the future installation of grab bars complying with Section 604.5 at water closets; grab bars complying with Section 607.4 at bathtubs; and for grab bars and shower seats complying with Sections 608.2.1.3, 608.2.2.3, 608.2.3.2 and 608.3 at shower compartments.

**Exceptions:**



1. At fixtures not required to comply with Section 1103.11.2, reinforcement in accordance with Section 1104.11.1 shall be permitted.
2. Reinforcement is not required in a room containing only a lavatory and a water closet, provided the room does not contain the only lavatory or water closet on the *accessible* level of the *dwelling unit*.
3. Reinforcement for the water closet side wall vertical grab bar component required by Section 604.5.1 is not required.
4. Where the lavatory overlaps the *maneuvering clearance* around the water closet in accordance with the exception to Section 1103.11.2.4.4, reinforcement at the water closet rear wall for a 24-inch (610 mm) minimum length grab bar, centered on the water closet, shall be provided.

**1103.11.2 General.** At least one toilet and bathing *facility* shall comply with Section 1103.11.2. At least one lavatory, one water closet, and either a bathtub or shower within the unit shall comply with Section 1103.11.2. These toilet and bathing fixtures shall be in a single toilet/bathing area, such that travel between fixtures does not require travel through other parts of the unit.

**1103.11.2.1 Doors.** Doors shall not swing into the *clear floor space* or *maneuvering clearance* for any fixture.

**Exception:** Where a *clear floor space* complying with Section 305.3 is provided within the room beyond the arc of the door swing.

**1103.11.2.2 Lavatory.** Lavatories shall comply with Section 606.

**Exception:** Cabinetry shall be permitted under the lavatory, provided the following criteria are met:

1. The cabinetry can be removed without removal or replacement of the lavatory.
2. The floor finish extends under the cabinetry.
3. The walls behind and surrounding the cabinetry are finished.

**1103.11.2.3 Mirrors.** Mirrors above lavatories required to comply with Section 1103.11.2.2 shall have the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the floor.

**1103.11.2.4 Water closet.** Water closets shall comply with Section 1103.11.2.4.

**Figure 1103.11.2.4 (A)**

WATER CLOSETS IN TYPE A UNITS – WATER CLOSET LOCATION

**Figure 1103.11.2.4 (B)**

WATER CLOSETS IN TYPE A UNITS – MINIMUM MANEUVERING CLEARANCE AROUND THE WATER CLOSET

**Figure 1103.11.2.4 (C)**

WATER CLOSETS IN TYPE A UNITS – MANEUVERING CLEARANCE AROUND THE WATER CLOSET WITH LAVATORY (OVERLAP EXCEPTION)

## Figure 1103.11.2.4 (D)

### WATER CLOSETS IN TYPE A UNITS – WATER CLOSET SEAT HEIGHT

**1103.11.2.4.1 Location.** The water closet shall be positioned with a wall to the rear and to one side. The centerline of the water closet shall be 16 inches (405 mm) minimum and 18 inches (455 mm) maximum from the sidewall.

**1103.11.2.4.2 Maneuvering clearance width.** *Maneuvering clearance* around the water closet shall be 60 inches (1525 mm) minimum in width, measured perpendicular from the side wall.

**1103.11.2.4.3 Maneuvering clearance depth.** *Maneuvering clearance* around the water closet shall be 56 inches (1420 mm) minimum in depth, measured perpendicular from the rear wall.

**1103.11.2.4.4 Maneuvering clearance overlap.** The required *maneuvering clearance* around the water closet shall be permitted to overlap the water closet, associated grab bars, paper dispensers, coat hooks, shelves, *accessible routes*, *clear floor space* and *maneuvering clearances* at other fixtures, and the *turning space*. No other fixtures or obstructions shall be located within the required *maneuvering clearance* around the water closet.

**Exception:** A lavatory measuring 24 inches (610 mm) maximum in depth and complying with Section 1103.11.2.2 shall be permitted on the rear wall 18 inches (455 mm) minimum from the centerline of the water closet to the side edge of the lavatory where the *maneuvering clearance* around the water closet is 66 inches (1675 mm) minimum measured perpendicular from the rear wall.

**1103.11.2.4.5 Height.** The top of the water closet seat shall be 15 inches (380 mm) minimum and 19 inches (485 mm) maximum above the floor, measured to the top of the seat.

**1103.11.2.4.6 Flush controls.** Flush controls shall be hand-operated or automatic. Hand operated flush controls shall comply with *operable parts*. Hand-operated flush controls shall be located on the open side of the water closet.

**1103.11.2.5 Bathing fixtures.** The bathing fixture shall be a bathtub complying with Section 1103.11.2.5.1 or a shower compartment complying with Section 1103.11.2.5.2. Bathtub and shower enclosures shall comply with Section 1103.11.2.5.3.

**1103.11.2.5.1 Bathtub.** Bathtubs shall comply with Section 607.

**Exceptions:**

1. A removable in-tub seat in accordance with Section 607.3 is not required.
2. Countertops and cabinetry shall be permitted at one end of the *maneuvering clearance* at the bathtub, provided the following criteria are met:
  - 2.1. The countertop and cabinetry can be removed.
  - 2.2. The floor finish extends under the countertop and cabinetry.
  - 2.3. The walls behind and surrounding the countertop and cabinetry are finished.

*Note: The wall in the Figures 1103.11.2.5.1(A) and 1103.11.2.5.1(B) would be jogged to indicate the additional 6-inch control clearance in the new Figure 607.2.1*

**Figure 1103.11.2.5.1 (A)**

MANEUVERING CLEARANCE AT BATHTUBS IN TYPE A UNITS WITH REMOVABLE SEAT

*Note: The wall in the Figures 1103.11.2.5.1(A) and 1103.11.2.5.1(B) would be jogged to indicate the additional 6-inch control clearance in the new Figure 607.2.1*

**Figure 1103.11.2.5.1 (B)**

MANEUVERING CLEARANCE AT BATHTUBS IN TYPE A UNITS WITH PERMANENT SEAT

**1103.11.2.5.2 Shower.** Showers shall comply with Section 608.

**Exception:** At standard roll-in shower compartments complying with Section 608.2.2, lavatories, countertops and cabinetry shall be permitted at one end of the *maneuvering clearance* at the shower compartment, provided the following criteria are met:

1. The countertop and cabinetry can be removed.
2. The floor finish extends under the countertop and cabinetry.
3. The walls behind and surrounding the countertop and cabinetry are finished.

**Figure 1103.11.2.5.2**

STANDARD ROLL-IN-TYPE SHOWER COMPARTMENT IN TYPE A UNITS

**1103.11.2.5.3 Bathtub or shower enclosures.** A bathtub or shower enclosure shall be permitted where the assembly on the side of the bathtub or shower where the *maneuvering clearance* at the bathtub or shower is located can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.

**1103.12 Kitchens.** Kitchens shall comply with Section 1103.12.

**1103.12.1 Clearance.** Clearance complying with Section 1103.12.1 shall be provided.

**Proposal 11-14-2021 AS/AMBC1; 08-03-2021 AS**

**1103.12.1.1 Minimum clearance.** Clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles.

**Exception:** Circulation routes into kitchens that do not serve as access to counters, appliances or cabinets shall comply with Section 403.4.

**Figure 1103.12.1.1**

MINIMUM KITCHEN CLEARANCE IN TYPE A UNITS

**Proposal 11-14-2021 AS/AMBC1**

**1103.12.1.2 U-shaped kitchens.** In kitchens with counters, appliances, or cabinets on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 60 inches (1525 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles.

**Exception:** U-shaped kitchens with an island complying with Section 1103.12.1.1.

**Figure 1103.12.1.2 (A)**

U-SHAPED KITCHEN CLEARANCE IN TYPE A UNITS

**Figure 1103.12.1.2 (B)**

U-SHAPED KITCHEN CLEARANCE IN TYPE A UNITS EXCEPTION

#### Proposal 11-15-2021 AS, E12-24

**1103.12.1.3 Spaces where a cook top or conventional range is not provided.** In a kitchen space where a cooktop or conventional range is not provided, clearance between all opposing base cabinets, countertops, appliances, and walls within kitchen work areas shall be 40-inches (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles.

**1103.12.2 Clear floor space.** A *clear floor spaces* shall be provided where required by Sections 1103.12.3 through 1103.12.5.

**1103.12.3 Work surface.** At least one section of counter shall provide an *accessible* work surface 30 inches (760 mm) minimum in length complying with Section 1103.12.3.

**Exception:** Spaces that do not provide a cooktop or conventional range shall not be required to provide an *accessible* work surface.

**Figure 1103.12.3**

WORK SURFACE IN KITCHEN FOR TYPE A UNITS

**1103.12.3.1 Clear floor space.** A *clear floor space*, positioned for a forward approach to the work surface, shall be provided. *Knee and toe clearance* shall be provided.

**Exception:** Cabinetry shall be permitted under the work surface, provided the following criteria are met:

1. The cabinetry can be removed without removal or replacement of the work surface.
2. The floor finish extends under the cabinetry.
3. The walls behind and surrounding the cabinetry are finished.

**1103.12.3.2 Height.** The work surface shall be 34 inches (865 mm) maximum above the floor.

**Exception:** A counter that is adjustable to provide a work surface at variable heights 29 inches (735 mm) minimum and 36 inches (915 mm) maximum above the floor, or that can be relocated within that range without cutting the counter or damaging adjacent cabinets, walls, doors, and structural *elements*, shall be permitted.

**1103.12.3.3 Exposed surfaces.** There shall be no sharp or abrasive surfaces under the exposed portions of work surface counters.

**1103.12.4 Sink.** Sinks shall comply with Section 1103.12.4.

**Figure 1103.12.4**

**KITCHEN SINK FOR TYPE A UNITS**

**1103.12.4.1 Clear floor space.** A *clear floor space*, positioned for a forward approach to the sink, shall be provided. *Knee and toe clearance* shall be provided.

**Exceptions:**

1. The requirement for *knee and toe clearance* shall not apply to more than one bowl of a multi-bowl sink.
2. Cabinetry shall be permitted to be added under the sink, provided the following criteria are met:
  - 2.1 The cabinetry can be removed without removal or replacement of the sink.
  - 2.2 The floor finish extends under the cabinetry.
  - 2.3 The walls behind and surrounding the cabinetry are finished.
3. A *clear floor space* providing a parallel approach and centered on the sink shall be permitted at a kitchen sink in a space where a cook top or conventional range is not provided.
4. A *clear floor space* providing a parallel approach and centered on the sink shall be permitted at wet bars.

**1103.12.4.2 Height.** The front of the sink shall be 34 inches (865 mm) maximum above the floor, measured to the higher of the rim or counter surface.

**Exception:** A sink and counter that is adjustable to variable heights 29 inches (735 mm) minimum and 36 inches (915 mm) maximum above the floor, or that can be relocated within that range without cutting the counter or damaging adjacent cabinets, walls, doors, and structural *elements*, provided rough-in plumbing permits connections of supply and drain pipes for sinks mounted at the height of 29 inches (735 mm), shall be permitted.

**1103.12.4.3 Faucets.** Faucets shall comply with *operable parts*.

**1103.12.4.4 Exposed pipes and surfaces.** Water supply and drain pipes under sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under sinks.

**1103.12.5 Appliances.** Where provided, kitchen appliances shall comply with Section 1103.12.5.

**1103.12.5.1 Operable parts.** All appliance controls shall comply with *operable parts* and Section 1103.9.

**Exceptions:**

1. Appliance doors and door latching devices shall not be required to comply with the *operable parts* requirements in Section 309.4.
2. Bottom-hinged appliance doors, when in the open position, shall not be required to comply with the *operable parts* requirements in Section 309.3.

**1103.12.5.2 Clear floor space.** A *clear floor space*, positioned for a parallel or forward approach, shall be provided at each kitchen appliance.

**1103.12.5.3 Dishwasher.** A *clear floor space*, positioned adjacent to the dishwasher door, shall be provided. The dishwasher door in the open position shall not obstruct the *clear floor space* for the dishwasher or an adjacent sink.

**1103.12.5.4 Cooktop.** Cooktops shall comply with Section 1103.12.5.4.

**1103.12.5.4.1 Clear floor space.** A *clear floor space*, positioned for a parallel or forward approach to the cooktop, shall be provided.

**1103.12.5.4.2 Forward approach.** Where the *clear floor space* is positioned for a forward approach, *knee and toe clearance* shall be provided. The underside of the cooktop shall be insulated or otherwise configured to protect from burns, abrasions, or electrical shock.

**1103.12.5.4.3 Parallel approach.** Where the *clear floor space* is positioned for a parallel approach, the *clear floor space* shall be centered on the appliance.

**1103.12.5.4.4 Controls.** The location of controls shall not require reaching across burners.

**1103.12.5.5 Oven.** Ovens shall comply with Section 1103.12.5.5.

**1103.12.5.5.1 Clear floor space.** A *clear floor space* shall be provided. The oven door in the open position shall not obstruct the *clear floor space* for the oven.

**1103.12.5.5.2 Side-hinged door ovens.** Side-hinged door ovens shall have a countertop positioned adjacent to the latch side of the oven door.

**1103.12.5.5.3 Bottom-hinged door ovens.** Bottom-hinged door ovens shall have a countertop positioned adjacent to one side of the door.

**1103.12.5.5.4 Controls.** The location of controls shall not require reaching across burners.

**1103.12.5.6 Refrigerator/freezer.** Refrigerators and freezers shall comply with Section 1103.12.5.6

**1103.12.5.6.1 Clear floor space.** A clear floor space, positioned for a parallel approach to the refrigerator/freezer, shall be provided. The centerline of the clear floor space shall be offset 24 inches (610 mm) maximum from the centerline of the appliance.

**1103.12.5.6.2 Shelves.** Combination refrigerators and freezers shall have at least 50 percent of the freezer compartment shelves, including the bottom of the freezer 54 inches (1370 mm) maximum above the floor when the shelves are installed at the maximum heights possible in the compartment.

**1103.13 Windows.** Operable windows shall comply with Section 1103.13.

**Exceptions:**

1. Windows in kitchens shall not be required to comply with Section 1103.13.
2. Windows in bathrooms shall not be required to comply with Section 1103.13.

**1103.13.1 Natural ventilation.** Operable windows required to provide natural ventilation shall comply with the *operable parts* requirements in Sections 309.2 and 309.3.

**1103.13.2 Emergency escape.** Operable windows required to provide an emergency escape and rescue opening shall comply with the *operable parts* requirements in Section 309.2.

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**1103.14 Storage facilities.** Where storage facilities are provided, other than kitchen storage, at least one of each type shall comply with Section 905. Kitchen storage shall comply with Section 804.7.

**Exception:** Removable base cabinets in beneath sinks or work surfaces and in accordance with Sections 1103.12.3.1 and 1103.12.4.1 shall not be required to comply with Section 1103.14.

## SECTION 1104 TYPE B UNITS

**1104.1 General.** Type B units shall comply with Section 1104.

**1104.1.1. Clear floor space.** For Type B units, *clear floor spaces* shall comply with Section 305.3.3.

**1104.1.2. Mailboxes.** Mailboxes serving Type B units shall be permitted an unobstructed side reach range of 54 inches (1370 mm) maximum above the floor.

**1104.2 Primary entrance.** The primary entrance shall be on an *accessible* route from public and common areas. The primary entrance shall not be to a bedroom unless it is the only entrance.

**1104.3 Accessible route.** *Accessible* routes within Type B units shall comply with Section 1104.3.

**1104.3.1 Location.** At least one *accessible* route shall connect all spaces and *elements* that are a part of the unit. *Accessible* routes shall coincide with or be located in the same area as a general *circulation path*.

### Exceptions:

1. An *accessible* route shall not required to unfinished attics and unfinished basements that are part of the unit.
2. One of the following shall not required to be on an *accessible* route:
  - 2.1 A raised floor area in a portion of a living, dining, or sleeping room.
  - 2.2 A sunken floor area in a portion of a living, dining, or sleeping room.
  - 2.3 A mezzanine that does not have plumbing fixtures or an enclosed *habitable* space.

**1104.3.2 Components.** *Accessible* routes shall consist of one or more of the following components:

1. Walking surfaces with a slope not steeper than one unit vertical in 20 units horizontal (5 percent slope).
2. Doors and doorways.
3. *Ramps*.
4. Elevators
5. Platform lifts.

**1104.4 Walking surfaces.** Walking surfaces that are part of an *accessible* route shall comply with Section 1104.4.

**1104.4.1 Clear width.** The clear width of an *accessible* route shall comply with Section 403.4.

### Exceptions:

1. 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 the reduced width segments are separated by segments that are 48 inches (1220 mm) minimum in length and 36 inches (915 mm) minimum in width.
2. Where an *accessible* route makes a 180-degree turn around an object that is less than 48 inches (1220 mm) in width, clear widths shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum during the turn, and 42 (1065 mm) inches minimum leaving the turn.
3. Where an *accessible* route makes a 180-degree turn around an object that is less than 48 inches (1220 mm) in width, the clear width approaching the turn and leaving the turn shall be 36 inches (915 mm) minimum provided the clear width during the turn is 60 inches (1525 mm) minimum.
4. Where an *accessible* route makes a 90-degree turn, the clear widths approaching the turn and leaving the turn shall be 36 inches (915 mm) minimum.
5. 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 60-inch (1525 mm) minimum by 60-inch (1525 mm) minimum space, or an intersection of two walking surfaces that provide a T-shaped *turning space*, provided the base and arms of the T-shaped space extend 48 inches (1220 mm) minimum beyond the intersection.

**1104.4.2 Changes in level.** Changes in level shall comply with Section 303.

**Exception:** Where exterior deck, patio, or balcony surface materials are impervious, the finished exterior impervious surface shall be 4 inches (100 mm) maximum below the floor level of the adjacent interior spaces of the unit.

**1104.5 Doors and doorways.** Doors and doorways shall comply with Section 1104.5.

**1104.5.1 Primary entrance door.** The primary entrance door to the unit shall comply with Section 404.

**Exceptions:**

1. Storm and screen doors serving individual *dwelling unit* or *sleeping units* shall not be required to comply with Section 404.2.5.
2. For the *maneuvering clearance* at swinging doors for the front approach direction on the push side, the dimension perpendicular to the door shall be 48 inches (1220 mm) minimum.
3. For the *maneuvering clearance* at sliding and folding doors for the front approach direction, the dimension perpendicular to the door shall be 48 inches (1220 mm) minimum.
4. For doorways without doors, the dimension perpendicular to the doorway for the front direction shall be 48 inches (1220 mm) minimum.

**1104.5.2 User passage doorways.** Doorways intended for user passage shall comply with Section 1104.5.2.

**Exception:** Doors that are part of a shower enclosure shall not be required to comply with Section 1104.5.2.



**1104.5.2.1 Clear width.** Doorways shall have a clear opening of 31<sup>3</sup>/<sub>4</sub> inches (805 mm) minimum. Clear opening of swinging doors shall be measured between the face of the door and stop, with the door open 90 degrees.

**1104.5.2.1.1 Double leaf doorways.** Where the *operable parts* on an inactive leaf of a double leaf doorway are located more than 48 inches (1220 mm) or less than 15 inches (380 mm) above the floor, the active leaf shall provide the clear opening width required by Section 1104.5.2.1.

**1104.5.2.2 Thresholds.** Thresholds shall comply with Section 303.

**Exception:** Thresholds at exterior sliding doors shall be permitted to be <sup>3</sup>/<sub>4</sub> inch (19 mm) maximum in height, provided they are beveled with a slope not steeper than one unit vertical in 2 units horizontal (50 percent slope).

**1104.5.2.3 Automatic doors.** Automatic doors shall comply with Section 404.3.

**1104.6 Ramps.** *Ramps* shall comply with Section 405.

**1104.7 Elevators.** Elevators serving the unit shall comply with Sections 407, 408 or 409.

**Exception:** In private residence elevators, the elevator cars shall provide a clear inside dimension of 36 inches (760 mm) minimum in width and of 48 inches (1220 mm) minimum in depth.

**1104.8 Platform lifts.** Platform lifts within the unit shall comply with Section 410.

**Exception:** Platform lifts with a single door or doors on opposite ends shall provide a clear inside dimension of 36 inches (915 mm) minimum in width and inches (1220 mm) minimum in depth.

## **Proposal 11-19-2021 AS; 11-20-2021 AS - 03-10-2021 AM/AFM Combined PC; E11 coordination**

**1104.9 Operable Parts.** Lighting controls, electrical switches, receptacle outlets, environmental controls, electrical panelboards, and user controls for security or intercom systems shall comply with the *operable parts* requirements in Sections 309.2 and 309.3.

**Exception:** The *operable parts* of the following items are not required to comply with the *operable parts* requirements in Sections 309.2 and 309.3:

1. Receptacle outlets serving a dedicated use.
2. Floor receptacle outlets.
3. HVAC diffusers.
4. Controls mounted on ceiling fans.
5. Controls or switches mounted on appliances.
6. Plumbing fixture controls.
7. Reset buttons and shut-offs serving appliances, piping, and plumbing fixtures.
8. One control in each space where redundant controls other than light switches are provided for a single element.
9. Lighting controls, electrical switches, and receptacle outlets serving counters in kitchens and bathrooms complying with either of the following:
  - 9.1. Where located 44 inches (1120 mm) maximum above the floor.
  - 9.2. Where located on the side wall over the counter 48 inches (1220 mm) maximum above the floor and 15 inches (380 mm) maximum from front edge of the counter.

10. Receptacle outlets serving counters in kitchens and bathrooms where located at the face of the upper cabinets 54 inches (1370 mm) maximum from the floor and 15 inches (380 mm) maximum from the front edge of the counter and with a forward plug insertion.

**1104.10 Laundry equipment.** Washing machines and clothes dryers shall comply with Section 1104.10.

**1104.10.1 Clear floor space.** A *clear floor space* shall be provided for each washing machine and clothes dryer. A parallel approach shall be provided for a top loading machine. A forward or parallel approach shall be provided for a front loading machine. The centerline of the *clear floor space* shall be offset 24 inches (610 mm) maximum from the centerline of the appliance.

**1104.11 Toilet and bathing facilities.** Toilet and bathing fixtures shall comply with Section 1104.11.

**Exception:** Fixtures on levels not required to be *accessible*.

**1104.11.1 Grab bar and shower seat reinforcement.** Reinforcement shall be provided for the future installation of grab bars and shower seats at water closets, bathtubs, and shower compartments. Where walls are located to permit the installation of grab bars and seats complying with Section 604.5 at water closets; grab bars complying with Section 607.4 at bathtubs; and for grab bars and shower seats complying with Sections, 608.3, 608.2.1.3, 608.2.2.3, 608.2.3.3 and 608.2.4.3 at shower compartments; reinforcement shall be provided for the future installation of grab bars and seats complying with those requirements.

**Exceptions:**

1. In a room containing only a lavatory and a water closet, reinforcement is not required provided the room does not contain the only lavatory or water closet on the *accessible* level of the unit.
2. At water closets, reinforcement for the side wall vertical grab bar component required by Section 604.5 is not required.
3. At water closets where wall space will not permit a grab bar complying with Section 604.5.2, reinforcement for a rear wall grab bar 24 inches (610 mm) minimum in length centered on the water closet shall be provided.
4. At water closets where a side wall is not available for a 42-inch (1065 mm) grab bar complying with Section 604.5.1, reinforcement for a sidewall grab bar, 24 inches (610 mm) minimum in length, located 12 inches (305 mm) maximum from the rear wall, shall be provided.
5. At water closets where a side wall is not available for a 42-inch (1065 mm) grab bar complying with Section 604.5.1, reinforcement for a swing-up grab bar complying with Section 1104.11.1.1 shall be permitted.
6. At water closets where a side wall is not available for a 42-inch (1065 mm) grab bar complying with Section 604.5.1, reinforcement for two swing-up grab bars complying with Section 1104.11.1.1 shall be permitted to be installed in lieu of reinforcement for rear wall and side wall grab bars.
7. In shower compartments larger than 36 inches (915 mm) in width and 36 inches (915 mm) in depth reinforcement for a shower seat is not required

**1104.11.1.1 Swing-up grab bars.** A clearance of 18 inches (455 mm) minimum from the centerline of the water closet to any side wall or obstruction shall be provided where reinforcement for swing-up grab bars is provided. Where the approach to the water closet is from the side, the 18 inches (455 mm) minimum shall be on the side opposite the direction of approach. Reinforcement shall accommodate a swing-up grab bar centered 15<sup>3</sup>/<sub>4</sub> inches (400 mm) from the centerline of the water closet and 28 inches (710 mm) minimum in length, measured from the wall to the end of the horizontal portion of the grab bar. Reinforcement shall accommodate a swing-up grab bar with a height in the down position of 33 inches (840 mm) minimum and 36 inches (915 mm) maximum. Reinforcement shall be adequate to resist forces in accordance with Section 609.8.

**Exception:** Where a water closet is positioned with a wall to the rear and to one side, the centerline of the water closet shall be 16 inches (405 mm) minimum and 18 inches (455 mm) maximum from the sidewall.

**Figure 1104.11.1.1**

SWING-UP GRAB BARS FOR WATER CLOSETS

**1104.11.2 Clear floor space.** *Clear floor spaces* required by Section 1104.11.3.1 (Option A) or 1104.11.3.2 (Option B) shall comply with Sections 1104.11.2.

**1104.11.2.1 Doors.** Doors shall not swing into the *clear floor space* or clearance for any fixture.

**Exception:** Where a *clear floor space*, excluding *knee and toe clearances* under *elements*, is provided within the room beyond the arc of the door swing.

**1104.11.2.2 Knee and toe clearance.** *Clear floor space* at fixtures shall be permitted to include *knee and toe clearances*.

**1104.11.3 Toilet and bathing areas.** Either all toilet and bathing areas provided shall comply with Section 1104.11.3.1 (Option A), or one toilet and bathing area shall comply with Section 1104.11.3.2 (Option B).

**1104.11.3.1 Option A.** Each fixture provided shall comply with Section 1104.11.3.1.

**Exceptions:**

1. Where multiple lavatories are provided in a single toilet and bathing area such that travel between fixtures does not require travel through other parts of the unit, not more than one lavatory is required to comply with Section 1104.11.3.1.
2. A lavatory and a water closet in a room containing only a lavatory and water closet, provided the room does not contain the only lavatory or water closet on the *accessible* level of the unit.

**1104.11.3.1.1 Lavatory.** A *clear floor space* positioned for a parallel approach shall be provided at a lavatory. The *clear floor space* shall be centered on the lavatory.

**Exception:** A lavatory complying with Section 606. Cabinetry shall be permitted under the lavatory provided the following criteria are met:

1. The cabinetry can be removed without removal or replacement of the lavatory.
2. The floor finish extends under the cabinetry.
3. The walls behind and surrounding the cabinetry are finished.

**Figure 1104.11.3.1.1**

LAVATORY IN TYPE B UNITS – OPTION A BATHROOMS

**1104.11.3.1.2 Water closet.** The water closet shall comply with Section 1104.11.3.1.2.

**Figure 1104.11.3.1.2 (A)**

MANEUVERING CLEARANCE AROUND THE WATER CLOSETS IN TYPE B UNITS  
WATER CLOSET LOCATION

**Figure 1104.11.3.1.2 (B)**

MANEUVERING CLEARANCE AROUND THE WATER CLOSETS IN TYPE B UNITS  
CLEARANCE WIDTH AND DEPTH

**Figure 1104.11.3.1.2 (C)**

MANEUVERING CLEARANCE AROUND THE WATER CLOSETS IN TYPE B UNITS  
INCREASED CLEARANCE DEPTH – FORWARD APPROACH

**Figure 1104.11.3.1.2 (D)**

MANEUVERING CLEARANCE AROUND THE WATER CLOSETS IN TYPE B UNITS  
CLEARANCE WITH LAVATORY OVERLAP

**1104.11.3.1.2.1 Location.** The centerline of the water closet shall be 16 inches (405 mm) minimum and 18 inches (455 mm) maximum from one side of the required clearance.

**1104.11.3.1.2.2 Maneuvering clearance.** Maneuvering clearance around the water closet shall comply with Sections 1104.11.3.1.2.2.1 through 1104.11.3.1.2.2.3.

**Exception:** Maneuvering clearance around the water closet complying with Sections 1103.11.2.4.2 through 1103.11.2.4.4.

**1104.11.3.1.2.2.1 Maneuvering clearance width.** Maneuvering clearance around the water closet shall be 48 inches (1220 mm) minimum in width, measured perpendicular from the side of the clearance that is 16 inches (405 mm) minimum and 18 inches (455 mm) maximum from the water closet centerline.

**1104.11.3.1.2.2.2 Maneuvering clearance depth.** Maneuvering clearance around the water closet shall be 56 inches (1420 mm) minimum in depth, measured perpendicular from the rear wall.

**1104.11.3.1.2.2.3 Increased clearance depth at forward approach.** Where a forward approach is provided, the maneuvering clearance around the water closet shall be 66 inches (1675 mm) minimum in depth, measured perpendicular from the rear wall.

**1104.11.3.1.2.2.4 Clearance overlap.** A vanity or other obstruction 24 inches (610 mm) maximum in depth, measured perpendicular from the rear wall, shall be permitted to overlap the required maneuvering clearance around the water closet, provided the width of the remaining maneuvering clearance around the water closet is 33 inches (840 mm) minimum.

**1104.11.3.1.3 Bathing fixtures.** Where provided in a bathroom, at least one bathing fixture shall comply with Section 1104.11.3.1.3. A bathtub shall comply with Section 1104.11.3.1.3.1 or

1104.11.3.1.3.2 and a shower compartment shall comply with Section 1104.11.3.1.3.3 or 1104.3.1.3.4. Bathtub and shower enclosures shall comply with Section 1104.11.3.1.3.5.

**1104.11.3.1.3.1 Parallel approach bathtubs.** Where a parallel approach is provided, the *maneuvering clearance* at the bathtub shall be 60 inches (1525 mm) minimum in length and 30 inches (760 mm) minimum in width. Lavatories complying with Section 606 shall be permitted in the *maneuvering clearance* at the bathtub. A lavatory complying with Section 1104.11.3.1.1 shall be permitted at one end of the bathtub where the *maneuvering clearance* at the bathtub is 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width.

**Figure 1104.11.3.1.3.1**

PARALLEL APPROACH BATHTUB IN TYPE B UNITS – OPTION A BATHROOM

**1104.11.3.1.3.2 Forward approach bathtubs.** Where a forward approach is provided, the *maneuvering clearance* at the bathtub shall be 60 inches (1525 mm) minimum in length and 48 inches (1220 mm) minimum in width. A water closet and a lavatory shall be permitted in the *maneuvering clearance* at the bathtub at one end of the bathtub.

**Figure 1104.11.3.1.3.2**

FORWARD APPROACH BATHTUB IN TYPE B UNITS

OPTION A BATHROOM

**1104.11.3.1.3.3 Parallel approach shower compartment.** The shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth.

If a shower compartment is the *accessible* bathing fixture in the bathroom, the shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth.

Where a parallel approach is provided, the *maneuvering clearance* at the shower shall be 48 inches (1220 mm) minimum in length, measured perpendicular from the control wall, and 30 inches (760 mm) minimum in depth, measured 3 inches (76 mm) maximum from the face of the shower compartment.

**Exception:** A shower compartment with dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width shall be permitted.

**Figure 1104.11.3.1.3.3 (A)**

PARALLEL APPROACH SHOWER COMPARTMENT IN TYPE B UNITS

**Figure 1104.11.3.1.3.3 (B)**

PARALLEL APPROACH SHOWER COMPARTMENT IN TYPE B UNITS

EXCEPTION

**Proposal 11-30-2021 AM/AM BC2 and PC1**

**1104.11.3.1.3.4 Forward approach shower compartment.** Where a forward approach is provided, the shower compartment shall have dimensions of 30 inches (760 mm) minimum in depth and 44 inches

(1120 mm) minimum in width. A *maneuvering clearance* at the shower shall be 60 inches (1525 mm) minimum in length measured perpendicular from a side wall and 48 inches (1220 mm) minimum in width. A water closet and a lavatory shall be permitted in the *maneuvering clearance* at the shower at one side of the shower compartment opposite the side wall from which the clearance is measured.

#### **Figure 1104.11.3.1.3.4**

#### **FORWARD APPROACH SHOWER COMPARTMENT IN TYPE B UNITS**

**1104.11.3.1.3.5 Bathtub or shower enclosures.** A bathtub or shower enclosure shall be permitted where the door on the side of the bathtub or shower where the *maneuvering clearance* is provided can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.

**1104.11.3.2 Option B.** One of each type of fixture provided shall comply with Section 1104.11.3.2. These fixtures shall be in a single toilet/bathing area, such that travel between fixtures does not require travel through other parts of the unit.

**1104.11.3.2.1 Lavatory.** Lavatories shall comply with Sections 1104.11.3.1.1 and 1104.11.3.2.1.1.

#### **Figure 1104.11.3.2.1**

#### **LAVATORY IN TYPE B UNITS – OPTION B BATHROOM**

**1104.11.3.2.1.1 Height.** The front of the lavatory shall be 34 inches (865 mm) maximum above the floor, measured to the higher of the rim or counter surface.

**1104.11.3.2.2 Water closet.** The water closet shall comply with Section 1104.11.3.1.2.

**1104.11.3.2.3 Bathing fixtures.** The bathing fixture shall be a bathtub complying with Section 1104.11.3.2.3.1 or a shower compartment complying with Section 1104.11.3.2.3.2. Bathtub and shower enclosures shall comply with Section 1104.11.3.2.3.3.

**1104.11.3.2.3.1 Bathtub.** The maneuvering clearance at the bathtub shall be 48 inches (1220 mm) minimum in length measured perpendicular from the control end of the bathtub, and 30 inches (760 mm) minimum in width.

#### **Figure 1104.11.3.2.3.1**

#### **MANEUVERING CLEARANCE AT THE BATHTUB IN TYPE B UNITS**

#### **OPTION B BATHROOM**

**1104.11.3.2.3.2 Shower compartment.** A shower compartment shall comply with Section 1104.11.3.1.3.3.

**1104.11.3.2.3.3 Bathtub or shower enclosures.** A bathtub or shower enclosure shall comply with Section 1104.11.3.1.3.4.

**1104.12 Kitchens.** Kitchens shall comply with Section 1104.12.

**1104.12.1 Clearance.** Clearance complying with Section 1104.12.1 shall be provided.

**Exception:** Circulation routes into kitchens that do not serve as access to counters, appliances, or cabinets shall comply with Section 1104.3.

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**1104.12.1.1 Minimum clearance.** Clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles.

**Figure 1004.12.1.1**

MINIMUM CLEARANCE IN TYPE B UNITS

**Proposal 11-14-2021 AS/AMBC1**

**1104.12.1.2 U-shaped kitchens.** In kitchens with counters, appliances, or cabinets on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 60 inches (1525 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles.

**Exception:** U-shaped kitchens with an island complying with Section 1104.12.1.1.

**Figure 1104.12.1.2 (A)**

U-SHAPED KITCHEN CLEARANCE IN TYPE B UNITS

**Figure 1104.12.1.2 (B)**

U-SHAPED KITCHEN CLEARANCE IN TYPE B UNITS - EXCEPTION

**Proposal 11-15-2021 AS, E12-24**

**1104.12.1.3 Spaces where a cook top or conventional range is not provided.** In a kitchen space where a cooktop or conventional range is not provided, clearance between all opposing base cabinets, countertops, appliances, and walls within kitchen work areas shall be 40-inch (1015 mm) minimum measured at the narrowest point, excluding hardware and appliance controls and handles.

**1104.12.2 Clear floor space.** *Clear floor spaces* at appliances shall comply with Sections 1104.12.2.

**1104.12.2.1 Sink.** A *clear floor space*, positioned for a parallel approach to the sink, shall be provided. The *clear floor space* shall be centered on sink bowl.

**Exception:** A sink with a forward approach complying with Section 1103.12.4.1.

**1104.12.2.2 Dishwasher.** A *clear floor space*, positioned for a parallel or forward approach to the dishwasher, shall be provided. The dishwasher door in the open position shall not obstruct the *clear floor space* for the dishwasher.

**1104.12.2.3 Cooktop.** Cooktops shall comply with Section 1104.12.2.3.

**1104.12.2.3.1 Approach.** A *clear floor space*, positioned for a parallel or forward approach to the cooktop, shall be provided.

**1104.12.2.3.2 Forward approach.** Where the *clear floor space* is positioned for a forward approach, *knee and toe clearance* shall be provided. The underside of the cooktop shall be insulated or otherwise configured to prevent burns, abrasions, or electrical shock.

**1104.12.2.3.3 Parallel approach.** Where the *clear floor space* is positioned for a parallel approach, the *clear floor space* shall be centered on the appliance.

**1104.12.2.4 Oven.** A *clear floor space*, positioned for a parallel or forward approach adjacent to the oven shall be provided. The oven door in the open position shall not obstruct the *clear floor space* for the oven.

**1104.12.2.5 Refrigerator/freezer.** The refrigerator/freezer shall comply with Section 1104.12.2.5.

**1104.12.2.5.1 Approach.** A *clear floor space* positioned for a parallel or forward approach to the refrigerator/freezer shall be provided.

**1104.12.2.5.2 Forward approach.** Where the *clear floor space* is positioned for a forward approach, the centerline of the *clear floor space* shall be offset 15 inches (380 mm) maximum from the centerline of the appliance.

**1104.12.2.5.3 Parallel approach.** Where the *clear floor space* is positioned for a parallel approach, the centerline of the *clear floor space* shall be offset 24 inches (610 mm) maximum from the centerline of the appliance.

**1104.12.2.6 Trash compactor.** A *clear floor space*, positioned for a parallel or forward approach to the trash compactor, shall be provided.

## Section 1105 Type C (Visitable) Units

**1105.1 General.** Type C (Visitable) *dwelling units* shall comply with Section 1105.

**1105.2 Unit entrance.** At least one unit entrance shall be on a *circulation path* complying with Section 1105.5 from a public street or sidewalk, a dwelling unit driveway, or a garage.

**1105.3 Connected spaces.** A *circulation path* complying with Section 1105.5 shall connect the unit entrance complying with Section 1105.2 and with the spaces specified in Section 1105.4.

**1105.4 Interior spaces.** The entrance level shall include a toilet room or bathroom complying with Section 1105.6 and one *habitable* space with an area 70 square feet (6.5 m<sup>2</sup>) minimum. Where a food preparation area is provided on the entrance level, it shall comply with Section 1105.7.

**Exception:** A toilet room or bathroom shall not be required on an entrance level with less than 120 square feet (11.2 m<sup>2</sup>) of *habitable* space.

**1105.5 Circulation path.** *Circulation paths* shall comply with Section 1105.5.

**1105.5.1 Components.** The *circulation path* shall consist of one or more of the following components:

1. Walking surfaces with a slope not steeper than one unit vertical in 20 units horizontal (5 percent slope).
2. Doors and doorways.



3. *Ramps.*
4. Elevators
5. Platform lifts.

**1105.5.2 Walking surfaces.** Walking surfaces with slopes not steeper than one unit vertical in 20 units horizontal (5 percent slope) shall comply with Section 303.

**1105.5.2.1 Clear width.** The clear width of the *circulation path* shall be 36 inches (915 mm) minimum.

**1105.5.3 Doors and doorways.** Doors and doorways shall comply with Section 1105.5.3

**1105.5.3.1 Clear width.** Doorways shall have a clear opening width of 31<sup>3</sup>/<sub>4</sub> inches (805 mm) minimum. Clear opening width of swinging doors shall be measured between the face of the door and stop, with the door open 90 degrees.

**1105.5.3.2 Thresholds.** Thresholds shall comply with Section 303.

**Exception:** Thresholds at exterior sliding doors shall be permitted to be <sup>3</sup>/<sub>4</sub> inch (19 mm) maximum in height, provided they are beveled with a slope not steeper than one unit vertical in 2 units horizontal (50 percent slope).

**1105.5.4 Ramps.** *Ramps* shall comply with Section 405.

**Exception:** *Handrails*, intermediate *landings*, and edge protection shall not be required where the sides of ramp runs have a vertical drop off of <sup>1</sup>/<sub>2</sub> inch (12.7 mm) maximum within 10 inches (255 mm) horizontally of the ramp run.

**1105.5.4.1 Clear width.** The clear width of the *circulation path* shall comply with Section 403.4.

**1105.6 Toilet room or bathroom.** At a minimum, the toilet room or bathroom required by Section 1105.4 shall include a lavatory and a water closet. Reinforcement shall be provided for the future installation of grab bars at water closets. *Maneuvering clearances* around the water closet shall comply with Section 1104.11.3.1.2.

**1105.7 Food preparation area.** At a minimum, the food preparation area shall include a sink, a cooking appliance, and a refrigerator. Clearances between all opposing base cabinets, counter tops, appliances or walls within the food preparation area shall be 40 inches (1015 mm) minimum.

**Exception:** Spaces that do not provide a cooktop or conventional range shall be permitted to provide a clearance of 36 inches (915 mm) minimum.

**1105.8 Lighting controls and receptacle outlets.** Receptacle outlets and *operable parts* of lighting controls shall be located 15 inches (380 mm) minimum and 48 inches (1220 mm) maximum above the floor.

**Exception:** The following shall not be required to comply with Section 1105.8:

1. Receptacle outlets serving a dedicated use.
2. Controls mounted on ceiling fans and ceiling lights.
3. Floor receptacle outlets.
4. Lighting controls and receptacle outlets over countertops.

## **Section 1106**

### **Units with Communication Features**

**1106.1 General.** Units required to have communication features shall comply with Section 1106.

**1106.2 Unit smoke detection.** Where provided, unit smoke detection shall include audible notification complying with NFPA 72 listed in Section 106.2.7.

**1106.3 Building fire alarm system.** Where a building fire alarm system is provided, the system wiring shall be extended to a point within the unit in the vicinity of the unit smoke detection system.

**1106.4 Visible notification appliances.** Where provided within the unit as part of the unit smoke detection system or the building fire alarm system, visible notification appliances, shall comply with Section 1106.4.

**1106.4.1 Appliances.** Visible notification appliances shall comply with Section 702.

**1106.4.2 Activation.** All visible notification appliances provided within the unit for smoke detection notification shall be activated upon smoke detection. All visible notification appliances provided within the unit for building fire alarm notification shall be activated upon activation of the building fire alarm in the portion of the building containing the unit.

**1106.4.3 Interconnection.** The same visible notification appliances shall be permitted to provide notification of unit smoke detection and building fire alarm activation.

**1106.4.4 Prohibited use.** Visible notification appliances used to indicate unit smoke detection or building fire alarm activation shall not be used for any other purpose within the unit.

**1106.5 Unit primary entrance.** Communication features shall be provided at the unit primary entrance and shall comply with Section 1106.5.

**1106.5.1 Notification.** A hard-wired electric doorbell shall be provided. A button or switch shall be provided on the public side of the unit primary entrance. Activation of the button or switch shall initiate an audible tone and a visible notification within the unit. Controls shall be provided to deactivate the doorbell notification.

**1106.5.2 Identification.** A means for visually identifying a visitor without opening the unit entry door shall be provided. Peepholes, where used, shall provide a minimum 180-degree range of view.

**1106.6 Site, building, or floor entrance.** Where a system permitting voice communication between a visitor and the occupant of the unit is provided at a location other than the unit entry door, the system shall comply with Section 1106.6.

**1106.6.1 Public or common-use interface.** The public or common-use system interface shall include the capability of supporting voice and *TTY* communication with the unit interface.

**1106.6.2 Unit interface.** The unit system interface shall include a telephone jack capable of supporting voice and *TTY* communication with the public or common-use system interface.

**1106.7 Closed-circuit communication systems.** Where a closed-circuit communication system is provided, the public or common-use system interface shall comply with Section 1106.6.1, and the unit system interface in units required to have communication features shall comply with Section 1106.6.2.