ICC A117.1 STANDARD

SECOND PUBLIC REVIEW DRAFT

SUPPLEMENT

NOVEMBER 7, 2014

ICC/ANSI A117.1 STANDARD DEVELOPMENT - 2015 EDITION

ICC A117.1 Standard – Accessible and Usable Buildings and Facilities
Second Public Review Draft - Supplement
November 7, 2014

This document is an informational companion to the Second Public Review Draft of the 2015 edition of the ICC A117.1 Standard. The intent of the Supplement is to show the approved changes in context with the balance of the standard. The Second Public Review Draft – Supplement is an unofficial merging of the approved changes into the Standard as reflected in both the First and Second Public Review Drafts. Where there are multiple changes to one section, they are shown merged as would eventually occur in the final standard when published.

Legislative format: The changes are shown in a legislative format. Text being removed is ~~crossed out~~; text being added is underlined.

Font color:

1. Text shown in the green font reflects changes approved by the A117.1 Committee that were included in the First Public Review Draft.
2. Text shown in blue font reflects changes approved by the Committee and are the changes of the Second Public Review Draft. Public Comments can be submitted on the Second Public Review Draft – see that document.
3. Text shown in red font reflects editorial revisions, primarily of section references, which result from the approved changes.

Proposal Numbers: Each change is based on a numbered proposal considered by the committee. The proposal number, for example (9-7-12) is placed after the text created by the proposal. Public comments on those original changes will be followed by PC designation, for example (9-7-12 PC2). To find information in the related background reports, use the proposal number and public comment numbers to find the relevant information.

Figures: This is a working document provided for information purposes. It does not contain existing or proposed figures. Such figures are not the standard, but reflect the text of the standard. They are essentially editorial and will be added prior to publication of the standard.

For further information please see the following documents. The documents are found the A117.1 Standard page of the ICC website.
http://www.iccsafe.org/cs/standards/A117/Pages/default.aspx

1. Second Public Review Draft
2. Second Public Review Draft – Background Report
3. First Public Review Draft Background Report.

Providing Public Comment.

Comments on the Second Public Review draft will be accepted through Monday, December 22, 2014. Comments must be provided on the ICC Standards Public Comment Form. The form can be found at the ICC website as follows: http://www.iccsafe.org:8888/cs/standards/Pages/publicforms.aspx

Comments will only be accepted on the changes shown in the Second Public Review Draft. Public comments on this Supplemental document will not be accepted. For further information regarding submitting comments, please see the Second Public Review Draft Document.

If you have questions, please direct them to Kermit Robinson, krobinson@iccsafe.org

Closing Date for Public Comments on the Second Public Review Draft: Monday, December 22,' 2014.

Chapter 1. Application and Administration

101 Title

This document shall be known as Accessible and Usable Buildings and Facilities, hereinafter referred to as 'this standard'. (1-1-12)

~~101~~ 102 Purpose

The technical criteria in Chapters 3 through ~~9~~ 10, Sections ~~1002, 1003 and 1006 and Chapter 11~~ 1102, 1103 and 1106 of this standard make sites, facilities, buildings 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, facility, building, or element.

Section ~~1004~~ 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 ~~1005~~ 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.

~~101.1~~ 102.1 **Applicability.** Sites, facilities, buildings, and elements required to be accessible shall comply with the applicable provisions of Chapters 3 through 10 ~~9 and Chapter 11~~. Dwelling units and sleeping units shall comply with the applicable provisions of Chapter ~~10~~ 11.

~~102~~ 103 Human Factor ~~Anthropometric~~ Provisions

The technical criteria in this standard are based on body sizes and functional abilities of adults and, in those sections where specifically noted, children. ~~They provide minimum conditions of accessibility. adult dimensions and anthropometrics. This standard also contains technical criteria based on children's dimensions and anthropometrics for drinking fountains, water closets, toilet compartments, lavatories and sinks, dining surfaces, work surfaces and benches.~~ (1-4-12) **(1-4-12 PC1)**

~~103~~ 104 Compliance Alternatives

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.

~~104~~ 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. (1-7-12)

105.3 ~~Dimensions.~~ ~~Dimensions that are not stated as "maximum" or "minimum" are absolute. All dimensions are subject to conventional industry tolerances.~~ **Dimension tolerances.** All dimensions are subject to conventional industry tolerances except where the requirement is a range with stated minimum and maximum end points. (1-5-12)

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

105.5 Floor or Floor Surface. The terms floor or floor surface refer to the finish floor surface or ground surface, as applicable.

105.6 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.

~~105~~ 106 Referenced Documents

106.1 General. The documents listed in Section ~~105.2~~ 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.

~~105.2~~ 106.2 Documents.

Staff note: When the standard is published – these referenced documents will be placed in alphabetical order with section numbers accordingly.

~~105.2.11~~ 106.2.1 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)

106.2.2 Hearing aids – Magnetic field strength in audio-frequency induction loops for hearing aids operating with an induction pickup coil IEC 60118.4-2007 (International Electrotechnical Commission, 3 rue de Varenbe, PO Box 131, 1211 Geneva 20, Switzerland.) (7-19-12)

~~106.2.3 Light reflectance value (LRV) of a surface. Method of Test.~~ ~~BS 8493:2008 + A1: 2010 (British Standards Institution, 389 Chiswick High Road, London W4 4AL, United Kingdom).~~ (7-1-12 PC3)

~~105.2.1~~ 106.2.4 Manual on Uniform Traffic Control Devices: MUTCD ~~2003~~ 2009 (The Federal Highway Administration, Office of Transportation Operations, Room 3408, 400 7th Street, S.W., Washington, DC 20590). (1-8-12)

Convention	Description
36 915	dimension showing English units (in inches unless otherwise specified) above the line and SI units (in millimeters unless otherwise specified) below the line
6 150	dimension for small measurements
33 – 36 840 – 915	dimension showing a range with minimum – maximum
min	minimum
max	maximum
>	greater than
≥	greater than or equal to
<	less than
≤	less than or equal to
	boundary of clear floor space or maneuvering clearance
℄	centerline
	a permitted element or its extension
	direction of travel or approach
	a wall, floor, ceiling or other element cut in section or plan
	a highlighted element in elevation or plan
	location zone of element, control or feature

Fig. ~~104.3~~ 105.4
Graphic Convention for Figures

~~105.2.2~~ 106.2.5 **National Fire Alarm and Signaling Code:** NFPA 72-~~2007~~ 2010 (National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269-9101). (1-8-12)

~~105.2~~ 106.2.6 **Performance Criteria for Accessible Communications Entry Systems.** DASMA 303-2006. (Door and Access Systems Manufacturers Association, 1300 Sumner Avenue, Cleveland, OH 44115-2851)

~~105.2.3~~ 106.2.7 **Power Assist and Low Energy Power Operated Doors:** BHMA A156.19- 2007 (Builders Hardware Manufacturers' Association, 355 Lexington Avenue, 15th Floor, New York, NY 10017)

~~105.2.4~~ 106.2.8 **Power Operated Pedestrian Doors:** ANSI/ BHMA A156.10-~~2005~~ 2011(Builders Hardware Manufacturers' Association, 355 Lexington Avenue, 15th Floor, New York, NY 10017). (1-8-12)

~~105.2.5~~ 106.2.9 **Safety Code for Elevators and Escalators:** ASME A17.1- ~~2007~~ 2013/CSA B44-~~07~~ 13 (American Society of Mechanical Engineers International, Three Park Avenue, New York, NY 10016-5990) (1-9-12)

~~105.2.6~~ 106.2.10 **Safety Standard for Platform Lifts and Stairway Chairlifts:** ASME A18.1-~~2005~~ 2011 (American Society of Mechanical Engineers International, Three Park Avenue, New York, NY 10016-5990). (1-8-12)

~~105.2.10~~ 106.2.11 **Standard Consumer Safety Performance Specification for Playground Equipment for Public Use** ASTM F 1487-01 (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959)

~~105.2.9~~ 106.2.12 **Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment** ASTM F 1292-04 (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959).

106.2.13 Standard Laboratory Test Method for Determination of Forces and Motions Required to Activate Operable Parts of CW and AW Class Operable Windows, Sliding Glass Doors and Terrace Doors in Accessible Spaces, AAMA 513 - 12 (AAMA, 1827 Walden Office Square, Suite 550, Schaumburg, IL 60173-4268). (4-23-12 PC2)

106.2.14 IES Handbook 10th Edition, (Illuminating Engineering Society, 120 Wall Street, Floor 17, New York, NY 10005-4001). (8-6-12 PC1)

106.2.15 Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods ASTM E 2235-04(2012) (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959). (8-15-12 PC5)

~~**105.2.8 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment** ASTM F 1292-99. (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959)~~ (1-8-12)

~~106~~ 107 **Definitions**

~~106.1~~ 107.1 **General.** For the purpose of this standard, the terms listed in Section ~~106.5~~ 107.5 have the indicated meaning.

~~106.2~~ 107.2 **Terms Defined in Referenced Documents.** Terms specifically defined in a referenced document, and not defined in this section, shall have the specified meaning from the referenced document.

~~106.3~~ 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.

~~106.4~~ 107.4 **Interchangeability.** Words, terms, and phrases used in the singular include the plural, and those used in the plural include the singular.

~~106.5~~ 107.5 **Defined Terms.**

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. (1-10-12)

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. (1-10-12)

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 1:20 or less. **(4-42-12)**

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.

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 and younger.

circulation path: An exterior or interior way of passage ~~from one place to another for pedestrians~~ provided for pedestrian travel, including but not limited to, walks, hallways, courtyards, elevators, platform lifts, ramps, stairways, and landings. (4-38-12)

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. (4-38-12)

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 line. A line at the face of the curb that marks the transition between curb and the gutter, street or highway. (4-42-12)

curb ramp. A short ramp cutting through a curb or built up to it. ~~Curb ramps can be perpendicular or parallel, or a combination of parallel and perpendicular ramps.~~ (4-42-12 PC2)

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: 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.

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. (4-38-12)

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. (3-6-12 PC2)

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

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. (4-42-12)

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.

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.

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

operable part: A component of an element used to insert or withdraw objects, or to activate, deactivate, or adjust the element.

pictogram: A pictorial symbol that represents activities, facilities, or concepts.

~~**place of religious worship.** A building or a portion thereof intended for the performance of religious services.~~ (1-10-12 PC2)

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.

ramp: A walking surface that has a running slope steeper than 1:20.

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.

~~**space.** A definable area, such as a room, toilet room, hall, *assembly area*, *entrance*, storage room, alcove, courtyard, or lobby.~~ (1-10-12 PC1)

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*. (1-10-12)

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.

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 ~~105.2.10~~ 106.2.11, 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*.

(1-10-12)

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

wheelchair charging area: A clear floor area where people with disabilities can recharge their wheelchair batteries. (10-10-12)

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

201 General

This standard provides technical criteria for making sites, facilities, buildings, 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; specific site and building elements; and to multiple elements or spaces provided within a site or building.

202 Dwelling and Sleeping Units

Chapter ~~10~~ 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 accessible 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.

203 Administration

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

Chapter 3. Building Blocks

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

302 Floor Surfaces

302.1 General. Floor surfaces shall be stable, firm, and slip resistant, and shall comply with Section 302. Changes in level in floor surfaces shall comply with Section 303.

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 $^{1}/_{2}$ inch (13 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.

302.3 Openings. Openings in floor surfaces shall be of a size that does not permit the passage of a $^{1}/_{2}$ inch (13 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.

303 Changes in Level

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

~~**EXCEPTIONS:**~~

~~1. Animal containment areas not exempted by Section 1001.2.1 shall not be required to comply with this section. (3-1-12)~~

~~2. Within areas of sports activity exempted in Chapter 10, the changes in level shall not be required to comply with this section. (3-1-12)~~

303.2 Vertical. Changes in level of 1/4 inch (6.4 mm) maximum in height shall be permitted to be vertical.

303.3 Beveled. ~~Changes in level greater than 1/4 inch (6.4 mm) in height and not more than 1/2 inch (13 mm) maximum in height shall comply with one of the following:~~

~~1. The change in level shall be beveled with a slope not steeper than 1:2.~~

~~2. The change in level shall be a combination of vertical change in level of ¼ inch (6.4 mm) maximum below a bevel with a slope not steeper than 1:2.~~

Changes in level greater than 1/4 inch (6.4 mm) in height and not more than 1/2 inch (13 mm) maximum in height shall be beveled with a slope not steeper than 1:2. (3-4-12 PC4/PC5)

303.4 Ramps. Changes in level greater than $^{1}/_{2}$ inch (13 mm) in height shall be ramped and shall comply

with Section 405 or 406.

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 have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the turning space.

~~**EXCEPTION:** Slopes not steeper than 1:48 shall be permitted.~~ (3-5-12)

304.3 Size. Turning spaces shall comply with Section 304.3.1 or 304.3.2.

304.3.1 Circular Space.

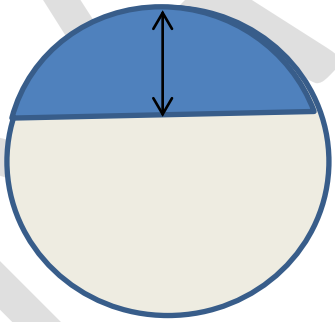
304.3.1.1 New buildings. In new buildings, the turning space shall be a circular space with a ~~60~~ 67 inch (~~1525~~ 1700 mm) minimum diameter. The turning space shall be permitted to include knee and toe clearance complying with Section 306. Where the turning space includes knee and toe clearances under an obstruction, the overlap shall comply with all of the following: . (3-6-12) (3-8-12)

1. The depth of the overlap shall not be more than 10 inches (255 mm), and

2. The depth shall not exceed the depth of the knee and toe clearances provided, and

3. The overlap shall be permitted only within the turning circle area shown shaded in Figure 304.3.1. (3-8-12)

Figure 304.3.1



***Staff note**: Figure 304.3.1 is illustrative of the new text of Section 304.3.1.1, however it is not drawn to accurately reflect the dimensions specified in the text. It will be revised before publication.*

304.3.1.2 Existing buildings. In existing buildings, the turning space shall be a circular space with a 60 inch (1525 mm) minimum diameter. The turning space shall be permitted to include knee and toe clearance complying with Section 306. (3-6-12 PC2)

304.3.2 T-Shaped Space. ~~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. The turning space shall be permitted to include knee and toe clearance complying with Section 306 only at the end of either the base or one arm.~~

304.3.2 T-Shaped Space.

304.3.2.1 New construction. In new buildings, 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 ~~be~~ ~~16~~ 12 inches (~~405~~ 305 mm) minimum ~~in each direction~~ from each side of the base and the base shall extend ~~24~~ 20 inches (~~610~~ 510 mm) minimum from each arm. (3-9-12)(3-9-12 PC3)

Exception: The turning space shall be permitted to include knee and toe clearance complying with Section 306 only at the end of either the base or one arm. (3-9-12 PC3)

~~T-TURN DIMENSIONS~~

	~~Rectangular Space~~		~~Widths~~		~~Chamfer~~	~~Length Clear of Obstructions~~	
	~~Width~~	~~Depth~~	~~Arms~~	~~Base~~		~~Arms~~	~~Base~~
~~1~~	~~68~~	~~60~~	~~36~~	~~36~~	~~8~~	~~16~~	~~24~~
~~2~~	~~64~~	~~60~~	~~38~~	~~42~~		~~11~~	~~22~~
~~3~~	~~64~~	~~60~~	~~40~~	~~40~~		~~12~~	~~20~~

(3-9-12 PC3)

304.3.2.2 Existing buildings. In existing buildings, 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. The turning space shall be permitted to include knee and toe clearance complying with Section 306 only at the end of either the base or one arm. (3-6-12 PC2)

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

305 Clear Floor Space

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

305.2 Floor Surfaces. Floor surfaces of a clear floor space shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the clear floor space.

~~**EXCEPTION:** Slopes not steeper than 1:48 shall be permitted.~~ (3-5-12)

305.3 Size. The clear floor space shall be ~~48 inches (1220 mm)~~ 52 inches (1320 mm) minimum in length and 30 inches (760 mm) minimum in width. (3-13-12)
305.3 Size.

305.3.1 New buildings. In new buildings, the clear floor space shall be ~~48 inches (1220 mm)~~ 52 inches

(1320 mm) minimum in length and 30 inches (760 mm) minimum in width. (3-13-12)

305.3.2 Existing buildings and within new Type B units. In existing construction and within new Type B units, the clear floor space shall be 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width. (3-6-12 PC2)

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, the clear floor space shall be positioned for either forward or parallel approach to an element.

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

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

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

305.7.2 Forward Approach.

305.7.2.1 New buildings. In new buildings, where the clear floor space is positioned for a forward approach, the alcove shall be 36 inches (915 mm) minimum in width where the depth exceeds ~~24~~ 20 inches (~~610~~ 510 mm). (3-13-12)

> **Exception:** Alcoves in a kitchen or bathroom, formed by cabinets or appliances and providing for access to a sink, lavatory or accessible work surface, shall be 36 inches (915 mm) minimum in width where the depth exceeds 24 inches (610 mm).(3-13-12 PC4)

305.7.2.2 Existing buildings and within new Type B units. In existing buildings and within new Type B units, where the clear floor space is positioned for a forward approach, the alcove shall be 36 inches (915 mm) minimum in width where the depth exceeds 24 inches (610 mm). (3-6-12PC2)

306 Knee and Toe Clearance

306.1 General. Where space beneath an element is included as part of clear floor space at an element, clearance at an element, or a turning space, the 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.

306.2.1 General. 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.

306.2.2 Maximum Depth. Toe clearance shall be permitted to extend 25 inches (635 mm) maximum under an element.

306.2.3 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.

306.2.4 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.

306.2.5 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.

306.3.2 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.

306.3.3 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.

306.3.4 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.

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

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 the circulation path.

EXCEPTION: Handrails shall be permitted to protrude 4 $^{1}/_{2}$ inches (115 mm) maximum.

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 the 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.

307.4 Vertical Clearance. Vertical clearance shall be 80 inches (2030 mm) minimum in height. Rails or other barriers shall be provided where the vertical clearance is less than 80 inches (2030 mm) in height. The leading edge of such rails or barrier shall be located 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.

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

308 Reach Ranges

308.1 General. Reach ranges shall comply with Section 308.

308.2 Forward Reach.

308.2.1 Unobstructed.

308.2.1.1 New buildings. In new buildings, 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 ~~23~~ inches (380 ~~585~~ mm) minimum above the floor. (3-20-12 PC1, PC3 through PC6)

308.2.1.2 Existing buildings and within new Type B units. In existing buildings and within new Type B units, 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. (3-6-12 PC2)

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. ~~Where the reach depth over the obstruction is more than 20 inches (510 mm) and 25 inches (635 mm) or less, the high forward reach shall be 44 inches (1120 mm) maximum above the floor.~~ 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). (3-20-12)(3-21-12 PC2)

308.3 Side Reach.

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 an existing curbs shall be permitted at 54 inches (1370 mm) maximum above the floor. (3-23-12)

3. Mailboxes serving Type B dwelling units and complying with Section 1101.2 shall be permitted an unobstructed high side reach 54 inches (1370 mm) maximum above the floor. (3-24-12 PC1)

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.

~~**EXCEPTION:** At washing machines and clothes dryers, the height of the obstruction shall be permitted to be 36 inches (915 mm) maximum above the floor.~~ (6-69-12)

309 Operable Parts

309.1 General. Operable parts required to be accessible shall comply with Section 309.

EXCEPTIONS:

1. Receptacle outlets serving a dedicated use.

2. Where two or more receptacle outlets are provided in a kitchen above a length of counter top that is uninterrupted by a sink or appliance, one receptacle outlet shall not be required to comply with

Section 309.

3. Floor receptacle outlets.

4. HVAC diffusers.

5. Controls mounted on ceiling fans.

6. Where redundant controls other than light switches are provided for a single element, one control in each space shall not be required to be accessible.

7. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures. (3-27-12)

8. Firefighting devices, such as hose connections, valve controls, gauges, 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. (5-24-12 PC1)

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

309.3 Height. Operable parts shall be placed 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

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.

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: Walking surfaces with a running slope not steeper than 1:20, doors and doorways, gates, ramps, curb ramps excluding the flared sides, blended transitions, elevators, and platform lifts. All components of an accessible route shall comply with the applicable portions of this standard. (4-2-12) (4-11-12)

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

403 Walking Surfaces

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

403.2 Floor Surface. Floor surfaces shall comply with Section 302.

403.3 Slope. The running slope of walking surfaces shall not be steeper than 1:20. The cross slope of a walking surface shall not be steeper than 1:48.

403.4 Changes in Level. Changes in level shall comply with Section 303.

403.5 Clear width. The clear width of an accessible route shall comply with Section 403.5.1. 403.5.2, 403.5.3 or 403.5.4 as applicable. (4-5-12)

403.5.1 General. The clear width of an accessible route shall be 36 inches (915 mm) minimum. The clear width of an exterior accessible route shall be 48 inches (1220 mm) minimum. (4-7-12) (4-5-12)

EXCEPTIONS:

1. In new buildings, 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~~ 52 inches (~~1220~~ 1320 mm) minimum in length and 36 inches (915 mm) minimum in width. (4-6-12)

2. In existing buildings and within new Type B units, 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. (3-6-12 PC2)

3. The clear width of a circulation path of a Type C dwelling unit shall be 36 inches (915 mm) minimum. (4-7-12 PC1)

4. The clear width of an exterior accessible route located within seating areas shall be 36 inches

(915 mm) minimum. (4-7-12 PC1)

~~403.5.1~~ 403.5.2 **Clear Width at 180 Degree Turn**.

403.5.2.1 New buildings. In new buildings, where an accessible route makes a 180 degree turn around an object that is ~~less~~ equal to or greater 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~~ 52 inches (1320 mm) in width, the clear widths in the turn shall comply with Section 403.5.1. Where an accessible route makes a 180 degree turn around an object that is less than 52 inches (1320 mm) inches in width, the clear widths approaching the turn, during the turn and leaving the turn, shall be one of the following sets of dimensions: (4-5-12)

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 (1065 mm) inches minimum, during width is 48 inches (1220 mm) minimum, and leaving width is 42 (1065 mm) inches 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. (4-8-12)

~~**EXCEPTION:** Section 403.5.1 shall not apply where the clear width during the turn is 60 inches (1525 mm) minimum.~~ (4-8-12)

403.5.2.2 Existing buildings and within new Type B units. In existing buildings and within new Type B units, 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.

EXCEPTION: Section 403.5.1 shall not apply where the clear width during the turn is 60 inches (1525 mm) minimum. (3-6-12 PC1)

403.5.3 Clear Width at 90 Degree Turn.

403.5.3.1 New buildings. In new buildings, 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 (1016 mm) minimum in width The width of each leg of the turn shall be maintained for 28 inches minimum from the inner corner.

2. Where the interior corners of the turn are chamfered for 8 inches minimum (205 mm) along both walls, both legs of the turn shall be 36 inches (915 mm) minimum in width. (4-9-12) (4-10-12)

~~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. (4-10-12)

4. Where one leg of the turn is 44 inches (1115 mm) minimum in width, the other shall be permitted to be 36 inches (915 mm) minimum in width. (4-10-12)

403.5.3.2 Existing buildings and within Type B units. In existing buildings and within new Type B units, 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. (3-6-12 PC2)

~~403.5.4~~ ~~403.5.2~~ **Passing Space.**

403.5.4.1 New construction. In new buildings, 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 complying with Section 304.3.2, provided the base and arms of the T-shaped space extend ~~48~~ 52 inches (~~1220~~ 1320 mm) minimum beyond the intersection. (4-6-12) (4-5-12)

403.5.4.2 Existing buildings and within new Type B units. In existing buildings and within new Type B units, 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 complying with Section 304.3.2, provided the base and arms of the T-shaped space extend 48 inches (1220 mm) minimum beyond the intersection. (3-6-12 PC2)

403.6 Handrails. Where handrails are required at the side of a corridor they shall comply with Sections 505.4 through 505.9.

404 Doors, ~~and~~ Doorways and Gates

404.1 General. **Doors, ~~and~~ doorways and gates** that are part of an accessible route shall comply with Section 404. (4-11-12)

> **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, 404.3.2 and 404.3.4 through 404.3.6. (4-11-12)

404.2 Manual Doors, Doorways and Manual Gates. Manual doors and doorways, and manual gates, intended for user passage ~~including ticket gates~~, shall comply with Section 404.2. (4-11-12)

> ~~**EXCEPTION:** Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with Sections 404.2.6, 404.2.7, and 404.2.8.~~ (4-11-12)

404.2.1 Double-Leaf Doors and Gates. At least one of the active leaves of doorways with two leaves shall comply with Sections 404.2.2 and 404.2.3.

404.2.2 Clear 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 into the clear opening width between 34 inches (865 mm) and 80 inches (2030 mm) 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 (16 mm) maximum into the required clear opening width shall be permitted for the latch side stop.

404.2.3 Maneuvering Clearances. Minimum maneuvering clearances at doors and gates shall comply with Section 404.2.3. Maneuvering clearances ~~and~~ shall include the full clear opening width of the doorway and the required latch side or hinge side clearance. ~~Required door maneuvering clearances shall not include knee and toe clearance.~~ (4-11-12) (4-13-12)

404.2.3.1 Floor Surface. Floor surface within the maneuvering clearances shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the maneuvering clearances. (3-5-12)

404.2.3.2 Swinging Doors and Gates. Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.3.2. (4-11-12)

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**	**Parallel to Doorway (beyond latch unless noted)**
From front	Pull	60 inches (1525 mm)	18 inches (455 mm)
From front	Push	~~48~~ 52 inches (~~1220~~ 1320 mm) [5]	0 inches (0 mm)[3]
From hinge side	Pull	60 inches (1525 mm)	36 inches (915 mm)
From hinge side	Pull	54 inches (1370 mm)	42 inches (1065 mm)
From hinge side	Push	42 inches (1065 mm)[1]	22 inches (560 mm)[3 & 4]
From latch side	Pull	48 inches (1220 mm)[2]	24 inches (610 mm)
From latch side	Push	42 inches (1065 mm)[2]	24 inches (610 mm)

[1]Add 6 inches (150 mm) if closer and latch provided.
[2]Add 6 inches (150 mm) if closer provided.
[3]Add 12 inches (305 mm) beyond latch if closer and latch provided.
[4]Beyond hinge side. (4-11-12) (4-14-12)(4-15-12)

1. In existing buildings and within new Type B buildings the dimension perpendicular to the door for the front direction on the push side shall be 48 inches (122 mm) minimum. (3-6-12 PC2)

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	**Parallel to Doorway (beyond stop or latch side unless noted)**
From front	~~48~~ 52 inches (~~1220~~ 1320 mm) [2]	0 inches (0 mm)
From nonlatch side	42 inches (1065 mm)	22 inches (560 mm)[1]
From latch side	42 inches (1065 mm)	24 inches (610 mm)

[1]Beyond pocket or hinge side. (4-15-12)

2. In existing buildings and within new Type B buildings the dimension perpendicular to the door for the front direction shall be 48 inches (122 mm) minimum. (3-6-12 PC2)

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. (4-11-12)

Table 404.2.3.4—Maneuvering Clearances for Doorways without Doors

Approach Direction	MINIMUM MANEUVERING CLEARANCES Perpendicular to Doorway
From front	~~48~~ 52 inches (~~1220~~ 1320 mm) [1]
From side	42 inches (1065 mm)

(4-15-12)

1. In existing buildings and within new Type B buildings the dimension perpendicular to the doorway for the front direction shall be 48 inches (122 mm) minimum. (3-6-12 PC2)

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, maneuvering clearances for a forward approach shall be provided. (4-11-12)

404.2.4 Thresholds. ~~If provided~~, Thresholds at doorways shall be $^{1}/_{2}$ inch (13 mm) maximum in height. Raised thresholds and changes in level at doorways shall comply with Sections 302 and 303.

EXCEPTION: An existing or altered threshold shall be permitted to be $^{3}/_{4}$ inch (19 mm) maximum in height provided that the threshold has a beveled edge on each side with a maximum slope of 1:2 for the height exceeding $^{1}/_{4}$ inch (6.4 mm).

404.2.5 Two Doors and 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 shall provide a turning space complying with Section 304. (4-11-12)

404.2.6 Door and Gate Hardware. Handles, pulls, latches, locks, and other operable parts on accessible 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 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. (4-23-12 PC1)

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. (4-11-12)

~~**EXCEPTION:** Locks used only for security purposes and not used for normal operation shall not be required to comply with Section 404.2.6.~~ (4-11-12)

404.2.7 Closing Speed. Door and gate closing speed shall comply with 404.2.8. (4-11-12)

404.2.7.1 Door Closers and Gate Closers. Door closers and gate closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to an open position of 12 degrees shall be 5 seconds minimum. (4-11-12)

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. (4-11-12)

404.2.8 Door and Gate-Opening Force. Fire doors and doors 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 appropriate administrative authority. For other doors, the ~~The~~ force for pushing or pulling open doors or gates ~~other than fire doors~~ shall be as follows: (4-23-12) (4-11-12)(4-23-12 PC1)

1. Interior hinged doors and gates: 5.0 pounds (22.2 N) maximum. (4-11-12)
2. Sliding or folding ~~door~~ doors: 5.0 pounds (22.2 N) maximum.
3. Exterior sliding door: 10.0 pounds (45 N) maximum. (4-23-12 PC2)

Opening forces for exterior sliding doors shall be determined in accordance with AAMA 513. (4-23-12 PC2)

~~These forces do not apply to the force required to retract latch bolts or disengage other devices that hold~~

~~the door in a closed position.~~ (4-23-12 PC1)

EXCEPTION: The 5.0 pounds force 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. (4-23-12)

404.2.9 Door and Gate Surface. Door and gate surfaces within 10 inches (255 mm) of the floor, measured vertically, shall be a smooth surface on the push side extending the full width of the door or gate. Door and gate hardware, or any other obstruction or protrusion shall not be mounted in nor extend into the area within 10 inches (255 mm) of the floor. Parts creating horizontal or vertical joints in ~~such~~ the smooth surface shall be within $^{1}/_{16}$ inch (1.6 mm) of the same plane as the other. Cavities created by added kick plates shall be capped. (4-27-12) (4-11-12)

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 shoe with the top leading 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. (4-11-12)

4. The installation of kick plates on existing doors and gates without a smooth surface within 10 inches (255 mm) of the floor shall be permitted. The kick plates shall extend to 10 inches (255 mm) above the floor and no more than 1 inch (26 mm) from the sides and bottom of the door. Cavities created by such kickplates shall be capped. (4-29-12)

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 or an adjacent sidelite 43 inches (1090 mm) maximum above the floor. (4-11-12)

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 Doors and Power-Assisted Doors and Gates. Automatic doors and automatic gates shall comply with Section 404.3. Full powered automatic doors and gates shall comply with ANSI/BHMA A156.10 listed in Section ~~105.2.4~~ 106.2.8. Power–assist doors and gates and low–energy automatic doors and gates shall comply with ANSI/BHMA A156.19 listed in Section ~~105.2.3~~.106.2.7 (4-11-12) (4-30-12) (4-31-12 PC1)

~~**EXCEPTION**: Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with Sections 404.3.2, 404.3.4, and 404.3.5.~~ (4-11-12)

404.3.1 Public Entrances. Where an automatic door is required at a building or facility public entrance, it shall be a full powered automatic door or a low-energy door. Where the entrance includes a vestibule that has exterior and interior entrance doors, at least one exterior door and one interior door in the vestibule shall be either a full powered automatic door or a low-energy door. (4-33-12)

~~**404.3.1**~~ **404.3.2 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.

~~**EXCEPTION:** Where automatic doors and gates remain open in the power-off condition, compliance with Section 404.2.3 shall not be required.~~

~~**404.3.2**~~ **404.3.3 Maneuvering Clearances**. Maneuvering clearances at power–assisted doors and gates

shall comply with Section 404.2.3. ~~Clearances at swinging automatic doors and gates without standby power and serving an accessible means of egress 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 doors and gates and full power automatic doors and gates that serve as part of the accessible means of egress. **(4-30-12 PC1)(4-11-12)(4-31-12 PC1)**

EXCEPTIONS:

1. ~~Where automatic doors and gates remain open in the power-off condition, compliance with Section 404.2.3 shall not be required.~~ (4-30-12 PC1)
2. Low-energy automatic doors and gates and full power automatic doors and gates that have standby power or battery back-up shall not be required to comply with this section.
3. Low-energy automatic doors and gates and full power automatic doors and gates that remain open in the power-off condition shall not be required to comply with this section.
4. Full power automatic sliding doors and gates that include a break-away feature shall not be required to comply with this section. **(4-31-12 PC1)**

~~404.3.3~~ 404.3.4 **Thresholds.** Thresholds and changes in level at doorways shall comply with Section 404.2.4.

~~404.3.4~~ 404.3.5 **Two Doors or Gates in Series**. Doors or gates in series shall comply with Section 404.2.5. (4-11-12)

EXCEPTIONS:

1. Where both doors or gates in a series are power assist doors, low energy automatic doors or full power automatic doors, the two doors and gates in a series shall not be required to provide a turning space between the doors. (4-31-12 PC1)

2. ~~Full power automatic doors in a series are not required to provide a turning space complying with Section 304.~~ **(4-34-12 PC1)**

404.3.5 404.3.6 ~~**Control Switches**~~. **Controls.** Manually operated ~~control switches~~ controls shall comply with Section 309. The clear floor space adjacent to the control ~~switch~~ shall be located beyond the arc of ~~the~~ door ~~swing~~ swings. **(4-34-12) (4-30-12)(4-31-12)**

~~404.3.6~~ 404.3.7 **Door and Gate Hardware.** Handles, pulls, latches, locks, and other operable parts shall comply with Section 404.2.6. (4-34-12)

~~404.3.6~~ 404.3.8 **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. (4-31-12)

405 Ramps

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

EXCEPTION: In assembly areas, aisle ramps adjacent to seating and not serving elements required to be on an accessible route shall not be required to comply with Section 405.

405.2 Slope. Ramp runs shall have a running slope greater than 1:20 and not steeper than 1:12.

EXCEPTION: In existing buildings or facilities, ramps shall be permitted to have slopes steeper than 1:12 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[1]	Maximum Rise
Steeper than 1:10 but not steeper than 1:8	3 inches (75 mm)
Steeper than 1:12 but not steeper than 1:10	6 inches (150 mm)

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

405.3 Cross Slope. Cross slope of ramp runs shall not be steeper than 1:48.

405.4 Floor Surfaces. Floor surfaces of ramp runs shall comply with Section 302.

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. (4-38-12)

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.

405.7.1 Slope. Landings shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the landings. (3-5-12)

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 ~~ramp~~ landings ~~shall be sized to provide a turning space complying with Section 304.3~~ shall have a clear landing 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum. (4-40-12)

405.7.5 Doorways. Where doorways are adjacent to a ramp landing, maneuvering clearances required by Sections 404.2.3 and 404.3.2 shall be permitted to overlap the landing area. Where a door that is subject to locking is located adjacent to a ramp landing, the landing shall be sized to provide a turning space complying with Section 304.3.

405.8 Handrails. Ramp runs with a rise greater than 6 inches (150 mm) shall have handrails complying with Section 505.

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 505. 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. (4-38-12)

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 406.3.

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 (13 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 the ramps provide access to the adjacent seats and aisle access ways.

405.9.1 Extended Floor Surface. The floor surface of the ramp run or ramp landing shall extend 12 inches (305 mm) minimum beyond the inside face of a railing complying with Section 505.

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 a minimum of 4 inches (100 mm) in height.

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.

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

~~**406 Curb Ramps (4-42-12)**~~

~~**406.1 General.** Curb ramps on accessible routes shall comply with Sections 406, 405.2, 405.3, and 405.10. **(4-42-12)**~~

~~**406.2 Counter Slope.** Counter slopes of adjoining gutters and road surfaces immediately adjacent to the curb ramp shall not be steeper than 1:20. The adjacent surfaces at transitions at curb ramps to walks, gutters and streets shall be at the same level. **(4-42-12)**~~

~~**406.3 Sides of Curb Ramps.** Where provided, curb ramp flares shall comply with Section 406.3. **(4-42-12)**~~

~~**406.3.1 Slope.** Flares shall not be steeper than 1:10. **(4-42-12)**~~

406 Curb Ramps and Blended Transitions (4-42-12)

406.1 General. Curb ramps and blended transitions on accessible route shall comply with Section 406. **(4-42-12)**

406.2 Perpendicular Curb Ramps. Perpendicular curb ramps shall comply with Sections 406.2 and 406.5. **(4-42-12)**

406.2.1 ~~Turning Space.~~ Landing. A landing 48 inches (1220 mm) minimum by 48 inches (1220 mm) minimum shall be provided at the top of the curb ramp and shall be permitted to overlap ~~other turning spaces~~ pedestrian routes and clear spaces. Where the turning space is constrained at the back-of-sidewalk, the ~~turning space~~ landing shall be 48 inches (1220 mm) minimum by 60 inches (1525 mm) minimum. The 60 inches (1525 mm) dimension shall be provided in the direction of the curb ramp run. The slope of the landing shall be 1:48 maximum in all directions. **(4-42-12) (4-42-12 PC1 and PC4)**

406.2.2 Running Slope. The running slope of the 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 the curb ramp shall be 1:20 minimum and 1:12 maximum ~~but shall not require~~ The curb

ramp run length shall not be required to exceed 15 feet (4570 mm). ~~The running slope of the turning space shall be 1:48 maximum.~~ **(4-42-12) (4-42-12 PC1 and PC4)**

406.2.3 Flared Sides. Where a pedestrian circulation path crosses the curb ramp, flared sides shall be provided and shall be sloped 10 percent maximum. **(4-42-12 PC3)**

406.3 Parallel Curb Ramps. Parallel curb ramps shall comply with Sections 406.3 and 406.5. **(4-42-12)**

406.3.1 ~~Turning Space.~~ ~~A turning space~~ **Landing.** A landing 48 inches (1220 mm) minimum by 48 inches (1220 mm) minimum shall be provided at the bottom of the curb ramp and shall be permitted to overlap ~~other turning spaces~~ pedestrian routes and clear spaces. Where the ~~turning space~~ landing is constrained on 2 or more sides, the turning space shall be 48 inches (1220 mm) minimum by 60 inches (1525 mm) minimum . The 60 inches (1525 mm) dimension shall be provided in the direction of the pedestrian street crossing. The slope of the landing shall be 1:48 maximum in all directions. **(4-42-12) (4-42-12 PC4)**

406.3.2 Running Slope. The running slope of the curb ramp shall be in-line with the direction of sidewalk travel. The running slope of the curb ramp shall be 1:20 minimum and 1:12 maximum ~~but shall not require~~ The curb ramp run length shall not be required to exceed 15 feet (4570 mm). minimum. ~~The running slope of the turning space shall be 1:48 maximum.~~ **(4-42-12) (4-42-12 PC1 and PC4)**

406.4 Blended Transitions. Blended transitions shall comply with Sections 406.4 and 406.5. **(4-42-12)**

406.4.1 Running Slope. The running slope of blended transitions shall be 1:20 maximum. **(4-42-12)**

406.5 Common Requirements. Curb ramps and blended transitions shall comply with Section 406.5. **(4-42-12)**

406.5.1 Width. The clear width of curb ramp runs (excluding any flared sides) and blended transitions~~, and turning spaces~~ shall be 48 inches (1220 mm) minimum. **(4-42-12) (4-42-12 PC4)**

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 ramp runs and ~~turning spaces~~ landings. Surface slopes that meet at grade breaks shall be flush. **(4-42-12) (4-42-12 PC1 and PC4)**

406.5.3 Cross Slope. The cross slope of curb ramps~~,~~ and blended transitions~~, and turning spaces~~ shall be 1:48 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. **(4-42-12) (4-42-12 PC4)**

406.5.4 Counter Slope. The counter slope of the gutter or street at the foot of curb ramp runs, blended transitions and ~~turning spaces~~ landings shall be 1:20 maximum. **(4-42-12) (4-42-12 PC4)**

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. **(4-42-12)**

~~406.3.2~~ 406.5.6 Marking. If curbs adjacent to the ramp flares are painted, the painted surface shall extend along the flared portion of the curb.

~~**406.4 Width.** Curb ramps shall be 36 inches (915 mm) minimum in width, exclusive of flared sides. **(4-42-12)**~~

~~**406.5 Floor Surface.** Floor surfaces of curb ramps shall comply with Section 302. **(4-42-12)**~~

406.5.7 ~~406.6~~ 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.

~~**406.7 Landings.** Landings shall be provided at the tops of curb ramps. The clear length of the landing shall be 36 inches (915 mm) minimum. The clear width of the landing shall be at least as wide as the curb ramp, excluding flared sides, leading to the landing.~~ **(4-42-12)**

~~**EXCEPTION:** In alterations, where there is no landing at the top of curb ramps, curb ramp flares shall be provided and shall not be steeper than 1:12.~~ **(4-42-12)**

406.5.9 ~~**406.8**~~ **Obstructions.** Curb ramps shall be located or protected to prevent their obstruction by parked vehicles.

406.5.10 ~~**406.9**~~ **Handrails.** Handrails shall not be required on curb ramps.

~~**406.10 Diagonal Curb Ramps.** Diagonal or corner-type curb ramps with returned curbs or other well-defined edges shall have the edges parallel to the direction of pedestrian flow. The bottoms of diagonal curb ramps shall have 48 inches (1220 mm) minimum clear space outside active traffic lanes of the roadway. Diagonal curb ramps provided at marked crossings shall provide the 48 inches (1220 mm) minimum clear space within the markings. Diagonal curb ramps with flared sides shall have a segment of curb 24 inches (610 mm) minimum in length on each side of the curb ramp and within the marked crossing.~~ **(4-42-12)**

~~**406.11 Islands.** Raised islands in crossings shall be a cut-through level with the street or have curb ramps at both sides. Each curb ramp shall have a level area 48 inches (1220 mm) minimum in length and 36 inches (915 mm) minimum in width at the top of the curb ramp in the part of the island intersected by the crossings. Each 48-inch (1220 mm) by 36-inch (915 mm) area shall be oriented so the 48-inch (1220 mm) length is in the direction of the running slope of the curb ramp it serves. The 48-inch (1220 mm) by 36-inch (915 mm) areas and the accessible route shall be permitted to overlap.~~ **(4-42-12)**

~~**406.12 Detectable Warnings at Raised Marked Crossings.** Marked crossings that are raised to the same level as the adjoining sidewalk shall be preceded by a detectable warning 24 inches (610 mm) in depth complying with Section 705. The detectable warning shall extend the full width of the marked crossing.~~ **(4-44-12)**

~~**406.13 Detectable Warnings at Curb Ramps.** Where detectable warnings are provided on curb ramps, they shall comply with Sections 406.13 and 705.~~ **(4-44-12)**

~~**406.13.1 Area Covered.** Detectable warnings shall be 24 inches (610 mm) minimum in depth in the direction of travel. The detectable warning shall extend the full width of the curb ramp or flush surface.~~ **(4-44-12)**

~~**406.13.2 Location.** The detectable warning shall be located so the edge nearest the curb line is 6 inches (150 mm) minimum and 8 inches (205 mm) maximum from the curb line.~~ **(4-44-12)**

~~**406.14 Detectable Warnings at Islands or Cut-through Medians.** Where detectable warnings are provided on curb ramps or at raised marked crossings leading to islands or cut-through medians, the island or cut-through median shall be provided with detectable warnings complying with Section 705, that are 24 inches (610 mm) in depth, and extend the full width of the pedestrian route or cut-through. Where such island or cut-through median is less than 48 inches (1220 mm) in depth, the entire width and depth of the pedestrian route or cut-through shall have detectable warnings.~~ **(4-42-12)**

~~**406.12**~~ **406.6 Where Detectable Warnings are Required.** Where detectable warning surfaces are provided, they shall comply with Section 705. (4-44-12 PC3)

406.7 Required Locations for Detectable Warning Surfaces. Detectable warning surfaces shall be provided at the following locations on pedestrian access routes and at transit stops: (4-44-12 PC3)

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

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.

Exception: Detectable warning surfaces are not 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. (4-44-12)

407 Elevators

407.1 General. Elevators shall comply with Section 407 and ASME A17.1/CSA B44 listed in Section ~~105.2.5~~ 106.2.9. Elevators shall be passenger elevators as classified by ASME A17.1/CSA B44. Elevator operation shall be automatic.

407.2 Elevator Landing Requirements. Elevator landings shall comply with Section 407.2.

407.2.1 Call Controls. Where elevator call buttons or keypads are provided, they shall comply with Sections 407.2.1 and 309.4. Call 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.

407.2.1.1 Height. Call buttons and keypads shall be located within one of the reach ranges specified in Section 308, measured to the centerline of the highest operable part.

EXCEPTION: Existing call buttons and existing keypads shall be permitted to be located 54 inches (1370 mm) maximum above the floor, measured to the centerline of the highest operable part.

407.2.1.2 Size. Call buttons shall be $^{3}/_{4}$ inch (19 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 complying with Section 305 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, provided a visible signal and audible tones and verbal announcements complying with Section 407.2.1.7 are provided.

2. Existing elevators shall not be required to comply with Section 407.2.1.5.

407.2.1.6 Keypads. Where keypads are provided, keypads shall be in a standard telephone keypad arrangement and shall comply with Section 407.4.7.2.

407.2.1.7 Destination-oriented Elevator Signals. Destination-oriented elevators shall be provided with a visible signal and 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 a function button. The function button shall be identified by the International Symbol for Accessibility and a raised indication. The International Symbol for Accessibility, complying with Section 703.6.3.1, shall be $^{5}/_{8}$ inch (16 mm) 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 function button shall be located immediately below the keypad arrangement or floor buttons.

407.2.2 Hall Signals. Hall signals, including in-car signals, shall comply with Section 407.2.2.

407.2.2.1 Visible and Audible Signals. A visible and audible signal shall be provided at each hoistway entrance to indicate which car is answering a call and the car's direction of travel. Where in-car signals are provided they shall be visible from the floor area adjacent to the hall call buttons.

EXCEPTIONS:

1. Destination-oriented elevators shall not be required to comply with Section 407.2.2.1, provided a visible signal and audible tones and verbal announcements complying with Section 407.2.1.7 are provided.

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

407.2.2.2 Visible Signals. Visible signal fixtures shall be centered at 72 inches (1830 mm) minimum above the floor. The visible signal elements shall be $2^{1}/_{2}$ 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 407.2.2.2.

407.2.2.3 Audible Signals. Audible signals shall sound once for the up direction and twice for the down direction, or shall have verbal annunciators that indicate the direction of elevator car travel. Audible signals shall have a frequency of 1500 Hz maximum. Verbal annunciators shall have a frequency of 300 Hz minimum and 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 407.2.2.3, 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.

407.2.2.4 Differentiation. Each destination-oriented elevator in a bank of elevators shall have audible and visible means for differentiation.

407.2.3 Hoistway Signs. Signs at elevator hoistways shall comply with Section 407.2.3.

407.2.3.1 Floor Designation. Floor designations shall be provided in raised characters and braille complying with Sections 703.3 and 703.4. Raised characters shall be 2 inches (51 mm) minimum in height. Floor designations shall be located on both jambs of elevator hoistway entrances. A raised star shall be provided on both jambs at the main entry level.

407.2.3.2 Car Identification. Destination-oriented elevators shall provide car identification in raised characters and braille complying with Sections 703.3 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.

407.2.4 Destination Signs. Where signs indicate that elevators do not serve all landings, signs in raised characters and braille complying with Sections 703.3 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 407.2.4.

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:

a) The hoistway doors comply with Sections 404.2.2 and 404.2.8;

b) 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 if 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 ft/s) or T = D/(455 mm/s) = 5 seconds minimum, where T equals the total time in seconds and D equals the distance (in feet or millimeters) from the point in the lobby or corridor 60 inches (1525 mm) directly in front of the farthest call button controlling that car to the centerline of its hoistway door.

EXCEPTIONS:

1. For cars with in-car lanterns, T shall be permitted to begin when the signal is visible from the point 60 inches (1525 mm) directly in front of the farthest hall call button and the audible

signal is sounded.

2. Destination-oriented elevators shall not be required to comply with 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 floor area of 16 square feet (1.5 m^2) minimum, and provide a clear inside dimension 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

Door Location	Door Clear Opening Width	Inside Car, Side to Side	Inside Car, Back Wall to Front Return	Inside Car, Back Wall to Inside Face of Door
Centered	42 inches (1065 mm)	80 inches (2030 mm)	51 inches (1295 mm)	54 inches (1370 mm)
Side (Off Center)	36 inches (915 mm)[1]	68 inches (1725 mm)	51 inches (1295 mm)	54 inches (1370 mm)
Any	36 inches (915 mm)[1]	54 inches (1370 mm)	80 inches (2030 mm)	80 inches (2030 mm)
Any	36 inches (915 mm)[1]	60 inches (1525 mm)[2]	60 inches (1525 mm)[2]	60 inches (1525 mm)[2]

[1]A tolerance of minus $^5/_8$ inch (16 mm) is permitted.
[2]Other car configurations that provide a 36-inch (915mm) door clear opening width and a 60 inch (1525 mm) ~~turning~~ diameter space with the door closed are permitted. (3-6B-12)

407.4.2 Floor Surfaces. Floor surfaces in elevator cars shall comply with Section 302.

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 ~~105.2.5~~ 106.2.9.

407.4.4 Leveling. Each car shall automatically stop and maintain position at floor landings within a tolerance of $^1/_2$ inch (13 mm) under rated loading to zero loading conditions.

407.4.5 Illumination. The level of illumination at the car controls, platform, car threshold and car landing sill shall comply with ASME A17.1/CSA B44 listed in Section ~~105.2.5~~ 106.2.9

407.4.6 Elevator Car Controls. Where provided, elevator car controls shall comply with Sections 407.4.6 and 309.

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 specified in Section 308.

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 Section ~~407.4.6.1~~ 308. (4-49-12)

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.

407.4.6.2.1 Size. Buttons shall be $^{3}/_{4}$ inch (19 mm) minimum in their smallest dimension.

407.4.6.2.2 Arrangement. Buttons shall be arranged with numbers in ascending order. ~~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 telephone keypad arrangement is used, the number key ("#") shall be utilized to enter the minus symbol ("-").~~ When two or more columns of buttons are provided they shall read from left to right. **(4-50-12)**

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. Emergency controls shall comply with Section 407.4.6.4.

407.4.6.4.1 Height. Emergency control buttons shall have their centerlines 35 inches (890 mm) minimum above the floor.

407.4.6.4.2 Location. Emergency controls, including the emergency alarm, shall be grouped at the bottom of the panel.

407.4.7 Designations and Indicators of Car Controls. Designations and indicators of car controls shall comply with 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. Where existing building 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 existing building floor designations.

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

407.4.7.1.1 Type. Control buttons shall be identified by raised characters and braille complying with Sections 703.3 and 703.4.

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 telephone keypad arrangement is used, the number key ("#") shall be utilized to enter the minus symbol ("-"). 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. (4-50-12)

~~407.4.7.1.2~~ 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.

~~407.4.7.1.3~~ 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 ~~407.4.7.1.3~~ 407.4.7.1.4

~~407.4.7.1.4~~ 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.

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 ~~1/2~~ 5/8 inch (~~13~~ 16 mm) minimum in height. (4-53-12)

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 the elevator car and a point outside the hoistway shall comply with Section 407.4.10 and ASME A17.1/CSA B44 listed in Section ~~105.2.5~~ 106.2.9.

407.4.10 Emergency Communications. ~~Visual and audible~~ emergency two-way communication systems between the elevator car and a point outside the hoistway shall comply with Section 407.4.10 and ASME A17.1/CSA B44 listed in Section ~~105.2.5~~ 106.2.9 ~~and provide a two-way visual communication device~~. (4-54-12 PC1 through PC3)

~~**407.4.10.1 Visual Display Device.** Visual display device shall be provided for two-way visual communication to be activated by the elevator occupant. Visual communication devices shall consist of a key pad and monitor to enable text based or sign language communication provided through a certified visual relay service.~~ (4-54-12 PC1 through PC3)

~~**407.4.10.1**~~ **407.4.10.2 Height.** The highest operable part of a two-way communication system shall comply with Section 308.

~~**407.4.10.2**~~ **407.4.10.3 Identification.** Raised characters and braille complying with Sections 703.3 and 703.4 and raised symbols complying with Section ~~407.4.7.1.3~~ 407.4.7.1.4 shall be provided adjacent to the device.

407.4.10.4 Instructions. Where instructions for use are provided, essential information shall be presented in visual form, raised characters and braille complying with Sections 703.2, 703.3 and 703.4. (4-55-12)

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 ~~105.2.5~~ 106.2.9. 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 407.2.2.

408.2.3 Hoistway Signs. Signs at elevator hoistways shall comply with Section 407.2.3.

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 BHMA A156.19 listed in Section ~~105.2.3~~.106.2.7

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.

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 an 18 square foot (1.67 m^2) platform. Doors located on the narrow end of cars shall provide a clear opening width of 36 inches (815 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 a clear floor area 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 floor width of 42 inches (1065 mm) minimum. The clear floor area shall not be less than 15.75 square feet (1.46 m^2). The elevator car shall provide a clear floor space complying with Section 305.3.

> **EXCEPTIONS:**
>
> 1. ~~For installations~~ In existing buildings, elevator cars that provide a clear floor area of 15 square feet (1.4 m^2) minimum, and provide a clear inside dimension 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. In existing buildings, cars that provide a clear width 51 inches (1295 mm) minimum shall be permitted to provide a clear depth 51 inches (1295 mm) minimum provided that car doors provide a clear opening 36 inches (915 mm) wide minimum. **(4-56–12) (3-6-12 PC2)**

The 'change' in 3-6-12 PC2 is the exact change in 4-56-12)….. what is open since 4-56-12 isn't changed by any public comment.

408.4.2 Floor Surfaces. Floor surfaces in elevator cars shall comply with Section 302.

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 ~~105.2.5~~ 106.2.9.

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.

409 Private Residence Elevators

409.1 General. Private residence elevators shall comply with Section 409 and ASME A17.1/CSA B44 listed in Section ~~105.2.5~~ 106.2.9. 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 Section 309. Call buttons shall be 3/4 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 BHMA A156.19 listed in Section ~~105.2.3~~ 106.2.7. 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.

409.4.1.1 New buildings. In new buildings, elevator cars shall provide a clear floor area 36 inches (915 mm) minimum in width and ~~48~~ 52 inches (~~1220~~ 1322 mm) minimum in depth. (3-13B-12)

409.4.1.2 Existing buildings and within new Type B units. In existing buildings and within new Type B units, elevator cars shall provide a clear floor area 36 inches (915 mm) minimum in width and 48 inches (1220 mm) minimum in depth. (3-6-12 PC2)

409.4.2 Floor Surfaces. Floor surfaces in elevator cars shall comply with Section 302.

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

409.4.4 Leveling. Each car shall automatically stop at a floor landing within a tolerance of 1/2 inch (13 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 309.4.

409.4.6.1 Buttons. Control buttons shall be 3/4 inch (19 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 Section 309.3.

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

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 Section 309.3 and 309.4.

409.4.7.3 Compartment. If the device is in a closed compartment, the compartment door hardware shall comply with Section 309.

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

410 Platform Lifts

410.1 General. Platform lifts shall comply with Section 410 and ASME A18.1 listed in Section ~~105.2.6~~ 106.2.10. Platform lifts shall not be attendant operated and shall provide unassisted entry and exit from the lift.

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

410.2.1 Doors and Gates. Doors and gates shall be low energy power operated doors or gates 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 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 platform that serves only one landing. This exception shall not apply to doors or gates with ramps.

2. Lifts serving two landings maximum and having doors or gates on adjacent sides shall be permitted to have self closing manual doors or gates provided that the side door or gate is located with the strike side furthest from the end door. This exception shall not apply to door or gates with ramps.

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

410.3 Floor Surfaces. Floor surfaces of platform lifts shall comply with Section 302.

410.4 Platform to Runway Clearance. The clearance between the platform sill and the edge of any runway landing shall be $1^{1}/_{4}$ inch (32 mm) maximum.

410.5 Clear Floor Space. Clear floor space of platform lifts shall comply with Section 410.5.

410.5.1 Lifts with Single Doors or Doors on Opposite Ends.

410.5.1.1 New buildings. In new buildings, platform lifts with a single door or doors on opposite ends shall provide a clear floor width of 36 inches (915 mm) minimum and a clear floor depth of ~~48~~ 52 inches (~~1220~~ 1322 minimum). (3-13C-12)

Exception: Incline platform lifts with passenger restraining arms, shall be permitted to provide a clear floor width of 36 inches (915 mm) minimum and a clear floor depth of 48 inches (1220) mm. (3-13C-12)

410.5.1.2 Existing buildings and within new Type B units. In existing buildings and within new Type B units, platform lifts with a single door or doors on opposite ends shall provide a clear floor width of 36 inches (915 mm) minimum and a clear floor depth of 48 inches (1220 minimum). (3-6-12 PC2)

410.5.2 Lifts with Doors on Adjacent Sides. Platform lifts with doors on adjacent sides shall provide a clear floor width of 42 inches (1065 mm) minimum and a clear floor depth of 60 inches (1525 mm) minimum.

Exception: In existing buildings, platform lifts with doors on adjacent sides shall be permitted to provide a clear floor width of 36 inches (915 mm) and a clear floor depth of 60 inches (1525 mm).

410.6 Operable Parts. Controls for platform lifts shall comply with Section 309.

Chapter 5. General Site and Building Elements

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.

502 Parking Spaces

502.1 General. Accessible car and van parking spaces in parking lots shall comply with Sections 502.2 through 502.8. Accessible car and van parking spaces provided as part of on-street parking shall comply with Sections 502.9 through 502.10. (5-1-12)

502.2 Vehicle Space Size. Car parking spaces shall be 96 inches (2440 mm) minimum in width. Van parking spaces shall be 132 inches (3350 mm) minimum in width.

EXCEPTION: Van parking spaces shall be permitted to be 96 inches (2440 mm) minimum in width where the adjacent access aisle is 96 inches (2440 mm) minimum in width.

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.

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 placed 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.

502.4.2.1 New buildings. In new buildings, **a**ccess aisles serving car and van parking spaces shall be 60 ~~67~~ inches (1525 ~~1700~~ mm) minimum in width. (3-6C–12 PC3 through PC10)

502.4.2.2 Existing buildings and within new Type B units. In existing buildings and seving new Type B units, access aisles serving car and van parking spaces shall be 60 inches (1525 mm) minimum in width. (3-6-12 PC2)

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.

502.5 Floor Surfaces. Parking spaces and access aisles shall comply with Section 302 and have surface slopes not steeper than 1:48. Access aisles shall be at the same level as the parking spaces they serve. Changes in level exceeding that permitted by Section 303.3 are not permitted within the parking spaces and access aisles. (3-5-12)

502.6 Vertical Clearance. A vertical clearance of 98 inches (2490 mm) minimum 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 accessible parking spaces are required to be identified by signs, the signs shall include the International Symbol of Accessibility complying with Section 703.6.3.1. Signs identifying van parking spaces shall contain the designation “van accessible.” Such signs shall be 60 inches (1525 mm) minimum above the floor of the parking space, measured to the bottom of the sign.

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

502.9 Parallel Parking Spaces. On-street parallel parking spaces shall comply with Section 502.9.1. On-street perpendicular of angled parking shall comply with Section 502.9.2. (5-1-12)

502.9.1 Wide Sidewalks. Where the width of the adjacent sidewalk or available right-of-way exceeds 14 feet (4267 mm), an access aisle 60 inches (1525 mm) wide minimum shall be provided at street level the full length of the parking space and shall connect to a pedestrian access route. The access aisle shall comply with Section 502.4 and shall not encroach on the vehicular travel lane. (5-1-12)

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. (5-1-12)

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 (4267 mm). Where an access aisle is not provided, the parking spaces shall be located at the end of the block face. (5-1-12)

502.9.2 Perpendicular or Angled Parking Spaces. Where perpendicular or angled parking is provided, an access aisle 96 inches (2440 mm) wide minimum shall be provided at street level the full length of the parking space and shall connect to a pedestrian access 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. (5-1-12)

502.10 Parking Meters and Parking Pay Stations. Parking meters and parking pay stations that serve accessible parking spaces shall comply with Section 309. (5-1-12)

502.10.1 Location. At accessible parallel parking spaces, parking meters shall be located at the head or foot of the parking space. (5-1-12)

502.10.2 Displays and Information. Displays and information shall be visible from a point located 40 inches (1016 mm) maximum above the center of the clear space in front of the parking meter or parking pay station. (5-1-12)

502.11 Electrical vehicle charging stations. Where an electrical vehicle charging station is provided at an accessible parking space, it shall comply with Section 502.11. (5-1-13)

502.11.1 Operable parts. Operable parts on the charging station intended for operation by the user, including card readers, shall comply with Section 309. (5-1-13)

502.11.2 Accessible route. An accessible route shall be provided from the access aisle adjacent to the accessible parking space to the clear floor space complying with Section 502.11.1 adjacent to the vehicle charging station. When the vehicle is being charged, the accessible route shall not be obstructed by the cable between the car and charging station. (5-1-13)

502.11.3 Obstructions. Protection bollards, curbs or wheel stops shall be located so that they do not obstruct the clear floor space required by Section 502.11.1 or the accessible route required by Section 502.11.2. (5-1-13)

503 Passenger Loading Zones

503.1 General. Accessible passenger loading zones shall comply with Section 503.

503.2 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 (6100 mm) minimum in length.

503.3 Access Aisle. Passenger loading zones shall have an adjacent access aisle complying with Section 503.3.

503.3.1 Location. Access aisles shall adjoin an accessible route. Access aisles shall not overlap the vehicular way.

503.3.2 Width.

503.3.2.1 New buildings. In new buildings, aisles serving vehicle pull-up spaces shall be ~~60~~ 67 inches (~~1525~~ 1700 mm) minimum in width. (3-6D-12)

503.3.2.2 Existing buildings and within new Type B units. In existing buildings and seving new Type B units, access aisles serving vehicle pull-up spaces shall be 60 inches (1525 mm) minimum in width. (3-6-12 PC2)

503.3.3 Length. Access aisles shall extend the full length of the vehicle pull-up *spaces* they serve. ~~be 20 feet (6100 mm) minimum in length.~~ (5-8-12)

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

503.4 Floor Surfaces. Vehicle pull–up spaces and access aisles serving them shall comply with Section 302 and shall have slopes not steeper than 1:48. Access aisles shall be at the same level as the vehicle pull–up space they serve. Changes in level exceeding that permitted by Section 303.3 are not permitted within the vehicle pull-up spaces and access aisles. (3-5-12)

503.5 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.

504 Stairways

504.1 General. Accessible stairs shall comply with Section 504.

504.2 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.

504.3 Open Risers. Open risers shall not be permitted.

504.4 Tread Surface. Stair treads shall comply with Section 302 and shall have a slope not steeper than 1:48.

~~**504.5 Nosings.** Rounding or beveling at the leading edge of the tread shall not exceed the limit of a ½ inch (13 mm) radius. Nosings that project beyond risers shall have the underside of the leading edge curved or beveled. Risers shall be permitted to slope under the tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall be 1 ½ inches (38 mm) maximum over the tread or floor below.~~ (5-11-12)

504.5 Nosings. Nosings shall comply with 504.5.1 through 504.6.3. (5-11-12)

504.5.1 Nosings within a stairway shall be uniform. (5-11-12)

504.5.2 If rounded, the radius of curvature at the leading edge shall be 1/2 inch (13 mm) maximum. (5-11-12)

504.5.3 If beveled, the bevel shall slope at 45 degrees to the plane of the top surface of the tread and landing and extend for a horizontal distance of 1/2 inch (13 mm) maximum. (5-11-12)

504.5.4 Nosings that project beyond the risers shall have the underside of the leading edge curved or beveled. (5-11-12)

504.5.5 Risers shall be permitted to slope under the tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall be 1 1/2 inches (38 mm) maximum over the tread or floor below. (5-11-12)

~~**504.5.1 Visual contrast.** The leading 2 inches (51 mm) of the landing and tread shall have visual contrast of dark on-light or light-on-dark from the remainder of the tread.~~ (5-13-12 PC1)

504.5.6 Visual contrast. Visual contrast shall comply with either Sections 504.5.6.1 and 504.5.6.2, or Section 504.5.6.3 (5-13-12 PC1)

~~The Light Reflectance Value (LRV) of the 2-inch stripe and tread shall contrast 70 percent minimum, as determined in accordance with Equation 7-1. The lighter surface shall have a LRV of not less than 45.~~ (7-1-12 PC3)

504.5.6.1 The leading 1 to 2 inches (51 mm) of every tread and landing, measured horizontally from the leading edge of the nosing, shall consist of a solid color having visual contrast of dark-on-light or light-on-dark from the remainder of the tread. (5-13-12 PC1)

504.5.6.2 The contrasting marking shall be durable, and shall extend from one side of each tread to the other side of each tread. (5-13-12 PC1)

504.5.6.3 Durable distinctive warning markings required by the adopted building code or ANSI safety standard. (5-13-12 PC1)

504.6 Handrails. Stairs shall have handrails complying with Section 505.

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

504.8 Lighting. Lighting for interior stairways shall comply with Section 504.8.

504.8.1 Illumination Level. Lighting facilities shall be capable of providing ~~10 foot-candles (108 lux) of illuminance~~ illumination 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:
   a. The switch controllers are equipped for fail-safe operation and evaluated for this purpose
   b. The motion sensor is activated by occupant movement on the stair or stair landings
   c. The illumination timers are set for a minimum 15-minute duration. (5-14-12)

504.8.2 Lighting Controls. If provided, occupancy-sensing automatic controls shall activate the stairway lighting so the illuminance level required by Section 504.8.1 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.

504.9 ~~Stair Level Identification~~ Tactile Signage within the Stairway Enclosure. Stair level identification signs in raised characters and braille complying with Sections 703.3 and 703.4 shall be located at each floor level landing in all enclosed stairways adjacent to the door leading from the stairwell 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.” (5-16-12)

504.10 Tactile Signage at Exits. A sign stating EXIT in raised characters and Braille and complying with Sections 703.3 and 703.4 shall be provided adjacent to each door to ~~an area of refuge,~~ an exterior area for assisted rescue, an exit stairway, an exit ramp, an exit passageway and the exit discharge. (5-16-12) (5-16-12 PC1)

505 Handrails

505.1 General. Handrails required by Section 405.8 for ramps, or Section 504.6 for stairs, shall comply with Section 505.

505.2 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.

505.3 Continuity. Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs or ramps shall be continuous between flights or runs. Other handrails shall comply with Sections 505.10 and 307.

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

505.4 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.

505.5 Clearance. Clearance between handrail gripping surface and adjacent surfaces shall be $1^{1}/_{2}$ inches (38 mm) minimum.

505.6 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.) Not more than 20 percent of the handrail length is obstructed,
   2.) Horizontal projections beyond the sides of the handrail occur $1^1/_2$ inches (38 mm) minimum below the bottom of the handrail, and provided that for each $^1/_2$ inch (13 mm) of additional handrail perimeter dimension above 4 inches (100 mm), the vertical clearance dimension of $1^1/_2$ inch (38 mm) can be reduced by $^1/_8$ inch (3.2 mm), and
   3.) Edges shall be rounded.

2. Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of handrail griping surfaces shall be permitted to be obstructed along their entire length where they are integral to crash rails or bumper guards.

505.7 Cross Section. Handrails shall have a cross section complying with Section 505.7.1 or 505.7.2.

505.7.1 Circular Cross Section. Handrails with a circular cross section shall have an outside diameter of $1^1/_4$ inches (32 mm) minimum and 2 inches (51 mm) maximum.

505.7.2 Noncircular Cross Sections. Handrails with a noncircular cross section shall have a perimeter dimension of 4 inches (100 mm) minimum and $6^1/_4$ inches (160 mm) maximum, and a cross-section dimension of $2^1/_4$ inches (57 mm) maximum.

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

505.9 Fittings. Handrails shall not rotate within their fittings.

505.10 Handrail Extensions. Handrails shall extend beyond and in the same direction of stair flights and ramp runs in accordance with Section 505.10.

EXCEPTIONS:

1. Continuous handrails at the inside turn of stairs and ramps.
2. Handrail extensions are not required in aisles serving seating where the handrails are discontinuous to provide 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.

505.10.1 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.

505.10.2 Top Extension at Stairs. At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beginning directly above the landing nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

505.10.3 Bottom Extension at Stairs. At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance 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.

506.1 General. Where operable ~~Accessible~~ windows are provided in an accessible room or space, at least one shall be accessible and have operable parts complying with Section 309. Where operable windows are required to provide natural ventilation or operable windows are required to provide an emergency escape and rescue openings that window shall be the accessible operable window. (5-22-12)

EXCEPTIONS:

1. Operable windows that are operated only by employees are not required to comply with this section.
2. Operable windows in Type A units that comply with Section 1003.13. (5-22-12)
3. Operable skylights are not required to comply with this section. (5-22-12)

506.2 ~~Opening~~ Operating force. The operating force for windows includes forces for opening, closing, locking or latching, and unlocking or unlatching. Operable parts shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required for locking or latching and unlocking or unlatching shall be 5 pounds (22.2 N) maximum. The ~~opening~~ operating force for opening and closing operable windows shall be as follows: (5-22-12 PC4)

1. 8.5 pounds (37.7 N) maximum for casement or horizontal sliding windows(5-22-12)
2. ~~25 pounds (111 N) maximum for double hung windows~~.(5-22-12 PC2)

507 Accessible Routes through Parking. Where accessible routes pass through parking facilities, they shall be physically separated from vehicular traffic.

EXCEPTIONS:

1. Accessible routes crossings drive aisles shall not be required to comply with Section 507.
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 507. (5-23-12 PC1)

Chapter 6. Plumbing Elements and Facilities

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.

602 Drinking Fountains and Bottle Filling Stations. (6-2-12)

602.1 General. Wheelchair accessible drinking fountains shall comply with Sections 602.2 and 307.

Drinking fountains for standing persons shall comply with Section 602.3 and 307. (6-1-12)

602.2 Wheelchair Accessible Drinking Fountains. Wheelchair accessible drinking fountains shall comply with Section 602.2.1 through 602.2.5. (6-1-12)

~~602.2~~ 602.2.1 **Clear Floor Space.** A clear floor space complying with Section 305, positioned for a forward approach to the drinking fountain, shall be provided. Knee and toe space complying with Section 306 shall be provided. The clear floor space shall be centered on the drinking fountain.

EXCEPTIONS:

1. ~~Drinking fountains for standing persons.~~ (6-1-12)

2. Wheelchair accessible drinking fountains primarily for children's use shall be permitted where ~~the spout outlet is 30 inches (760 mm) maximum above the floor,~~ a parallel approach complying with Section 305 is provided and the clear floor space is centered on the drinking fountain. (6-1-12)

~~602.3~~ 602.2.2 **Operable Parts.** Operable parts shall comply with Section 309.

~~602.4~~ 602.2.3 **Spout Outlet Height.** Spout outlets of wheelchair accessible drinking fountains shall be 36 inches (915 mm) maximum above the floor ~~Spout outlets of drinking fountains for standing persons shall be 38 inches (965 mm) minimum and 43 inches (1090 mm) maximum above the floor.~~

EXCEPTION: Drinking fountains for standing persons and 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. (6-1-12)

~~602.5~~ 602.2.4 **Spout Location.** The spout shall be located 15 inches (380 mm) minimum from the vertical support and 5 inches (125mm) maximum from the front edge of the drinking fountain, including bumpers.

EXCEPTION: ~~Where only a parallel approach is provided~~ At drinking fountains primarily for children's use, the spout shall be located 3 1/2 inches (89 mm) maximum from the front edge of the drinking fountain, including bumpers. (6-1-12)

~~602.6~~ 602.2.5 **Water Flow.** The spout shall provide a flow of water 4 inches (102 mm) minimum in height. The angle of the water stream from spouts within 3 inches (76 mm) of the front of the drinking fountain shall be 30 degrees maximum, and from spouts between 3 inches (76 mm) and 5 inches (125 mm) from 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 standing persons. Drinking fountains for standing persons shall comply with Section 602.3.1 through 602.3.4. (6-1-12)

602.3.1 Operable Parts. Operable parts shall comply with Section 309.3 and 309.4. (6-1-12)

602.3.2 Spout Outlet Height. Spout outlets of drinking fountains for standing persons shall be 38 inches (965 mm) minimum and 43 inches (1090 mm) maximum above the floor. (6-1-12)

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. (6-1-12)

602.3.4 Water Flow. The spout shall provide a flow of water 4 inches (102 mm) minimum in height. The angle of the water stream from spouts within 3 inches (76 mm) of the front of the drinking fountain shall be 30 degrees maximum, and from spouts between 3 inches (76 mm) and 5 inches (125 mm) from the front of the drinking fountain shall be 15 degrees maximum, measured horizontally relative to the front face of the drinking fountain. (6-1-12)

602.4 Bottle Filling Stations. Bottle filling stations which shall comply with sections 602.4.1 and 602.4.2.

> **Exception:** Where bottle filling stations are part of the drinking fountain for standing persons, the bottle filling station is not required to comply with this section provided a bottle filling station is located at the wheelchair accessible drinking fountain. (6-2-12)

602.4.1 Clear Floor Space. A clear floor space complying with Section 305, positioned for a forward or side approach, shall be provided. (6-2-12)

602.4.2 Controls. Controls for bottle filling stations shall be hand operated or automatic. Hand operated controls shall comply with Section 309. (6-2-12)

603 Toilet and Bathing Rooms

603.1 General. Accessible toilet and bathing rooms shall comply with Section 603.

603.2 Clearances.

603.2.1 Turning Space. A turning space complying with Section 304 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 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 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 603.2.2.

603.3 Mirrors. Where mirrors are located above lavatories, a mirror shall be located over the accessible lavatory 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 or sleeping units, mirrors are not 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 specified in Section 308. Shelves shall be 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the floor.

603.5 Diaper Changing Tables. Diaper changing tables shall comply with Sections 309 and 902

603.6 Operable Parts. Operable parts on towel dispensers and hand dryers serving accessible lavatories shall comply with Table 603.6.

Table 603.6
Maximum Reach Depth and Height

Maximum Reach Depth	0.5 inch (13 mm)	2 inches (50 mm)	5 inches (125 mm)	6 inches (150 mm)	9 inches (230 mm)	11 inches (280 mm)
Maximum Reach Height	48 inches (1220 mm)	46 inches (1170 mm)	42 inches (1065 mm)	40 inches (1015 mm)	36 inches (915 mm)	34 inches (865 mm)

604 Water Closets and Toilet Compartments

604.1 General. Accessible 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 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.

604.3 Clearance.

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

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

604.3.3 Clearance Overlap. The required 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 at other fixtures and the turning space. No other fixtures or obstructions shall be within the required water closet clearance.

604.4 Height. The height of water closet seats shall be 17 inches (430 mm) minimum and 19 inches (485 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. An accessible water closet which is adjustable in height by the user is permitted provided that at least one adjustment setting provides a seat within the range specified in Section 604.4. (6-5-12)

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

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 are not 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 are not 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 609.4.2. (6-7-12)

604.5.1.1 Horizontal Grab Bar. A ~~fixed~~ horizontal ~~side wall~~ grab bar~~s shall be~~ 42 inches (1065 mm) minimum in length~~,~~ shall be located 12 inches (305 mm) maximum from the rear wall and extend~~ing~~ 54 inches (1370 mm) minimum from the rear wall. (6-7-12)

604.5.1.2 Vertical Grab Bar. ~~In addition,~~ 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 with the center line of the bar located 39 inches (990 mm) minimum and 41 inches (1040 mm) maximum from the rear wall. (6-7-12)

~~**EXCEPTION:** The vertical grab bar at water closets primarily for children's use shall comply with Section 609.4.2.~~ (6-7-12)

604.5.2 Rear Wall Grab Bars. The fixed rear wall grab bar shall be:

1. 36 inches (915 mm) minimum in length ~~and extend from the centerline of the water closet between 12 inches (305) minimum on the side closest to the wall, and 24 inches (610 mm) minimum on the transfer side.~~ ,
~~2.~~ Located 6 inches maximum (150 mm) from the side wall, and
3. Extend 42 inches (1065 mm) from the side wall. (6-10-12)

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 requires flush controls for flush valves 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.

604.6 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with Section 309. Flush controls shall be located on the open side of the water closet.

EXCEPTION: In ambulatory accessible compartments complying with Section 604.10, flush controls shall be permitted to be located on either side of the water closet.

604.7 Dispensers. Toilet paper dispensers shall comply with Section 309.4. Dispensers shall comply with Section 609.3. Dispensers shall not be of a type that control delivery, or do not allow continuous paper

flow. (6-14-12 PC2)

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. Dispensers shall comply with Section 609.3. ~~Dispensers shall not be of a type that control delivery, or do not allow continuous paper flow.~~ (6-14-12 PC2)

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. (6-14-12) (6-14-12 PC2)

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 Compartments.

604.9.1 General. Wheelchair accessible compartments shall comply with Section 604.9.

604.9.2 Size. Toilet compartments shall comply with Section 604.9.2.1, 604.9.2.2 or 604.9.2.3 as applicable.

604.9.2.1 Minimum area. The minimum area of a wheelchair accessible 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.

604.9.2.2 Compartment for children's use. The minimum area of a wheelchair accessible 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.

604.9.2.3 Alternate wheelchair accessible Compartments. Where an alternate wheelchair 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 82 inches (2085 mm) minimum in depth, measured perpendicular to the rear wall. (6-18-12)

604.9.3 Doors. Toilet compartment doors, including door hardware, shall comply with Section 404~~, except if the approach is to the latch side of the compartment door clearance between the door side of the stall and any obstruction shall be 42 inches (1065 mm) minimum~~. The door shall be self-closing. A door pull complying with Section 404.2.6 shall be placed on both sides of the door near the latch. Toilet compartment doors shall not swing into the required minimum area of the compartment. (6-19-12)

EXCEPTIONS:

1. Outside of the compartment, where the approach is to the latch side of the compartment door clearance between the door side of the compartment and any obstruction shall be 42 inches (1065 mm) minimum. (6-19-12)

2. Within the compartment, maneuvering clearances at the door are not required to comply with Section 404. (6-19-12)

3. In an alternate wheelchair accessible compartment, the door can swing into the stall where a

clear floor space complying with Section 305.3 is provided within the stall beyond the arc of the door swing. (6-18-12)

604.9.3.1 Door Opening Location. The farthest edge of toilet compartment door opening shall be located in the front wall or partition or in the side wall or partition as required by Table 604.9.3.1.

Table 604.9.3.1 – Door Opening Location

Door Opening Location	Measured From	Dimension
Front Wall or Partition	From the side wall or partition closest to the water closet	56 inches (1420 mm) minimum
	~~or~~	
	From the side wall or partition farthest from the water closet	~~4~~ 5 inches (~~102~~ 127mm) maximum
Side Wall or Partition - Wall-Hung Water Closet	From the rear wall	52 inches (1320 mm) minimum
	~~or~~	
	From the front wall or partition	~~4~~ 5 inches (~~102~~ 127mm) maximum
Side Wall or Partition - Floor-Mounted Water Closet	From the rear wall	55 inches (1395 mm) minimum
	~~or~~	
	From the front wall or partition	~~4~~ 5 inches (~~102~~ 127mm) maximum

(6-20-12) (6-20-12 PC2)

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

604.9.5 Toe Clearance at Accessible Compartments. Toe clearance for compartments primarily for children's use shall comply with Section 604.9.5.2. Toe clearance for other wheelchair accessible compartments shall comply with Section 604.9.5.1. (6-22-12)

604.9.5.1 Toe Clearance at Accessible Compartments. The front partition and at least one side partition of accessible compartments shall provide a toe clearance of ~~9~~ 12 inches (~~230~~ 305 mm) minimum above the floor and extending ~~6~~ 8 inches (~~150~~ 205 mm) beyond the compartment side face of the partition, exclusive of partition support members. (6-22-12)

EXCEPTIONS:

1. Toe clearance at the front partition is not required in a compartment greater than ~~62~~ 64 inches (~~1575~~ 1625 mm) in depth with a wall-hung water closet, or greater than ~~65~~ 67 inches (~~1650~~ 1700 mm) in depth with a floor-mounted water closet. (6-22-12)

2. Toe clearance at the side partition is not required in a compartment greater than ~~66~~ 68 inches (~~1675~~ 1730 mm) in width. (6-22-12)

604.9.5.2 Toe Clearance at Compartments for Children's Use. The front partition and at least one side partition of compartments primarily for children's use shall provide a toe clearance of 12 inches (305 mm) minimum above the floor and extending ~~6~~ 8 inches (~~150~~ 205 mm) beyond the compartment side face of the partition, exclusive of partition support members. (6-22-12)

EXCEPTIONS:

1. Toe clearance at the front partition is not required in a compartment greater than ~~65~~ 67 inches (~~1650~~ 1700 mm) in depth. (6-22-12)

2. Toe clearance at the side partition is not required in a compartment greater than ~~66~~ 68 inches (~~1675~~ 1730 mm) in width. (6-22-12)

604.9.6 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.

604.10 Ambulatory Accessible Compartments.

604.10.1 General. Ambulatory accessible compartments shall comply with Section 604.10.

604.10.2 Size. The minimum area of an ambulatory accessible 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 ~~36 inches (915 mm) in width~~. (6-24-12)

604.10.3 Doors. Toilet compartment doors, including door hardware, shall comply with Section 404~~, except if the approach is to the latch side of the compartment door the clearance between the door side of the compartment and any obstruction shall be 42 inches (1065 mm) minimum~~. The door shall be self- closing. A door pull complying with 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. (6-19-12)

EXCEPTIONS:

1. Outside of the compartment, where the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 42 inches (1065 mm) minimum. (6-19-12)

2. Within the compartment, maneuvering clearances at the door are not required to comply with Section 404. (6-19-12)

604.10.4 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.

604.11 Water Closets and Toilet Compartments for Children's Use.

604.11.1 General. Accessible water closets and toilet compartments primarily for children's use shall comply with Section 604.11.

604.11.2 Location. The water closet primarily for children's use shall be located with a wall or partition to the rear and to one side. The centerline of the water closet shall be 12 inches (305 mm) minimum and 18 inches (455 mm) maximum from the side wall or partition ~~except that the water closet shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum from the side wall or partition in the ambulatory *accessible* toilet compartment specified in 604.10.1.~~ Water closets located in ambulatory accessible toilet compartments specified in Section 604.10 shall be located as specified in Section 604.2. (6-24-12 PC1)

604.11.3 Clearance. A clearance around the water closet primarily for children's use complying with Section 604.3 shall be provided.

604.11.4 Height. The height of water closet seats primarily for children's use 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.

604.11.5 Grab Bars. Grab bars for water closets primarily for children's use shall comply with Section 604.5.

604.11.6 Flush Controls. Flush controls primarily for children's use shall be hand operated or automatic. Hand operated flush controls shall comply with 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 compartments complying with Section 604.10, flush controls shall be permitted to be located on either side of the water closet.

604.11.7 Dispensers. Toilet paper dispensers primarily for children's use shall comply with Section 309.4. There shall be a clearance of 1 1/2 inches (38 mm) minimum below the grab bar. Dispensers shall not be of a type that control delivery or do not allow continuous paper flow. (6-14-12 PC 2)

604.11.7.1 Location. The outlet of toilet paper dispensers primarily for children's use 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. ~~There shall be a clearance of 1 1/2 inches (38 mm) minimum below the grab bar. Dispensers shall not be of a type that control delivery or do not allow continuous paper flow.~~ (6-14-12 PC 2)

> **EXCEPTION:** Toilet paper dispensers that accommodate a maximum of 2 toilet paper rolls of not more than 5 inch diameter each shall be permitted to be located 7 inches minimum and 9 inches 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. (6-11-12) (6-14-12 PC 2)

604.11.8 Toilet Compartments. Toilet compartments primarily for children's use shall comply with Sections 604.9 and 604.10, as applicable.

605 Urinals

605.1 General. Accessible 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. ~~Wall hung~~ Urinals shall be 13 ½ inches (345 mm) minimum in depth measured from the outer face of the urinal rim to the finished wall surface. (6-24-12)

605.3 Clear Floor Space. A clear floor space complying with Section 305, positioned for forward approach, shall be provided.

605.4 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with Section 309.

606 Lavatories and Sinks

606.1 General. Accessible 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 complying with Section 306 shall be provided. The dip of the overflow shall not be considered in determining knee and toe clearances.

EXCEPTIONS:

1. A parallel approach complying with Section 305 ~~and centered on the sink~~, shall be permitted to a kitchen sink in a space where a cook top or conventional range is not provided. (3-13-12 PC5)

2. 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.

3. 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. (6-33-12)

4. A parallel approach complying with Section 305 ~~and centered on the sink~~, shall be permitted at lavatories and sinks used primarily by children ages 5 and younger. (3-13-12 PC5)

5. The requirement for knee and toe clearance shall not apply to more than one bowl of a multibowl

sink.

6. A parallel approach complying with Section 305 ~~and centered on the sink~~, shall be permitted at wet bars. (3-13-12 PC5)

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.

606.4 Faucets. Faucets shall comply with Section 309. Hand-operated metering faucets shall remain open for 10 seconds minimum.

EXCEPTION: Automatic faucets are not required to comply with Section 309 provided that the reach depth to activate the faucets and the reach depth to the water flow is 11 inches maximum. (6-36-12)

606.5 Basin Location. The interior edge of the rim of the lavatory basin shall be located ~~3~~ 3 ½ inches (~~75~~ 90 mm) maximum from the front edge of the fixture or countertop. (6-37-12) (6-37-12 PC1)

~~606.5~~ 606.6 **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 ~~or, if automatic, shall be activated within a reach depth of 11 inches (280 mm) maximum.~~ Water and soap ~~flow~~ outlet shall be provided with a reach depth of 11 inches (280 mm) maximum. The lavatory shall be 34 inches maximum above the floor, measured to the higher of the rim or counter surface. (6-36-12)

EXCEPTIONS:

1. Enhanced reach range faucets are not required on lavatories provided with automatic faucets where the reach depth to activate the faucets and the reach depth to the water ~~flow~~ outlet is 11 inches (280 mm) maximum. (6-36-12)

2. Enhanced reach range soap dispensers are not required on lavatories provided with automatic faucets where the reach depth to activate the soap dispensers and the reach depth to the soap ~~flow~~ outlet is 11 inches (280 mm) maximum. (6-36-12)

~~606.6~~ 606.7 **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.

607 Bathtubs

607.1 General. Accessible bathtubs shall comply with Section 607.

607.2 Clearance. A clearance in front of bathtubs extending the length of the bathtub and 30 inches (760 mm) minimum in depth shall be provided. Where a permanent seat is provided at the head end of the bathtub, the clearance shall extend 12 inches (305 mm) minimum beyond the wall at the head end of the bathtub.

607.3 Seat. A permanent seat at the head end of the bathtub or a removable in-tub seat shall be provided. Seats shall comply with Section 610.

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 Permanent Seats. For bathtubs with permanent seats, grab bars complying with Section 607.4.1 shall be provided.

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 near 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 without Permanent Seats. For bathtubs without permanent seats, grab bars complying with Section 607.4.2 shall be provided.

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 at the front edge of the bathtub.

607.5 Controls. Controls, other than drain stoppers, 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. Controls shall comply with Section 309.4.

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 control with a nonpositive shut-off feature. Where provided, an adjustable-height hand shower mounted on a vertical bar shall be installed so as to not obstruct the use of grab bars.

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.

607.8 Water Temperature. Bathtubs shall deliver water that is 120 degrees F (49 degrees C) maximum.

608 Shower Compartments

608.1 General. Accessible shower compartments shall comply with Section 608.

608.2 Size, Clearance and Seat. Shower compartments shall have sizes, 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.

608.2.1.1 Size. Transfer-type shower compartments shall have a clear inside dimension of 36 inches (915 mm) 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.

608.2.1.2 Clearance

608.2.1.2.1 New buildings. In new buildings, a clearance of ~~48~~ 52 inches (~~1220~~ 1320 mm) minimum in length measured perpendicular from 12 inches (305 mm) beyond the ~~control~~ seat wall, and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment. (6-46-12)

Staff note: *The committee approved both PC2 and PC3 for item number 6-46-12. The two revised provisions conflict with each other. The conflict will be resolved by the committee based on comments received.*

Revisions based on Public Comment 2 (PC2) to 6-46-12.
608.2.1.2 Clearance. A clearance of 52 inches (1360 mm) minimum in length measured perpendicular from ~~12 inches (305 mm) beyond~~ the control ~~seat~~ wall, and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment.

Revisions based on Public Comment 3 (PC3) to 6-46-12.
608.2.1.2 Clearance. A clearance of ~~48~~ 52 inches (~~1220~~ 1320 mm) minimum in length measured perpendicular from 12 inches (305 mm) beyond the ~~control~~ seat wall, and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment.

608.2.1.2.2 Existing buildings and within new Type B units. In existing buildings and within new Type B units, a clearance 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. (3-6-12 PC2)

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 Standard Roll-in-Type Shower Compartments. Standard roll-in-type shower compartments shall comply with Section 608.2.2.

608.2.2.1 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.

608.2.2.2 Clearance. A clearance 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 clearance opposite the seat.

608.2.2.3 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 608.2.2.1.

608.2.3 Alternate Roll-in-Type Shower Compartments. Alternate roll-in-type shower compartments shall comply with Section 608.2.3.

608.2.3.1 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.

608.2.3.2 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 are 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 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.

608.3.1.1 Horizontal Grab Bars. Horizontal grab bars shall be provided across the control wall 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 Standard Roll-in-Type Showers. Grab bars in standard roll-in showers shall comply with Section 608.3.2. (6-55-12 PC1) (6-61-12)

608.3.2.1 Horizontal Back Wall Grab Bar. In standard roll-in type showers, a grab bar shall be provided on the back wall beginning at the front edge of 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. The grab bars shall not be provided above the seat. (6-55-12 PC1) (6-61-12)

Exceptions:

1. The back wall grab bar ~~but~~ shall not be required to exceed 48 inches (1220 mm) in length. (6-55-12 PC1)

~~2. The back wall grab bar is not required to extend within 6 inches (150 mm) of the adjacent side wall opposite the seat if it would require the grab bar length to exceed 48 inches (1220 mm) in~~

~~length.~~ (6-55-12 PC3)

608.3.2.2 Horizontal 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 and extend within 6 inches (150 mm) maximum from the adjacent back wall. (6-55-12 PC1)

Exception: The side wall grab bar ~~but~~ shall not be required to exceed 30 inches (760 mm) in length. ~~Grab bars shall be 6 inches (150 mm) maximum from the adjacent wall.~~ (6-55-12 PC1)

608.3.2.3 Vertical Grab Bar. Where an ambulatory roll-in shower control and hand spray are provided, a vertical grab bar shall be provided. A vertical grab bar 18 inches (45 mm) minimum in length shall be provided on the ambulatory control side 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. (6-61-12)

608.3.3 Alternate Roll-in-Type Showers. In alternate roll-in type showers, grab bars shall be provided on the back wall and the end 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.

608.4 Controls and Hand Showers. Controls and hand showers shall comply with Sections 608.4 and 309.4.

608.4.1 Transfer-Type Showers. In transfer-type showers, the controls and hand shower shall be located:

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, and

3. 15 inches (380 mm) maximum, from the centerline of the control wall toward the shower opening.

608.4.2 Standard Roll-in Showers. In standard roll-in showers, the controls and hand shower shall not be located above the seat. Controls and hand showers shall be located: (6-61-12)

1. On the back wall,
2. At a height ~~above the grab bar~~ of 38 inches minimum and 48 inches (1220 mm) maximum above the shower floor, and
3. 16 inches (405 mm) minimum and 27 inches (685 mm) maximum from the ~~end~~ wall behind the seat. (6-60-12)

608.4.2.1 Ambulatory Roll-In Showers. Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall, an additional shower control and hand shower can be located on this side wall:

1. At a height of 38 inches (965 mm) minimum to 48 inches (1220 mm) maximum above the shower floor, and
2. 17 inches (430 mm) to 19 inches (485 mm) from the back wall. (6-61-12)

608.4.3 Alternate Roll-in Showers. In alternate roll-in showers, the controls and hand shower shall be located:

1. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor~~.~~, and
2. ~~In alternate roll-in showers with~~ Where the controls and hand shower are located on the end wall adjacent to the seat, the controls and hand shower shall be 16 inches (405 mm) minimum and 27 inches (685 mm) maximum from the wall behind the seat wall~~.~~, or

3. ~~In alternate roll-in showers with~~ where the controls and hand shower are located on the back wall opposite the seat, the controls and hand shower shall be located within 15 inches (380 mm) maximum from, ~~left or right, of~~ the centerline of the seat toward the transfer space. (6-60-12)(6-62-12)

608.5 Hand Showers. A hand shower with a hose 59 inches long (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 control with a nonpositive shut-off feature. Where provided, an adjustable-height hand shower mounted on a vertical bar shall be installed so as to not obstruct the use of grab bars. A means to hold the hand shower wand while in the on or off position shall be located at a height of 38 inches minimum and 48 inches maximum above the shower finish floor. (6-65-12)

EXCEPTION: In other than Accessible units and Type A units, a fixed shower head located 48 inches (1220 mm) maximum above the shower floor shall be permitted in lieu of a hand shower.

608.6 Thresholds. Thresholds in roll-in-type shower compartments shall be 1/2 inch (13 mm) maximum in height in accordance with Section 303. In transfer-type shower compartments, thresholds 1/2 inch (13 mm) maximum in height shall be beveled, rounded, or vertical.

EXCEPTION: In existing facilities, in transfer-type shower compartments where provision of a threshold 1/2 inch (13 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.

608.8 Water Temperature. Showers shall deliver water that is 120 degrees F (49 degrees C) maximum.

609 Grab Bars

609.1 General. Grab bars in accessible 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.

609.2.1 Circular Cross Section. Grab bars with a circular cross section shall have an outside diameter of 1 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 (102 mm) minimum and 4.8 inches (122 mm) maximum.

609.3 Spacing. The space between the wall and the grab bar shall be 1 1/2 inches (38 mm). The space between the grab bar and projecting objects below and at the ends of the grab bar shall be 1 1/2 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 shower controls, shower fittings, and other grab bars above the grab bar shall be permitted to be 1 1/2 inches (38 mm) minimum.

2. Recessed dispensers projecting from the wall ¼ inch (6.3 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 1 ½ inch (38 mm) spaces below and at the ends of the grab bar.

609.4 Position of Grab Bars.

609.4.1 General. Grab bars shall be installed in a horizontal position, 33 inches (840 mm) minimum and 36 inches (915 mm) maximum above the floor measured to the top of the gripping surface or shall be installed as required by Items 1 through 3.

1. The lower grab bar on the back wall of a bathtub shall comply with Section 607.4.1.1 or 607.4.2.1.

2. Vertical grab bars shall comply with Sections 604.5.1, 607.4.1.2.2, 607.4.2.2, and 608.3.1.2.

3. Grab bars at water closets primarily for children's use shall comply with Section 609.4.2

609.4.2 Position of Children's Grab Bars. At water closets primarily for children's use complying with Section 604.11, grab bars shall be installed in a horizontal position 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 between 21 inches (533 mm) minimum and 30 inches (760 mm) maximum above the floor and with the centerline of the bar located between 34 inches (865 mm) minimum and 36 inches (915 mm) maximum from the rear wall.

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 clear floor space. Horizontal and vertical grab bars shall be permitted to be separate bars, a single piece bar, or combination thereof.

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.

610 Seats

610.1 General. Seats in accessible bathtubs and shower compartments shall comply with Section 610.

610.2 Bathtub Seats. The height of bathtub seats shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the bathroom floor, measured to the top of the seat. 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. Permanent seats 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. Permanent seats shall be positioned at the head end of the bathtub.

610.3 Shower Compartment Seats. The height of shower compartment seats shall be 17 inches (430 mm) minimum and 19 inches (485 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, 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.

610.3.1 Rectangular Seats. The rear edge of a rectangular seat shall be $2^1/_2$ inches (64 mm) maximum and the front edge 15 inches (380 mm) minimum and 16 inches (405 mm) maximum from the seat wall. The side edge of the seat shall be $1\ ^1/_2$ inches (38 mm) maximum from the back wall of a transfer-type shower and $1^1/_2$ inches (38 mm) maximum from the control wall of a roll-in-type shower.

610.3.2 L-Shaped Seats. The rear edge of an L-shaped seat shall be $2^1/_2$ inches (64 mm) maximum and the front edge 15 inches (380 mm) minimum and 16 inches (405 mm) maximum from the seat wall. The rear edge of the "L" portion of the seat shall be 1 1/2 inches (38 mm) maximum from the wall

and the front edge shall be 14 inches (355 mm) minimum and 15 inches (380 mm) maximum from the wall. The end of the "L" shall be 22 inches (560 mm) minimum and 23 inches (585 mm) maximum from the main seat wall.

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.

611 Washing Machines and Clothes Dryers

611.1 General. Accessible washing machines and clothes dryers shall comply with Section 611.

611.2 Clear Floor Space. A clear floor space complying with Section 305, 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.

611.3 Operable Parts. Operable parts, including doors, lint screens, detergent and bleach compartments, shall comply with Sections 308 and 309.

EXCEPTION: The height of the obstruction in Section 308.3.2 shall be permitted to be 36 inches (915 mm) maximum above the floor. (6-69-12)

611.4 Height. Top loading machines shall have the door to the laundry compartment 36 inches (915 mm) maximum above the floor. Front loading machines shall have the bottom of the opening to the laundry compartment 15 inches (380 mm) minimum and 36 inches (915 mm) maximum above the floor.

612 Saunas and Steam Rooms

612.1 General. Saunas and steam rooms shall comply with Section 612.

612.2 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 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 612.2. (6-70-12)

612.3 Turning space. A turning space complying with Section 304 shall be provided within saunas and steam rooms.

Chapter 7. Communication Elements and Features

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.

~~**701.1.2 Light Reflectance Value.** The light reflectance value (LRV) of surfaces shall be determined in accordance with BS 8493 listed in Section 106.2.3 for the following surface types:~~

~~1. Opaque paint coatings and paint systems, including those that cause extreme angular dependences of reflected light and those that have a surface texture of less than 2 mm;~~

~~2. Opaque coverings including those that cause extreme angular dependences of reflected light, and those that have an unyielding texture of less than 2 mm;~~

~~3. Opaque coverings with a yielding pile, e.g. carpet;~~

~~4. Opaque materials, including those that cause extreme angular dependences of reflected light, and those that have a texture of less than 2 mm, e.g. finished metals;~~

~~5. Opaque materials coated with non-opaque coatings or coverings, e.g. timber door coated with a woodstain, including those that cause extreme angular dependences of reflected light, and those that have a texture of less than 2 mm;~~

~~6. Multi-colored surfaces.~~ (7-1-12 PC3)

~~**701.1.2.1 Other Surfaces.** Other surfaces shall comply with Section 703.1.3.1.~~ (7-1-12 PC3)

~~**701.1.3 Contrast Value.** The contrast between the LRVs of adjacent surfaces required by Sections 703.2.1.2, 703.5.3.2, 703.6.3.2, 705.3, and 504.5.1 shall be determined by Equation 7-1,~~

~~Contrast = [(B1-B2)/B1] x 100 percent **Equation 7-1**~~

~~Where~~

~~B1 = light reflectance value (LRV) of the lighter surface,~~
~~B2 = light reflectance value (LRV) of the darker surface.~~ (7-1-12 PC3)

~~**701.1.3.1 Other Surfaces.** Surfaces not within the scope of BS 8493 listed in Section 106.2.3 shall provide contrast between adjacent surfaces that are either light on dark or dark on light.~~ (7-1-12 PC3)

702 Alarms

702.1 General. Accessible 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 ~~105.2.2~~ 106.2.5, be powered by a commercial light and power source, be permanently connected to the wiring of the premises electric system, and be permanently installed. (7-2-12)

EXCEPTION: Audible and visible notification appliances provided within dwelling or sleeping units shall comply with Section 1106.2 through 1106.4.4. (7-2-12)

703 Signs

703.1 General. Accessible signs shall comply with Section 703. Tactile signs shall contain both raised characters and braille. Where signs with both visual and raised characters are required, either one sign with both visual and raised characters, or two separate signs, one with visual, and one with raised characters, shall be provided.

703.1.1 Designations. Interior and exterior signs identifying permanent rooms and spaces shall comply with Sections 703.1, 703.2, and 703.3.

> **EXCEPTION:** Exterior signs that are not located at the door to the space they serve shall not be required to comply with Section 703.3.

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 703.2 and 703.3.

> **EXCEPTION:** Pictograms that provide information about a room or space, such as “no smoking”, occupant logos, and the International Symbol of Accessibility, are not required to have text descriptors.

703.2 Visual Characters.

703.2.1 General. Visual characters shall comply with the following:

1. Visual characters that also serve as raised characters shall comply with Section 703.3, or
2. Visual characters on VMS signage shall comply with Section 703.7, or
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.

703.2.1.1 Nonglare Finish. The glare from coverings, the finish of characters and their background shall not exceed 19 glare units (gu) as measured on a 60-degree gloss meter. (7-1-12)

~~**703.2.1.2 Contrast.** The Light Reflectance Value (LRV) of characters and their background shall contrast 70 percent minimum as determined in accordance with Equation 7-1. The lighter surface shall have a LRV of not less than 45.~~ (7-1-12 PC3)

703.2.2 Case. Characters shall be uppercase, lowercase, or a combination of both.

703.2.3 Style. Characters shall be conventional in form. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

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 (25.4 mm) for every 30 feet (9.1 m) 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

Height above Floor to Baseline of Character [1]	Horizontal Viewing Distance [2]	Minimum Character Height
40 inches (1015 mm) to less than or equal to 70 inches (1780 mm)	Less than 6 feet (1830 mm)	$^5/_8$ inch (16 mm)
	6 feet (1830 mm) and greater	$^5/_8$ inch (16 mm), plus $^1/_8$ inch (3.2 mm) per foot (305 mm) of viewing distance above 6 feet (1830 mm)
Greater than 70 inches (1780 mm) to less than or equal to 120 inches (3050 mm)	Less than 15 feet (4570 mm)	2 inches (51 mm)
	15 feet (4570 mm) and greater	2 inches (51 mm), plus $^1/_8$ inch (3.2 mm) per foot (305 mm) of viewing distance above 15 feet (4570 mm)
Greater than 120 inches (3050 mm)	Less than 21 feet (6400 mm)	3 inches (75 mm)
	21 feet (6400 mm) and greater	3 inches (76 mm), plus $^1/_8$ inch (3.2 mm) per foot (305 mm) of viewing distance above 21 feet (6400 mm)

1. The vertical height is measured from the floor of the viewing position to the baseline of the highest line of characters.
2. The horizontal viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign or where applicable, as stated in the exception to Section 703.2.4. (7-6-12)

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.

703.2.10 Finish and Contrast. ~~Characters and their background shall have a non-glare finish.~~ Characters shall contrast with their background, with either light characters on a dark background, or dark characters on a light background. (7-1-12 PC3)

703.3 Raised Characters.

703.3.1 General. Raised characters shall comply with Section 703.3, and shall be duplicated in braille complying with Section 703.4.

703.3.2 Depth. Raised characters shall be raised $^{1}/_{32}$ inch (0.8 mm) minimum above their background.

703.3.3 Case. Characters shall be uppercase.

703.3.4 Style. Characters shall be sans serif. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

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 $^{5}/_{8}$ 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 $^{1}/_{2}$ inch (13 mm) minimum.

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. When 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 ~~15% or~~ 1/8 inch (3.2 mm) minimum~~, whichever is greater and 35% maximum of the character height. measured~~ at the top of the 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. (7-23-12 PC1)

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.

703.3.10 Height above Floor. Raised characters shall be 48 inches (1220 mm) minimum above the floor, measured to the baseline of the lowest raised character and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the highest raised character.

> **EXCEPTION:** Raised characters for elevator car controls shall not be required to comply with Section 703.3.10.

703.3.11 Location. Where a sign containing raised characters and braille is provided at a door, the sign shall be alongside the door at the latch side. Where a sign containing raised characters and braille is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a sign containing raised characters and braille is provided at double doors with two active leaves, the sign shall be to the right of the right-hand door. Where there is no wall space on the latch side of a single door, or to the right side of double doors, signs shall be on the nearest adjacent wall. Signs containing raised

characters and braille shall be located so that a clear floor area 18 inches (455 mm) minimum by 18 inches (455 mm) minimum, centered on the raised characters is provided beyond the arc of any door swing between the closed position and 45 degree open position.

EXCEPTION: Signs containing raised characters and braille shall be permitted on the push side of doors with closers and without hold-open devices.

703.3.12 Finish and Contrast. Characters and their background shall have a non-glare finish. Characters shall contrast with their background with either light characters on a dark background, or dark characters on a light background.

EXCEPTION: Where separate raised characters and visual characters with the same information are provided, raised characters are not required to have nonglare finish or to contrast with their background.

703.4 Braille.

703.4.1 General. Braille shall be contracted (Grade 2) braille and shall comply with Section 703.4.

703.4.2 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.

703.4.3 Dimensions. Braille dots shall have a domed or rounded shape and shall comply with Table 703.4.3.

Table 703.4.3— Braille Dimensions

Measurement range	Minimum in inches Maximum in inches
Dot base diameter	0.059 (1.5 mm) to 0.063 (1.6 mm)
Distance between two dots in the same cell	0.090 (2.3 mm) to 0.100 (2.5 mm)
Distance between corresponding dots in adjacent cells[1]	0.241 (6.1 mm) to 0.300 (7.6 mm)
Dot height	0.025 (0.6 mm) to 0.037 (0.9 mm)
Distance between corresponding dots from one cell directly below [1]	0.395 (10.0 mm) to 0.400 (10.2 mm)

[1]Measured center to center

703.4.4 Position. Braille shall be below the corresponding text. If text is multi-lined, braille shall be placed below entire text. Braille shall be separated 3/8 inch (9.5 mm) minimum 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.

703.4.5 Mounting Height. Braille shall be 48 inches (1220 mm) minimum and 60 inches (1525 mm) maximum above the floor, measured to the baseline of the braille cells.

EXCEPTION: Elevator car controls shall not be required to comply with Section 703.4.5.

703.5 Pictograms.

703.5.1 General. Pictograms shall comply with Section 703.5.

703.5.2 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.

~~**703.5.3 Finish and Contrast.** Pictograms and their fields shall have a nonglare finish. Pictograms shall contrast with their fields, with either light pictograms on a dark field, or dark pictograms on a light field.~~ (7-1-12 PC3)

703.5.3.1 Nonglare Finish. The glare from coverings and the finish of pictograms and their fields shall not exceed 19 glare units (gu) as measured on a 60-degree gloss meter. **(7-1-12)**

703.5.3.2 Contrast. ~~The Light Reflectance Value (LRV) of pictograms and their fields shall contrast 70 percent minimum as determined in accordance with Equation 7-1. The lighter surface shall have a LRV of not less than 45.~~ Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background. (7-1-12 PC3)

703.6 Symbols of Accessibility.

703.6.1 General. Symbols of accessibility shall comply with Section 703.6.

703.6.2 Finish and Contrast. Symbols of accessibility and their backgrounds shall have a non-glare 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.

703.6.2.1 Nonglare Finish. The glare from coverings and the finish of symbols of accessibility and their backgrounds shall not exceed 19 glare units (gu) as measured on a 60-degree gloss meter. **(7-1-12)**

~~**703.6.2.2 Contrast.** The Light Reflectance Value (LRV) of symbols of accessibility and their backgrounds shall contrast 70 percent minimum, as determined in accordance with Equation 7-1. The lighter surface shall have a LRV of not less than 45.~~ (7-1-12 PC3)

703.6.3 Symbols.

703.6.3.1 International Symbol of Accessibility. The International Symbol of Accessibility shall comply with Figure 703.6.3.1.

703.6.3.2 International Symbol of TTY. The International Symbol of TTY shall comply with Figure 703.6.3.2.

703.6.3.3 Assistive Listening Systems. Assistive listening systems shall be identified by the International Symbol of Access for Hearing Loss complying with Figure 703.6.3.3.

703.6.3.4 Volume-Controlled Telephones. Telephones with volume controls shall be identified by a pictogram of a telephone handset with radiating sound waves on a square field complying with Figure 703.6.3.4.

703.7 Variable Message Signs.

703.7.1 General. High resolution variable message sign (VMS) characters shall comply with Sections 703.2 and 703.7.12 through 703.7.14. 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 703.7.1.

703.7.2 Case. Low resolution VMS characters shall be uppercase.

703.7.3 Style. Low resolution VMS characters shall be conventional in form, shall be san serif, and shall

not be italic, oblique, script, highly decorative, or of other unusual forms.

703.7.4 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 703.7.4.

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 (25.4 mm) for every 30 feet (9.1 m) 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 703.7.4—Low Resolution VMS Character Height

Height above Floor to Baseline of Character [1]	**Horizontal Viewing Distance** [2]	**Minimum Character Height**
40 inches (1015 mm) to less than or equal to 70 inches (1780 mm)	Less than 10 feet (3048 mm)	2 inches (51 mm)
	10 feet (3048 mm) and greater	2 inches (51 mm), plus 1/5 inch (5.1 mm) per foot (305 mm) of viewing distance above 10 feet (3048 mm)
Greater than 70 inches (1780 mm) to less than or equal to 120 inches (3050 mm)	Less than 15 feet (4570 mm)	3 inches (76 mm)
	15 feet (4570 mm) and greater	3 inches (76 mm), plus 1/5 inch (5.1 mm) per foot (305 mm) of viewing distance above 15 feet (4570 mm)
Greater than 120 inches (3050 mm)	Less than 20 feet (6096 mm)	4 inches (102 mm)
	20 feet (6096 mm) and greater	4 inches (102 mm), plus 1/5 inch (5.1 mm) per foot (305 mm) of viewing distance above 20 feet (6096 mm)

1. The vertical height is measured from the floor of the viewing position to the baseline of the highest line of characters.
2. The horizontal viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign or where applicable, as stated in the exception to Section 703.7.4. (7-6-12)

703.7.5 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 703.7.5.

Table 703.7.5 Pixel count for Low Resolution VMS Signage [1]

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

(1) Measured in pixels.

703.7.6 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 703.7.5.

703.7.7 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 703.7.5.

703.7.8 Line Spacing. Low resolution VMS characters shall comply with Section 703.2.8.

703.7.9 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 characters shall comply with Table 703.7.4, based on the size of the characters on the sign.

703.7.10 Finish. The background of Low resolution VMS characters shall have a non-glare finish.

703.7.11 Contrast. Low resolution VMS characters shall be light characters on a dark background.

703.7.12 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 non-glare finish.

703.7.13 Brightness. The brightness of variable message signs in exterior locations shall automatically adjust in response to changes in ambient light levels.

703.7.14 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 and 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 Remote Infrared Audible Sign (RIAS) Systems.

703.8.1 General. Remote Infrared Audible Sign Systems shall comply with Section 703.8.

703.8.2 Transmitters. Where provided, Remote Infrared Audible Sign Transmitters shall be designed to communicate with receivers complying with Section 703.8.3.

703.8.3 Infrared Audible Sign Receivers.

703.8.3.1 Frequency. Basic speech messages shall be frequency modulated at 25 kHz, with a +/- 2.5 kHz deviation, and shall have an infrared wavelength from 850 to 950 nanometer (nm).

703.8.3.2 Optical Power Density. Receiver shall produce a 12 decibel (dB) signal-plus-noise-to-noise ratio with a 1 kHz modulation tone at +/- 2.5 kHz deviation of the 25 kHz subcarrier at an optical power

density of 26 picowatts per square millimeter measured at the receiver photosensor aperture.

703.8.3.3 Audio Output. The audio output from an internal speaker shall be at 75 dBA minimum at 18 inches (455 mm) with a maximum distortion of 10 percent.

703.8.3.4 Reception Range. The receiver shall be designed for a high dynamic range and capable of operating in full-sun background illumination.

703.8.3.5 Multiple Signals. A receiver provided for the capture of the stronger of two signals in the receiver field of view shall provide a received power ratio on the order of 20 dB for negligible interference.

703.9 Pedestrian Signals. Accessible pedestrian signals shall comply with Section 4E.06 - Accessible Pedestrian Signals, and Section 4E.09 - Accessible Pedestrian Signal Detectors, of the Manual on Uniform Traffic Control Devices listed in Section ~~105.2.1~~ 106.2.4.

> **EXCEPTION:** Pedestrian signals are not required to comply with the requirement for choosing audible tones.

704 Telephones

704.1 General. Accessible public telephones shall comply with Section 704.

704.2 Wheelchair Accessible Telephones. Wheelchair accessible public telephones shall comply with Section 704.2.

> **EXCEPTION:** Drive up only public telephones are not required to be provided with a clear floor space complying ~~to comply~~ with Section 704.2.1. (7-14-12)

704.2.1 Clear Floor Space. A clear floor space complying with Section 305 shall be provided. The clear floor space shall not be obstructed by bases, enclosures, or seats.

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.

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.

704.2.2 Operable Parts. Operable parts shall comply with Section 309. 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 Section 309.

704.2.4 Cord Length. The telephone handset cord shall be 29 inches (735 mm) minimum in length.

~~**704.2.5 Hearing-Aid Compatibility.** Telephones shall be hearing aid compatible.~~ (7-15-12)

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.

704.4 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.

704.5 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 704.5.

704.6 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 a vertical clearance 6 inches (150 mm) minimum in height above the area where the TTY is placed.

~~**704.7 Protruding Objects.** Telephones, enclosures, and related equipment shall comply with Section 307.~~ **(7-15-12)**

704.7 Visual Relay Service Booth. Each public Visual Relay Service Booth shall be ~~accessible and~~ accommodate one user with seating and privacy enclosure, a visual monitor, a video camera device, control device, diffuse lighting with a minimum lighting level of 20 foot candles (215 lux). ~~And privacy enclosure with a flat, non-textured surface and finish color in contrast with the full range of human skin tones to provide a background for clear visual communication.~~ The background of the seating area, and within range of the video camera device, shall have a flat, non-textured surface and finish color in the bright green or blue range. (7-16-12 PC2)

705 Detectable Warnings

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.

EXCEPTION: In facilities that have both interior and exterior locations, detectable warnings in exterior locations shall not be required to comply with Section 705.4.

705.3 Contrast. Detectable warning surfaces shall contrast visually with adjacent surfaces, either light-on-dark or dark-on-light.

~~The Light Reflectance Value (LRV) of the surfaces shall contrast 70 percent minimum, as determined in accordance with Equation 7-1. The lighter surface shall have a LRV of not less than 45.~~ (7-1-12 PC3)

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.

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.(7-18-12)

705.6 Extent of warning surfaces. Detectable warning surfaces shall extend 24 inches (610 mm) minimum in the direction of pedestrian travel. 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. At pedestrian at-grade rail crossings not located within a street or highway, detectable warnings shall extend the full width of the crossing. At boarding platforms for buses and rail vehicles, detectable warning surfaces shall extend the full length of the public use areas of the platform. 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. (4-44-12)

705.7 Placement. The placement of detectable warning surfaces shall comply with Section 705.7. (4-44-12)

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 brake 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 brake 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. (4-44-12)

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. (4-44-12)

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. (4-44-12)

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 a 24 inches (610 mm) minimum length of surface without detectable warnings. (4-44-12)

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 72 inches (1829) minimum and 15 feet (4679 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. (4-44-12)

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. (4-44-12)

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. (4-44-12)

706 Assistive Listening Systems

706.1 General. Where installed, ~~A~~assistive listening systems ~~required in assembly areas~~ shall comply with 706. (7-19-12)

706.2 Receiver Jacks. Receivers required for use with an assistive listening system shall include a $^{1}/_{8}$ inch (3.2 mm) standard ~~mono~~ monaural (monophonic) jack. (7-20-12)

706.3 Induction Loop Systems. Where induction hearing loop systems are provided, they shall comply with IEC-60118-4 as listed in Section 106.2.2. (7-19-12)

~~**706.3**~~ **706.4 Receiver Hearing-Aid Compatibility.** Receivers required to be hearing aid compatible shall

interface with telecoils in hearing aids through the provision of neck loops.

~~706.4~~ 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.

~~706.5~~ 706.6 **Signal-to-Noise Ratio.** The signal-to-noise ratio for internally generated noise in assistive listening systems shall be 18 dB minimum.

~~706.6~~ 706.7 **Peak Clipping Level.** Peak clipping shall not exceed 18 dB of clipping relative to the peaks of speech.

707 Automatic Teller Machines (ATMs) and Fare Machines

707.1 General. Accessible automatic teller machines and fare machines shall comply with Section 707.

707.2 Clear Floor Space. A clear floor space complying with Section 305 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. Operable parts shall comply with Section 309. Unless a clear or correct key is provided, each operable part shall be able to be differentiated by sound or touch, without activation.

> **EXCEPTION:** Drive up only automatic teller machines and fare machines shall not be required to comply with 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.

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.

TABLE 707.6.1—RAISED SYMBOLS

Key Function	Description of Raised Symbol	Raised Symbol
Enter or Proceed:	CIRCLE	◯
Clear or Correct:	LEFT ARROW	← or <
Cancel:	“X”	X
Add Value:	PLUS SIGN	+
Decreased Value:	MINUS SIGN	-

(7-21-12)

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 $^{3}/_{16}$ inch (4.8 mm) minimum in height. Characters shall contrast with their background with either light characters on a dark background, or dark characters on a light 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 accessible to and independently usable by individuals with vision impairments. Speech shall be delivered through a mechanism that is readily available to all users including, but not limited to, an industry standard connector or a telephone handset. Speech shall be recorded or digitized human, or synthesized.

EXCEPTIONS:

1. Audible tones shall be permitted 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 can be used in the transaction being conducted.

3. Where speech synthesis cannot be supported, dynamic alphabetic output shall not be required to be audible.

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 discernable 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.

708 Two-Way Communication Systems

708.1 General. Accessible 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. Handset cords, if provided, shall be 29 inches (735 mm) minimum in length.

708.4 Telephone entry systems. Telephone entry systems shall comply with DASMA 303 listed in Section ~~105.2.7~~. 106.2.6.

Chapter 8. Special Rooms and Spaces

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.

802 Assembly Areas

802.1 General. Wheelchair spaces and wheel chair 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 ~~802.6~~ 802.7. (8-1-12). (8-2-12)

802.2 Floor Surfaces. The floor surface of wheelchair space locations shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the floor surface of wheelchair space locations. (3-5-12)

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.

802.4 Depth.

802.4.1 New buildings. In new buildings, where a wheelchair space can be entered from the front or rear, the wheelchair space shall be ~~48~~ 52 inches (~~1220~~ 1320 mm) minimum in depth. Where a wheelchair space can only be entered from the side, the wheelchair space shall be 60 inches (1525 mm) minimum in depth. (8-3-12)

802.4.2 Existing buildings. In existing buildings, where a wheelchair space can be entered from the front or rear, the wheelchair space shall be 48 inches (1220 mm) minimum in depth. Where a wheelchair space can only be entered from the side, the wheelchair space shall be 60 inches (1525 mm) minimum in depth. (3-6-12 PC2)

802.5 Approach. The wheelchair space shall adjoin an accessible route. The accessible route shall not overlap the wheelchair space.

802.5.1 Overlap. A wheelchair space location shall not overlap the required width of an aisle.

> **Exception:** In new buildings, the depth of the wheelchair space shall be permitted to overlap the required aisle width a maximum of 4 inches (100 mm). (3-13D-12) (3-6-12 PC2)

802.6 Integration of Wheelchair Space Locations. Wheelchair space locations shall be an integral part of any seating area.

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 considered to be 36 inches (915 mm) from the front or 12~~ 16 inches ~~(405 mm) 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. . (3-13E-12)

EXCEPTIONS:

1. Companion seat alignment is not required in tiered seating that includes dining surfaces or work surfaces. (8-2-12) (3-13E-12 PC3)
2. In existing facilities, the companion seat shall be permitted to be positioned 12 inches (305 mm) from the rear of the wheelchair space. (3-13E-12 PC1)
3. For wheelchair spaces with front access, the shoulder alignment shall be permitted to be measures 12 inches (305 mm) from the rear of the space. (3-13E-12 PC3)
4. For wheelchair spaces with side access, the should alignment shall be permitted to be measured 12 inches (305 mm) from the rear of the space. (3-13E-12 PC3)

802.7.2.1 New buildings. In new buildings, the shoulder of the wheelchair space occupant is considered to be 36 inches (915 mm) from the front or 16 inches (405 mm) from the rear of the wheelchair space. (3-6-12 PC2)

802.7.2.2 Existing buildings. In existing buildings, The shoulder of the wheelchair space occupant is considered to be 36 inches (915 mm) from the front or 12 inches (305 mm) from the rear of the wheelchair space. (3-6-12 PC2)

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 ~~the International Symbol of Accessibility~~ a sign or marker. (8-1-12)

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 will be 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.

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.

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.

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
Required Wheelchair Space Location Elevation Over Standing Spectators

Riser height	Minimum height of the wheelchair space location based on row spacing[1]		
	Rows less than 33 inches (840 mm)[2]	Rows 33 inches (840 mm) to 44 inches (1120 mm)[2]	Rows over 44 inches (1120 mm)[2]
0 inch (0 mm)	16 inches (405 mm)	16 inches (405 mm)	16 inches (405 mm)
4 inches (100 mm)	22 inches (560 mm)	21 inches (535 mm)	21 inches (535 mm)
8 inches (205 mm)	31 inches (785 mm)	30 inches (760 mm)	28 inches (710 mm)
12 inches (305 mm)	40 inches (1015 mm)	37 inches (940 mm)	35 inches (890 mm)
16 inches (405 mm)	49 inches (1245 mm)	45 inches (1145 mm)	42 inches (1065 mm)
20 inches (510 mm)[3]	58 inches (1475 mm)	53 inches (1345 mm)	49 inches (1245 mm)
24 inches (610 mm)	N/A	61 inches (1550 mm)	56 inches (1420 mm)
28 inches (710 mm)[4]	N/A	69 inches (1750 mm)	63 inches (1600 mm)
32 inches (815 mm)	N/A	N/A	70 inches (1780 mm)
36 inches (915 mm) and higher	N/A	N/A	77 inches (1955 mm)

Footnotes to Table 802.9.2.2
[1]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.
[2]The row spacing is the back-to-back horizontal distance between the rows of seats in front of the wheelchair space location.
[3]Seating treads less than 33 inches (840 mm) in depth are not permitted with risers greater than 18 inches (455 mm) in height.
[4]Seating treads less than 44 inches (1120 mm) in depth are not permitted with risers greater than 27 inches (685 mm) in height.

NOTE: 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 (305 mm) from the back of the seating tread directly in front and the eye of the standing spectator being set back 8 inches (205 mm) 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 is not 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. (8-4-12)

EXCEPTION: Horizontal dispersion shall not be required in assembly areas with 300 or fewer seats if 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. If 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 in 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. (8-5-12)

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. (8-1-12)

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; or

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). **(8-1-12)**

802.11 Stage Lighting for Sign Language Interpreters. ~~Lighting shall be provided at each side of a~~

~~stage for the purposes of illuminating a Sign Language Interpreter. The illuminated presentation area shall be 25 square feet (2.3 m^2) minimum measured in a vertical plane with the bottom edge at 48 inches (1220 mm) above the finished floor and a minimum of 36 inches (915 mm) measured from the presentation wall. The illumination shall be provided by directional light fixtures controlled independently from the general room lighting. The fixtures shall be located as necessary to provide a diagonal cast of light for facial illumination at no less than 15 degrees from the vertical plane. The illumination shall be 10 foot candles (108 lux) minimum greater than the least light level.~~ (8-6-12 PC1)

802.11 General. Sign language interpreter stations shall comply with Section 802.11. (8-6-12 PC1)

802.11.1 Area. A sign language interpreter station shall provide a level and clear floor of sufficient floor area necessary to enable a sign language interpreter to produce sign language legible from the seating area identified in Section 802.11.2 and allow periodic interpreter shift changes to take place. (8-6-12 PC1)

802.11.2 Location. Sign language interpreter stations shall be located so that seating within an arc centered on the station and subtending 120 degrees maximum and not more than 65 feet (19 800 mm) from the station is provided with sightlines providing unobstructed view of the signers from top of their heads to their waists and to an arm's length to both sides of the signer, all as measured to the center of the station. The vertical viewing angle to the interpreter station shall not exceed 30 degrees. (8-6-12 PC1)

802.11.3 Illumination: The sign language interpreter station shall be illuminated in compliance with 802.11.2 while signing is underway. Illumination of the sign language interpreter station shall comply with the Recommended Maintained Illuminance Targets established for a "Transitional Sermon" by IES Handbook 10th Edition, Table 37.2. as listed in Section 106.2.14. (8-6-12 PC1)

802.11.4 Backdrop. When a sign language interpreter station is located no grater than 10 feet (3050 mm) in front of a permanent wall as measured tangent to the centerline of the arc described in Section 802.11.2 a portion of the wall measuring 69 inches (1755 mm) wide centered on the sign language interpreter station and 96 inches (2440 mm) high from the finish floor shall be considered as a backdrop. The surface treatment of the backdrop shall comply with Section 802.11.5 while sign language interpretation is being provided. The backdrop shall provide a flat, smooth surface with a monochromatic, low-luster finish treatment. (8-6-12 PC1)

803 Dressing, Fitting, and Locker Rooms

803.1 General. Accessible dressing, fitting, and locker rooms shall comply with Section 803.

803.2 Turning Space. A turning space complying with Section 304 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. Accessible coat hooks provided within the room shall accommodate a forward reach or side reach complying with Section 308. Where provided, a shelf shall be 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the floor.

804 Kitchens and Kitchenettes

804.1 General. Accessible kitchens and kitchenettes 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. (8-13-12)

~~**EXCEPTION:** Spaces that do not provide a cooktop or conventional range shall not be required to~~

~~comply with Section 804.2 provided there is a 40-inch (1015 mm) minimum clearance between all opposing base cabinets, counter tops, appliances, or walls within work areas.~~

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, counter tops, appliances, or walls within kitchen work areas shall be 40 inches (1015 mm) minimum. Pass-through kitchens shall have two entries.

804.2.2 U-Shaped Kitchens.

804.2.2.1 New buildings. In new buildings, in kitchens enclosed on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 60 ~~67~~ inches (1525 ~~1700~~ mm) minimum. (3-6E-12 PC4 through PC6)

> **EXCEPTION:** U-shaped kitchens with an island shall be permitted to comply with Section 804.2.1. (8-9-12)

804.2.2.2 Existing buildings. In existing buildings, 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.

> **EXCEPTION:** U-shaped kitchens with an island shall be permitted to comply with Section 804.2.1. (3-6-12 PC2)

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, counter tops, appliances and walls within work areas shall be 40-inch (1015 mm) minimum. (8-13-12)

804.3 Work Surface. At least one accessible work surface, 30 inches 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. (8-10-12) (8-11-12)

> **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 complying with Section 305 shall be provided at each kitchen appliance.

804.5.2 Operable Parts. All appliance controls shall comply with Section 309.

EXCEPTIONS:

1. Appliance doors and door latching devices shall not be required to comply with Section 309.4.

2. Bottom-hinged appliance doors, when in the open position, shall not be required to comply with 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 complying with Section 306 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.

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. 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. 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.

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.

805.2.2.1 New buildings and sites. In new buildings and sites, bus stop boarding and alighting areas shall have a ~~96~~ 100-inch (~~2440~~ 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. (3-13F-12)

805.2.2.2 Existing buildings and sites. In existing buildings and sites, bus stop boarding and alighting areas shall have a 96 -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. (3-6-12 PC2)

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 1:48 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.

805.3 Bus Shelters. Bus shelters shall provide a minimum clear floor space complying with Section 305 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.

805.4 Bus Signs. Bus route identification signs shall have visual characters complying with Sections 703.2.2, 703.2.3, 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.

805.5.1 Slope. Rail platforms shall not exceed a slope of 1:48 in all directions.

EXCEPTION: Where platforms serve vehicles operating on existing track or track laid in existing roadway, the slope of the platform parallel to the track shall be permitted to be equal to the slope (grade) of the roadway or existing track.

805.5.2 Detectable Warnings. Platform boarding edges not protected by platform screens or guards shall have a detectable warning complying with Section 705.

805.6 Rail Station Signs. Rail station signs shall comply with Section 805.6.

EXCEPTION: Signs shall not be required to comply with Sections 805.6.1 and 805.6.2 where audible signs are remotely transmitted to hand-held receivers, or are user- or proximity-actuated.

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 703.3 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 (76 mm) in height.

805.6.3 Station Names. Stations covered by this section 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 (815mm) 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 105.2.5.

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 ~~24 inches (610 mm) in depth~~ complying with Section 705 ~~extending the full width of the circulation path. The detectable warning surface shall be located so that the edge nearest the rail crossing is 6 foot (1830 mm) minimum and 15 foot (4570 mm) maximum from the centerline of the nearest rail.~~ (4-44-12)

EXCEPTION: Openings for wheel flanges shall be permitted to be $2^1/_2$ inches (64 mm) maximum.

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 complying with Section 304 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, clear floor space complying with Section 305 shall be provided on at least one side of the bed. The clear floor space shall be positioned for parallel approach to the side of the bed.

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.

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 complying with Section 304.

EXCEPTION: Levels of jury boxes not required to be accessible are not required to comply with Section 807.2.

807.3 Clear Floor Space. Within the defined area of each jury box and witness stand, a clear floor space complying with Section 305 shall be provided.

EXCEPTION: In alterations, wheelchair spaces are not required to be located within the defined area of raised jury boxes or witness stands and shall be permitted to be located outside these spaces where 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.

808 Classroom Acoustics

808.1 General. Classrooms not exceeding 20,000 cubic feet (566 m^3) and required to provide enhanced acoustics shall comply with Section 808. (8-15-12 PC5)

808.2 Reverberation Time. Classrooms shall provide reverberation times complying with Sections 808.2.1 or 808.2.2. Reverberation times shall apply to fully furnished classrooms while not in use. (8-15-12 PC5)

808.2.1 Compliance Method A. In each of the octave frequency bands of 500, 1000, and 2000 Hz, reverberation times for sound to decay by 60 dB (*T*60) shall not exceed the times specified below:

1. 0.6 seconds in classrooms 10,000 cubic feet (283 m^3) maximum.

2. 0.7 seconds in classrooms more than 10,000 cubic feet (283 m^3) but not exceeding 20,000 cubic feet (566 m^3). (8-15-12 PC5)

Reverberation times shall be field verified and shall be measured over a minimum level decay of 20 dB for which the maximum time shall not exceed 0.2 seconds for classrooms listed in item #1 and 0.23 seconds for classrooms listed in item #2 .

808.2.2 Compliance Method B. Small classrooms 10,000 cubic feet (283 m^3) maximum complying with Table 808.2.2(a) for T60 of 0.6 s., and large classrooms more than 10,000 cubic feet (283 m^3) but not exceeding 20,000 cubic feet (566 m^3) complying with Table 808.2.2(b) for T60 of 0.7s., shall be deemed to comply with Section 808.2. (8-15-12 PC5)

Table 808.2.2(a) — Minimum surface area of acoustical treatment for small classrooms.

Sound absorption coefficient, α_1	Ceiling height, H, ft.								
	8	9	10	11	12	13	14	15	16
	Ceiling height, H, m.								
	2.44	2.74	3.05	3.35	3.66	3.96	4.27	4.57	4.88
	Minimum combined area of wall and ceiling sound-absorbing material as a percentage of the floor area								
0.45	112	130	148	167	185	203	221	239	257
0.50	101	117	134	150	166	183	199	215	232
0.55	92	107	121	136	151	166	181	196	211
0.60	84	98	111	125	139	152	166	179	193
0.65	78	90	103	115	128	141	153	166	178
0.70	72	84	95	107	119	130	142	154	166
0.75	67	78	89	100	111	122	133	144	154
0.80	63	73	83	94	104	114	124	135	145
0.85	59	69	79	88	98	107	117	127	136
0.90	56	65	74	83	92	101	111	120	129
0.95	53	62	70	79	88	98	105	113	116
1.00	50	59	67	75	83	91	100	108	116

(8-15-12 PC5)

Table 808.2.2(b) — Minimum surface area of acoustical treatment for large classrooms.

Sound absorption coefficient, α_1	Ceiling height, H, ft.								
	8	9	10	11	12	13	14	15	16
	Ceiling height, H, m.								
	2.44	2.74	3.05	3.35	3.66	3.96	4.27	4.57	4.88
	Minimum combined area of wall and ceiling sound-absorbing material as a percentage of								

	the floor area								
0.45	91	107	122	138	154	169	185	200	216
0.50	82	96	110	124	138	152	166	180	194
0.55	75	87	100	113	126	138	151	164	177
0.60	68	80	92	104	115	127	139	150	162
0.65	63	74	85	96	106	117	128	139	149
0.70	59	69	79	89	99	109	119	129	139
0.75	55	64	73	83	92	102	111	120	130
0.80	51	60	69	78	86	95	104	113	121
0.85	48	57	65	73	81	90	98	106	114
0.90	46	53	61	69	77	85	92	100	108
0.95	43	51	58	65	73	80	88	95	102
1.00	41	48	55	62	69	76	83	90	97

(8-15-12 PC5)

808.3 Ambient Sound Level. Ambient sound levels within a classroom shall comply with Section 808.3. Ambient sound levels from exterior and interior sound sources shall be evaluated individually. The greatest one-hour averaged sound levels shall be evaluated at a height of 3 feet (914 mm) above the floor and no closer than 3 feet (914 mm) from any wall, window, or fixed object. Ambient sound levels shall apply to fully furnished classrooms while not in use. (8-15-12 PC5)

808.3.1 Exterior Sound Sources. Ambient sound levels within a classroom 20,000 cubic feet (566 m^3) maximum shall not exceed 35 dBA and 55 dBC for noise intrusion from exterior sound sources. (8-15-12 PC5)

808.3.2 Interior Sound Sources. Ambient sound levels within a classroom not larger than 20,000 cubic feet (566 m^3) shall not exceed 35 dBA and 55 dBC, for noise from interior sound sources. (8-15-12 PC5)

808.1 General. This section applies to classrooms with volumes up to 20,000 cubic feet (565 m^3). (8-15-12 PC5)

808.2 Reverberation Time. Classroom reverberation times shall comply with either Section 808.2.1 or Section 808.2.2, depending on the size of the room. (8-15-12 PC4 and PC5)

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*60) shall not exceed the times specified below:

1. 0.6 seconds in classrooms with volumes up to and including 10,000 cubic feet (285 m^3).

2. 0.7 seconds in classrooms with volumes of more than 10,000 cubic feet (285 m^3), but less than 20,000 cubic feet (566 m^3).

Reverberation times shall apply to fully-furnished, unoccupied classrooms. Reverberation times shall be field-verified via measurements made in accordance with ASTM E2235-04(2012) "Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods" over a minimum 20 dB decay in each octave frequency band as listed in Section 106.2.15. (8-15-12 PC4 and PC5)

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 less than or equal to 10,000 cubic feet (285 cubic meters):

$$(NRC_{Floor} \times S_{Floor}) + (NRC_{Ceiling} \times S_{Ceiling}) + (NRC_{Wall} \times S_{Wall}) \geq Volume/12$$

For a classroom with a volume between 10,000 cubic feet (285 cubic meters) and 20,000 cubic feet (565

cubic meters):

$$(NRC_{Floor} \times S_{Floor}) + (NRC_{Ceiling} \times S_{Ceiling}) + (NRC_{Wall} \times S_{Wall}) \geq Volume/14$$

Where:

NRC_{Floor} = NRC rating of the floor finish material

S_{Floor} = floor area in square feet

$NRC_{Ceiling}$ = NRC rating of the ceiling finish material

$S_{Ceiling}$ = ceiling area in square feet

NRC_{Wall} = 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 x S product for each surface finish shall be added to the left side of the equation. (8-15-12 PC5)

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, fish tank pumps shall be turned off during these measurements. (8-15-12 PC5)

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. (8-15-12 PC5)

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. (8-15-12 PC5)

Chapter 9. ~~Built-In~~ Furnishings and Equipment

9-1-12 PC1

901 General

901.1 Scope. ~~Built-in~~ 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. (9-1-12)

902 Dining Surfaces and Work Surfaces

902.1 General. Accessible dining surfaces and work surfaces shall comply with Section 902.

EXCEPTION: Dining surfaces and work surfaces primarily for children's use shall be permitted to comply with Section 902.5.

902.2 Clear Floor Space. A clear floor space complying with Section 305, positioned for a forward approach, shall be provided. Knee and toe clearance complying with Section 306 shall be provided.

EXCEPTIONS:

1. At dining surfaces 12 inches (305 mm) or less in depth, knee and toe space 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 complying with Section 305 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 complying with Section 305 is provided and is positioned for a parallel approach.

902.5.1 Clear Floor Space. A clear floor space complying with Section 305, positioned for forward approach, shall be provided. Knee and toe clearance complying with Section 306 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.

903 Benches

903.1 General. Accessible benches shall comply with Section 903.

903.2 Clear Floor Space. A clear floor space complying with Section 305, positioned ~~for a parallel~~

~~approach to the bench seat,~~ shall be provided at the end of the bench seat and parallel to the short axis of the bench. (9-4-12)

> ~~**Exception.** A clear floor space positioned for a parallel approach to the front of the bench seat, shall be permitted where a clear floor space is also positioned at the end the bench seat.~~ (9-4-12 PC1 and PC2)

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 $2^{1}/_{2}$ inches (64 mm) maximum from the rear edge of the seat measured horizontally.

903.5 Height. The top of the bench seat shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the floor, measured to the top of the seat.

> **EXCEPTION:** 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.

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.

904 Sales and Service Counters

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 or 904.3.2. Where counters are provided, the accessible portion of the countertop shall extend the same depth as the sales and service countertop. (9-9-12)

904.3 Sales and Service Counters and Windows. Sales and service counters and windows shall comply with Sections 904.3.1 ~~or~~ and either 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. (9-7-12) (9-9-12)(9-10-12) (9-10-12 PC3)

> **EXCEPTION:** In *alterations*, when the provision of a counter complying with Section 904.4 would result in a reduction of the number of existing counters at work stations or a reduction of the number of existing *mail boxes*, the counter shall be permitted to have a portion which is 24 inches (610 mm) long minimum complying with Section 904.4.1 provided that the required clear floor *space* is centered on the *accessible* length of the counter. (9-6-12)

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. (9-10-12)

Exception: Transparent security glazing shall be permitted above the 43 inches (1090 mm) maximum height. **(9-10-12)**

~~**904.3.1**~~ **904.3.2** 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. ~~Where the counter surface at pass-through or hand-off elements of a counter is less than 36 inches (915 mm) in length, the entire pass-through or hand-off element of the counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor~~. A clear floor space complying with Section 305, 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: At pass-through or hand-off portions of counters, the counter surface shall be 12 inches minimum in length. Where the counter surface at pass-through or hand-off elements of a counter is less than 36 inches (915 mm) in length, the entire pass-through or hand-off element of the counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor. (9-10-12 PC2)

~~**904.3.2**~~ **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 complying with Section 305, positioned for a forward approach to the accessible counter, shall be provided. Knee and toe clearance complying with Section 306 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. (9-10-12) (9-10-12 PC2)

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 Counters. The checkout counter surface shall be 38 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.

904.4.3 Check Writing Surfaces. Where provided, check writing surfaces shall comply with Section 902.4.

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 Section 308.

904.5.2 Tray Slides. The tops of tray slides shall be 28 inches (710 mm) minimum and 34 inches (865 mm) maximum above the 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. Telephone handset devices, if provided, shall comply with Section 704.3.

905 Storage Facilities

905.1 General. Accessible built-in storage facilities shall comply with Section 905. (9-1-12)

EXCEPTION: Kitchen cabinets are not required to comply with Section 905. (9-13-12)

905.2 Clear Floor Space. A clear floor space complying with Section 305 shall be provided.

905.3 Height. Accessible storage elements shall comply with at least one of the reach ranges specified in Section 308.

905.4 Operable Parts. Operable parts of storage facilities shall comply with Section 309.

906 Charging Stations. (8-5-12)

906.1 General. A charging station shall consist of a grounded duplex outlet.

906.2 Clear Floor Space. A clear floor space complying with Section 305 shall be provided at the charging station.

906.3 Height. Accessible charging stations shall comply with at least one of the reach ranges specified in Section 308.

907 Gaming Machines and Tables (9-12-12)

907.1 Clear Floor Space. Accessible gaming machines and tables shall have a clear floor space complying with Section 305 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. **(9-12-12)**

Please Note: *The A117.1 Committee approved a proposal which exchanges Chapters 10 and 11 in their placement in the standard.*

Chapter 10. Recreational Facilities

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.

1001.2 Special Provisions

1001.2.1 General Exceptions. The following shall not be required to be accessible 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.
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^2) maximum. (11-1-12)

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 Chapter 10. Within areas of sports activity exempted in this chapter, the floor and ground surfaces shall not be required to comply with Section 302. (3-1-12) Within areas of sports activity exempted in this chapter, changes in level shall not be required to comply with Section 303. (3-1-12)

~~**1101.2.3 Recreational Boating Facilities.** Operable parts of cleats and other boat securement devices shall not be required to comply with Section 308.~~ (11-2-12)

~~**1001.2.4** **1001.2.3 Exercise Machines and Equipment.** Exercise machines and exercise equipment shall not be required to comply with Section 309.~~

1001.3 Protruding Objects. Protruding objects on circulation paths shall comply with Section 307.

EXCEPTIONS:

1. Within areas of sport activity, protruding objects on circulation paths shall not be required to comply with Section 307.

2. Within play areas, protruding objects on circulation paths shall not be required to comply with Section 307 provided that ground level accessible routes provide vertical 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. (3-1-12) Animal containment areas not exempted by Section 1001.2.1 shall not be required to comply with Section 303. (3-1-12)

1002 Amusement Rides.

1002.1 General. Accessible 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 505 where complying is not structurally or operationally feasible.

1002.3 Load and Unload Areas. A turning space complying with Sections 304.2 and 304.3 shall be provided in load and unload areas.

1002.4 Wheelchair Spaces in Amusement Rides. Wheelchair spaces in amusement rides shall comply with Section 1002.4.

1002.4.1 Floor Surface. The floor surface of wheelchair spaces shall be stable and firm.

1002.4.2 Slope. The floor surface of wheelchair spaces shall have a slope not steeper than 1:48 when in the load and unload position.

1002.4.3 Gaps. Floors of amusement rides with wheelchair spaces and floors of load and unload areas shall be coordinated so that, when amusement rides are at rest in the load and unload position, the vertical difference between the floors shall be within plus or minus $^{5}/_{8}$ 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 ~~105.2.11~~ 106.2.1, shall be provided. Handrails on the ramps, bridge plates or similar devices are permitted to comply with either the requirements of Section 505 or the requirements of 36 CFR 1192.83(c). (11-3-12)

1002.4.4 Clearances. Clearances for wheelchair spaces shall comply with Section 1002.4.4.

EXCEPTIONS:

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

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

3. Wheelchair spaces shall not be required to comply with 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 aid 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.

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. (11-4-12)

1002.5.1 Clear Floor Space. A clear floor space complying with Section 305 shall be provided in the load and unload area adjacent to the amusement ride transfer devices and seats designed for transfer. (11-4-12)

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. (11-4-12)

1002.5.3 Transfer Entry. Where openings are provided for transfer to amusement ride seats, the openings shall provide clearance for transfer from a wheelchair or mobility aid to the amusement ride seat.

1102.5.4 Wheelchair Storage Space. Wheelchair storage spaces complying with Section 305 shall be provided in or adjacent to unload areas for each required amusement ride transfer device and seat designed for transfer and shall not overlap any required means of egress or accessible route. (11-4-12)

~~**1102.6 Transfer Devices for Use with Amusement Rides.** Transfer devices for use with amusement rides shall comply with Section 1102.6 when positioned for loading and unloading. (11-4-12)~~

~~**1102.6.1 Clear Floor Space.** A clear floor space complying with Section 305 shall be provided in the load and unload area adjacent to the transfer device. (11-4-12)~~

~~**1102.6.2 Transfer Height.** The height of transfer device seats shall be 14 inches (355 mm) minimum and 24 inches (610 mm) maximum measured from the load and unload surface. (11-4-12)~~

~~**1102.6.3 Wheelchair Storage Space.** Wheelchair storage spaces complying with Section 305 shall be provided in or adjacent to unload areas for each required transfer device and shall not overlap any required means of egress or accessible route. (11-4-12)~~

1003 Recreational Boating Facilities

1003.1 General. Accessible 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 1103.2.

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 ~~boat launch ramps~~ piers. (11-5-12)

9. Cleats and other boat securement devices shall not be required to comply with Section ~~309.3~~ 308. (11-2-12)

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, ~~and~~ 8 and 9 in Section1003.2.1. (11-2-12)

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 Clearances. Clearances at boat slips and on boarding piers at boat launch ramps shall comply with Section 1003.3.

1003.3.1 Boat Slip Clearance. At boat slips and on 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 pier. Each 10 feet (3050 mm) of linear pier edge serving boat slips or boarding pier shall contain at least one continuous clear opening 60 inches (1525 mm) minimum in width. (11-6-12)

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 1103.3 would result in a reduction in the number of boat slips available or result in a reduction of the widths of existing slips. (11-6-12)

~~**1103.3.2 Boarding Pier Clearances.** Boarding piers at boat launch ramps shall provide clear pier space 60 inches (1525 mm) minimum in width and shall extend the full length of the boarding pier. Every 10 feet (3050 mm) of linear pier edge shall contain at least one continuous clear opening 60 inches (1525 mm) minimum in width.~~ (11-6-12)

~~**EXCEPTIONS:**~~

~~1. The 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.~~ (11-6-12)

1004 Exercise Machines and Equipment

1004.1 Clear Floor Space. Accessible exercise machines and equipment shall have a clear floor space complying with Section 305 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.

1004.2 Operable Parts. The operable parts of exercise machines and exercise equipment shall not be required to comply with Section 309.

1005 Fishing Piers and Platforms

1005.1 Accessible Routes. Accessible routes serving fishing piers and platforms, including gangways and floating piers, shall comply with Chapter 4.

EXCEPTIONS:

1. Accessible routes serving floating fishing piers and platforms shall be permitted to use Exceptions 1, 2, 5, 6, 7 and 8 in 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.

1005.2 Railings. Where provided along the perimeter of fishing piers or platforms, railings, or guards, ~~or handrails~~ shall comply with Section 1005.2. (11-7-12)

> **EXCEPTION**: Where a guard complying with the applicable building code is provided, the guard shall not be required to comply with Section 1005.2. (11-7-12)

1005.2.1 Height. A minimum of 25 percent of the railings~~, guards or handrails~~ shall be 34 inches (865 mm) maximum above the ground or deck surface. (11-7-12)

> ~~**EXCEPTION**: Where a guard complying with the applicable building code is provided, the guard shall not be required to comply with Section 1005.2.1.~~ (11-7-12)

1005.2.1.1 Dispersion. Railings~~, guards or handrails~~ required to comply with Section 1005.2.1 shall be dispersed throughout the fishing pier or platform. (11-7-12)

1005.3 Edge Protection. Where railings~~, guards or handrails~~ complying with Section 1005.2 are provided, edge protection complying with Section 1005.3.1 or 1005.3.2 shall be provided. (11-7-12)

1005.3.1 Curb or Barrier. Curbs or barriers shall ~~extend~~ be a minimum of 2 inches (51 mm) ~~minimum~~ in height above the surface of the fishing pier or platform. (11-7-12)

1005.3.2 Extended Ground or Deck Surface. The ground or deck surface shall extend 12 inches (305 mm) minimum beyond the inside face of the railing. Toe clearance shall be provided and shall be 30 inches (760 mm) minimum in width and 9 inches (230 mm) minimum in height above the ground or deck surface beyond the railing.

1005.4 Clear Floor Space. At each location where there are railings~~, guards or handrails~~ complying with Section 1005.2.1, a clear floor space complying with Section 305 shall be provided. Where there are no railings, guards, or handrails, at least one clear floor space complying with Section 305 shall be provided on the fishing pier or platform. (11-7-12)

1005.5 Turning Space. At least one turning space complying with Section 304.3 shall be provided on fishing piers and platforms.

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 ~~and~~ shall be 48 inches (1220 mm) minimum in width. Where ~~handrails~~ guards, barriers or rails are provided, accessible routes shall be 60 inches (1525 mm) minimum in clear width. (11-9-12) (11-8-12)

> ~~**EXCEPTION**: Handrails shall not be required on golf courses. Where handrails are provided on golf courses, the handrails shall not be required to comply with Section 505.~~ (11-9-12)

> **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 this section. (11-8-12)

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. (11-8-12)

> **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. (11-8-12)

1006.2.2 Putting Greens. Putting greens shall be designed and constructed so that a golf car can enter and exit the putting green. (11-8-12)

1006.2.3 Practice Putting Greens, Practice Teeing Grounds, and Teeing Stations at Driving Ranges. At least 5 percent, but no fewer than one, of practice putting greens, practice teeing grounds, and teeing stations at driving ranges shall be designed and constructed so that a golf car can enter and exit. (11-8-12)

~~1106.4~~ **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 floor space 60 inches (1525 mm) minimum by 96 inches (2440 mm) minimum shall be provided within weather shelters. (11-8-12)

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).

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: (11-10-12)

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 1:20 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 ~~on holes~~. ~~Where handrails are provided on holes, the handrails shall not be required to comply with Section 505.~~ (11-10-12)

.

1007.3 Miniature Golf Holes. Miniature golf holes shall comply with Section 1007.3.

1007.3.1 Start of Play. A clear floor space 48 inches (1220 mm) minimum by 60 inches (1525 mm) minimum with slopes not steeper than 1:48 shall be provided at the start of play.

1007.3.2 Golf Club Reach Range Area.

1007.3.2.1 New buildings. In new buildings, **a**ll areas within holes where golf balls rest shall be within 36 inches (915 mm) maximum of a clear floor space 36 inches (915 mm) minimum in width and ~~48~~ 52 inches (~~1220~~ 1320 mm) minimum in length complying with Section 305 having a running slope not steeper than 1:20. The clear floor space shall be served by an accessible route. (3-13H-12)

1007.3.2.2 Existing buildings. In existing buildings, all areas within holes where golf balls rest shall be within 36 inches (915 mm) maximum of a clear floor space 36 inches (915 mm) minimum in width and 48 inches (1220 mm) minimum in length complying with Section 305 having a running slope not steeper than 1:20. The clear floor space shall be served by an accessible route. (3-6-12 PC2)

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 authority having jurisdiction.

1008.3.1 Additions. Where play areas are designed and constructed in phases, the requirements of 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 of 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 if the minimum required types of play components are satisfied. Where two or more required ground level play components are provided, they shall be dispersed throughout the play area and integrated with other play components.

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:** If at least 50 percent of the elevated play components are connected by a ramp and at least 3 of the elevated play components connected by the ramp are different types of play components, the play area shall not be required to comply with 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
22 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 1108.4. **(11-12-12)**

1008.4.1 Accessible Routes. Accessible routes serving play areas shall comply with Chapter 4 and Section 1008.4.1 ~~and shall be permitted to use the exceptions in Sections 1108.4.1.1 through 1108.4.1.3.~~ Where accessible routes serve ground level play components, the vertical clearance shall be 80 inches (2030 mm) minimum in height. **(11-12-12)**

> **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. **(11-12-12)**

~~**1008.4.1.1 Ground Level and Elevated Play Components.** Accessible routes serving ground level play components and elevated play components shall be permitted to use the exceptions in Section 1008.4.1.1.~~

~~**EXCEPTIONS:**~~

~~1. Transfer systems complying with Section 1008.4.2 shall be permitted to connect elevated play components except where 20 or more elevated play components are provided no more than 25 percent of the elevated play components shall be permitted to be connected by transfer systems.~~

~~2. Where transfer systems are provided, an elevated play component shall be permitted to connect to another elevated play component as part of an accessible route.~~ **(11-12-12)**

~~**1008.4.1.2 Soft Contained Play Structures.** Accessible routes serving soft contained play structures shall be permitted to use the exception in Section 1008.4.1.2.~~

~~**EXCEPTION:** Transfer systems complying with Section 1008.4.2 shall be permitted to be used as part of an accessible route.~~ **(11-12-12)**

~~**1008.4.1.3 Water Play Components.** Accessible routes serving water play components shall be permitted to use the exceptions in Section 1008.4.1.3.~~

~~**EXCEPTIONS:**~~

~~1. 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.~~

~~2. Transfer systems complying with Section 1008.4.2 shall be permitted to connect elevated play components in water.~~ **(11-12-12)**

~~**1008.4.1.4**~~ **1008.4.1.1 Clear Width.** Accessible routes connecting play components shall provide a clear width complying with Section ~~1008.4.1.4~~ 1008.4.1.1

~~**1008.4.1.4.1**~~ **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^2), the clear width of accessible routes shall be permitted to be 44 inches (1120 mm) minimum, if at least one turning space complying with Section 304.3 is provided where the restricted accessible route exceeds 30 feet (9145 mm) in length.

2. The clear width of accessible routes shall be permitted to be 36 inches (915 mm) minimum for a distance of 60 inches (1525 mm) maximum provided that multiple reduced width segments

are separated by segments that are 60 inches (1525 mm) minimum in width and 60 inches (1525 mm) minimum in length.

~~1008.4.1.4.2~~ 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.

~~1108.4.1.5~~ 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 at modified by Section 1008.4.1.2**.** (11-14-12)

~~1108.4.1.5.1~~ 1008.4.1.2.1 **Ground Level.** Ramp runs connecting ground level play components shall have a running slope not steeper than 1:16.

~~1108.4.1.5.2~~ 1008.4.1.2.2 **Elevated.** The rise for any ramp run connecting elevated play components shall be 12 inches (305 mm) maximum.

~~1108.4.1.5.3~~ 1008.4.1.2.3 **Handrails.** Where required on ramps serving play components, the handrails shall comply with Section 505 except as modified by Section ~~1108.4.1.5.3~~ 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.

~~1108.4.1.5.3.1~~ 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 handrail is non-circular, the handrail shall provide an equivalent gripping surface.

~~1108.4.1.5.3.2~~ 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.

~~1108.4.1.6~~ 1008.4.1.3 **Ground Surfaces.** Ground surfaces on accessible routes, clear floor spaces, and turning spaces shall comply with Section ~~1108.4.1.6~~ 1008.4.1.3.

~~1108.4.1.6.1~~ 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.

~~1108.4.1.6.2~~ 1008.4.1.3.2 **Use Zones.** Ground surfaces located within use zones shall comply with ASTM F 1292 listed in ~~Sections 105.2.8 or 105.2.9~~ Section 106.2.11.

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.

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.

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 complying with Section 304 shall be provided on the same level as play components. Where swings are provided, the turning space shall be located immediately adjacent to the swing.

1008.4.3.2 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 from the 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.

1009 Swimming Pools, Wading Pools, Hot tubs and Spas

1009.1 General. Swimming pools, wading pools, hot tubs 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. Catch pools shall not be required to provide an accessible means of entry provided that the catch pool edge is on an accessible route.

1009.1.2 Wading pools. At least one sloped entry complying with Section 1009.3 shall be provided in wading pools.

1009.1.3 Hot tubs and Spas. At least one accessible means of entry shall be provided for hot tubs and 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 hot tubs or spas are provided in a cluster, no more than 5 percent, but not less than one hot tub or 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 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.

1009.2.2 Seat Location. In the raised position, the centerline of the seat shall be located over the deck and 16 inches (405 mm) minimum from the edge of the pool. The deck surface between the centerline of the seat and the pool edge shall have a slope not steeper than 1:48.

1009.2.3 Clear Deck Space

1009.2.3.1 New buildings. In new buildings, 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~~ 52 inches (~~1220~~ 1320 mm) minimum from a line located 12 inches (305 mm) behind the rear edge of the seat. The clear deck space shall have a slope not steeper than 1:48. (3-13K-12)

1009.2.3.2 Existing buildings. In existing buildings, 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 have a slope not steeper than 1:48. (3-6-12 PC2)

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.

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. If provided, the armrest positioned opposite the water shall be removable or shall fold clear of the seat when the seat is in the raised (load) position.

EXCEPTION: Footrests shall not be required on pool lifts provided in spas.

1009.2.7 Operation. The lift shall be capable of unassisted operation from both the deck and water levels. Controls and operating mechanisms shall be unobstructed when the lift is in use and shall comply with 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.

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 ~~Chapter 4~~ Sections 402, 403 and 405 except as modified by Sections 1009.3.1 through 1009.3.3. (11-16-12)

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.

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.

Section 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 505 shall be provided on the sloped entry. The clear width between required handrails shall be 33 inches (840 mm) minimum and 38 inches (965 mm) maximum.

EXCEPTIONS:

1. Handrail extensions specified by Section 505.10.1 shall not be required at the bottom landing serving a sloped entry.

2. Where a sloped entry is provided for wave action pools, leisure rivers, sand bottom pools, and other pools where user access is limited to one area, the handrails shall not be required to comply with the clear width requirements of Section 1009.3.3.

3. Sloped entries in wading pools shall not be required to provide handrails complying with Section 1009.3.3. If provided, handrails on sloped entries in wading pools shall not be required to comply with Section 505.

1009.4 Transfer Walls. Transfer walls shall comply with Section 1009.4.

1009.4.1 Clear Deck Space. A clear deck space of 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum with a slope not steeper than 1:48 shall be provided at the base of the transfer wall. Where one grab bar is provided, the clear deck space shall be centered on the grab bar. Where two grab bars are provided, the clear deck space shall be centered on the clearance between the grab bars.

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.

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.

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.

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.

1009.5.2 Transfer Space. A transfer space of 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum with a slope not steeper than 1:48 shall be provided at the base of the transfer platform surface. 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.

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.

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.

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.

1009.6 Pool Stairs. Pool stairs shall comply with Section 1009.6.

1009.6.1 Pool Stairs. Pool stairs shall comply with Sections ~~Section 504~~ 504.2 through 504.5. (11-17-12)

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 505 shall be provided on the pool stairs. The width between handrails shall be 20 inches (510 mm) minimum and 24 inches (610 mm) maximum. (11-17-12)

EXCEPTION: Handrail extensions required by Section 505.10.3 shall not be required at the bottom on pool stairs. (11-17-12)

1010 Shooting Facilities with Firing Positions

1010.1 Turning Space. A circular turning space complying with Section 304.3.1 with slopes not steeper than 1:48 shall be provided at shooting facility firing positions.

1010.2 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 maximum in height above the floor surface. If counter surfaces are provided at other firing positions of the same type, equivalent counter surfaces shall be provided at the accessible firing position. (11-18-12)

Please Note: *The A117.1 Committee approved a proposal which exchanges Chapters 10 and 11 in their placement in the standard.*

Chapter 11. Dwelling Units and Sleeping Units

1101 General

1101.1 Scoping. Dwelling units and sleeping units required to be Accessible units, Type A units, Type B units, Type C (Visitable) units or units with accessible communication features by the scoping provisions adopted by the administrative authority shall comply with the applicable provisions of Chapter 11.

~~**1101.2 Mail Receptacles.** Where provided, mail receptacles shall be accessible in accordance with Sections1101.2.1 or 1101.2.2.~~ (10-2-12 PC3 and PC4)

~~**1101.2.1 Dwelling Units and Sleeping units.** Where mail receptacles are provided for Accessible, Type A or Type B dwelling and sleeping units, accessible mail receptacles shall be provided in accordance with Section 1101.2.1.1 or 1101.2.1.2.~~ (10-2-12 PC3 and PC4)

~~**1101.2.1.1 Centralized Mail Receptacles.** Where each individual mail compartment of a centralized mail receptacle is assigned to a specific dwelling unit or sleeping unit, the individual mail compartments shall comply with Section 1101.2.1.1.1 or 1101.2.1.1.2.~~ (10-2-12 PC3 and PC4)

~~**1101.2.1.1.1 Buildings Without an Elevator.** In a structure without an elevator, all individual mail compartments assigned to Accessible units, Type A units and Type B units in each location shall be accessible.~~ (10-2-12 PC3 and PC4)

~~**1101.2.1.1.2 Buildings With an Elevator.** In a structure with an elevator, fifty percent of all individual mail compartments in each location shall be accessible. Individual mail compartments assigned to Accessible and Type A units shall be included in the accessible mailboxes. In addition to the individual mail compartments assigned to dwelling or sleeping units, an additional number of individual mail compartments that is equal to ten percent of the total number of dwelling units and sleeping units, but not less than one, at each location shall be accessible.~~ (10-2-12 PC3 and PC4)

~~**1101.2.1.1.3 Parcel lockers.** All parcel lockers of centralized mail receptacles shall be accessible.~~
(10-2-12 PC3 and PC4)

~~**1101.2.1.2 Individual house-mounted and curbside mail receptacles.** Where an individual house-mounted or curbside mail receptacle serves a dwelling unit or sleeping unit that is required to be an Accessible unit, Type A unit or Type B unit, the mail receptacle shall be accessible.~~
(10-2-12 PC3 and PC4)

1102 Accessible Units

1102.1 General. Accessible units shall comply with Section 1102.

1102.2 Primary Entrance. The accessible 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 complying with Section 304.

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 elements: walking surfaces with a slope not steeper than 1:20, doors and doorways, ramps, elevators, and 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 are not 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 are not required to comply with Section 404.2.5.

5. Communicating doors between individual sleeping units are not 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, door maneuvering clearance is not required on the exterior side of the door.

7. The maneuvering clearances required by Section 404 are not required within a closet or pantry complying with Exception 2 of Section 1102.3.2. (10-4-12)

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.

1102.9 Operable Parts. Lighting controls, electrical panels, electrical switches and receptacle outlets, environmental controls, appliance controls, ~~operating hardware for operable windows,~~ plumbing fixture controls, and user controls for security or intercom systems shall comply with Sections 1102.9 and 309. (5-22-12) (10-6-12) (10-10-12)

EXCEPTIONS:

1. Receptacle outlets serving a dedicated use.

2. In a kitchen, where two or more receptacle outlets are provided ~~in a kitchen~~ above a length of counter top that is uninterrupted by a sink or appliance, one receptacle outlet shall ~~not~~ be required to comply with Section 309. (10-8-12)

3. In a kitchen, where a clear floor space for a parallel approach cannot be located at a counter top in a corner between appliances, receptacle outlets over the counter top shall not be required to comply with Section 309 provided that the counter top ~~is 7~~ area does not exceed 9 square feet (~~0.65~~ 0.835 m^2) maximum. (10-8-12 PC2)

4. Floor receptacle outlets.

5. HVAC diffusers.

6. Controls mounted on ceiling fans.

7. Where redundant controls other than light switches are provided for a single element, one control in each space shall not be required to be accessible.

8. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures.

9. Electrical panels shall not be required to comply with Section 309.4.

1102.10 Laundry Equipment. Washing machines and clothes dryers shall comply with Section 611.

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 Accessible 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. The accessible 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 Counter Top Space. If vanity counter top space is provided in dwelling or sleeping units not required to be Accessible units within the same facility, equivalent vanity counter top space, in terms of size and proximity to the lavatory, shall also be provided in Accessible units.

1102.11.2.2 Mirrors. Mirrors above accessible lavatories shall have the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the floor.

1102.12 Kitchens ~~and kitchenettes.~~ Kitchens ~~and kitchenettes~~ shall comply with Section 804. ~~At least one work surface, 30 inches (760 mm) minimum in length, shall comply with Section 902.~~

~~**EXCEPTION:** Spaces that do not provide a cooktop or conventional range shall not be required to provide an accessible work surface.~~ (8-13-12) (8-10-12)

1102.13 Windows. Operable windows shall comply with Section ~~1102.13~~ 506.1.

EXCEPTIONS:

1. Windows in kitchens are not required to comply with Section 1102.13
2. Windows in bathrooms are not required to comply with Section 1102.13. (5-22-12)

~~**1102.13.1 Natural ventilation.** Operable windows required to provide natural ventilation shall comply with Sections 309.2 and 309.3.~~ (5-22-12)

~~**1102.13.2 Emergency escape.** Operable windows required to provide an emergency escape and rescue opening shall comply with Section 309.2.~~ (5-22-12)

1102.14 Storage Facilities. Where storage facilities are provided, at least one of each type shall comply with Section 905.

EXCEPTION: Kitchen cabinets shall not be required to comply with Section 1102.14.

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 complying with Section 305 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.

EXCEPTION: Where a single clear floor space complying with Section 305 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.

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~~, whether or not the mattress is compressed~~. (10-13-12 PC1)

1102.15.4 Wheelchair Charging Area. A wheelchair charging area shall be located adjacent to one bed. A clear floor space complying with Section 305 shall be ~~located between the bedside and a parallel wall. The parallel wall shall be 36 inches (915 mm) minimum to 48 inches (1220 mm) maximum from the bed and provide a 110V duplex receptacle outlet located 24 inches (610 mm) minimum and 48 inches (1220 mm) maximum from the head wall of the bed and complying with Section 1002.9~~ positioned for parallel approach to the side of the bed. (10-10-12 PC1)

~~**Exception:** Where there is no parallel wall within 36 inches (915 mm) minimum to 48 inches (1220 mm) maximum of the bedside, a clear floor space complying with Section 305 shall be along the wall at the head of one bed. A 110V duplex receptacle outlet complying with Section 1002.9 shall be located along the wall at the bed head and within 24 inches (610 mm) minimum and 48 inches (1220 mm) maximum of the bedside.~~ (10-10-12 PC1)

1103 Type A Units

1103.1 General. Type A units shall comply with Section 1103.

1103.2 Primary Entrance. The accessible 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 complying with Section 304.

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 elements: walking surfaces with a slope not steeper than 1:20, doors and doorways, ramps, elevators, and 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 3/4 inch (19 mm) maximum in height, provided they are beveled with a slope not greater than 1:2.~~-~~ (10-16-12 PC1)

1. In toilet rooms and bathrooms not required to comply with Section 1103.11.2, maneuvering clearances required by Section 404.2.3 are not required on the toilet room or bathroom side of the door.

2. A turning space between doors in a series as required by Section 404.2.5 is not required.

3. Storm and screen doors are not required to comply with Section 404.2.5.

4. Communicating doors between individual sleeping units are not required to comply with Section 404.2.5.

5. At other than the primary entrance door, where exterior space dimensions of balconies are less than the required maneuvering clearance, door maneuvering clearance is not required on the exterior side of the door.

6. The maneuvering clearances required by Section 404 are not required within a closet or pantry complying with Exception 2 of Section 1103.3.2. (10-4-12)

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.

1103.9 Operable Parts. Lighting controls, electrical panels, electrical switches and receptacle outlets, environmental controls, appliance controls, ~~operating hardware for operable windows,~~ plumbing fixture controls, and user controls for security or intercom systems shall comply with Section 309. (5-22-12) (10-6-12)

EXCEPTIONS:

1. Receptacle outlets serving a dedicated use.

2. In a kitchen, where two or more receptacle outlets are provided ~~in a kitchen~~ above a length of counter top that is uninterrupted by a sink or appliance, one receptacle outlet shall ~~not~~ be required to comply with Section 309. (10-8-12)

3. In a kitchen, where a clear floor space for a parallel approach cannot be located at a counter top in a corner between appliances, receptacle outlets over the counter top shall not be required to comply with Section 309 provided that the counter top ~~is 7~~ area does not exceed 9 square feet (~~0.65~~ 0.835 m^2) maximum. (10-8-12 PC2)

4. Floor receptacle outlets.

5. HVAC diffusers.

6. Controls mounted on ceiling fans.

7. Where redundant controls other than light switches are provided for a single element, one control in each space shall not be required to be accessible.

8. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures.

9. Electrical panels shall not be required to comply with Section 309.4.

1103.10 Laundry Equipment. Washing machines and clothes dryers shall comply with Section 611.

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 608.3, 608.2.1.3, 608.2.2.3 and 608.2.3.2 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 is not required.

4. Where the lavatory overlaps the water closet clearance 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. The accessible 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 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:

(a) The cabinetry can be removed without removal or replacement of the lavatory;
(b) The floor finish extends under the cabinetry; and
(c) The walls behind and surrounding the cabinetry are finished.

1103.11.2.3 Mirrors. Mirrors above accessible lavatories 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.

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 Clearance Width. A 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 Clearance Depth. 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 Clearance Overlap. The required 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 required at other fixtures, and the wheelchair turning space. No other fixtures or obstructions shall be located within the required water closet clearance.

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 clearance at 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 Section 309. Hand-operated flush controls shall be located on the open side of the water closet.

1103.11.2.5 Bathing Fixtures. The accessible 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.

1103.11.2.5.1 Bathtub. Bathtubs shall comply with Section 607.

EXCEPTION~~S:~~

~~1. The removable in-tub seat required by Section 607.3 is not required.~~ **10-38-12**

2. Counter tops and cabinetry shall be permitted at one end of the clearance, provided the following criteria are met:
   (a) The countertop and cabinetry can be removed;
   (b) The floor finish extends under the countertop and cabinetry; and

(c) The walls behind and surrounding the countertop and cabinetry are finished.

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, counter tops and cabinetry shall be permitted at one end of the clearance, provided the following criteria are met:
(a) The countertop and cabinetry can be removed;
(b) The floor finish extends under the countertop and cabinetry; and
(c) The walls behind and surrounding the countertop and cabinetry are finished.

1103.12 Kitchens. Kitchens and kitchenettes shall comply with Section 1103.12.

1103.12.1 Clearance. Clearance complying with Section 1103.12.1 shall be provided.

1103.12.1.1 Minimum Clearance. Clearance between all opposing base cabinets, counter tops, appliances, or walls within kitchen work areas shall be 40 inches (1015mm) minimum.

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.

EXCEPTION: U-shaped kitchens with an island shall be permitted to comply with Section 1103.12.1.1. (8-9-12)

1103.12.2 Clear Floor Space. Clear floor spaces required by Sections 1103.12.3 through 1103.12.5 shall comply with Section 305.

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. (8-10-12)

EXCEPTION: Spaces that do not provide a cooktop or conventional range shall not be required to provide an accessible work surface. (8-13-12)(8-10-12)

.

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 complying with Section 306 shall be provided. ~~The clear floor space shall be centered on the work surface.~~ (9-2-12)

EXCEPTION: Cabinetry shall be permitted under the work surface, provided the following criteria are met:
(a) The cabinetry can be removed without removal or replacement of the work surface,
(b) The floor finish extends under the cabinetry, and
(c) 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. ~~The sink~~ Sinks shall comply with Section 1103.12.4.

Exception: A parallel approach complying with Section 305 and centered on the sink, shall be

permitted to a kitchen sink in a space where a cook top or conventional range is not provided. (8-13-12)

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 complying with Section 306 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:
   (a) The cabinetry can be removed without removal or replacement of the sink,
   (b) The floor finish extends under the cabinetry, and
   (c) The walls behind and surrounding the cabinetry are finished.

3. A parallel approach complying with Section 305 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. (10-21-12)

4. A parallel approach complying with Section 305 and centered on the sink, shall be permitted at wet bars. (10-21-12)

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 Section 309.

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 Section 1103.9.

EXCEPTIONS:

1. Appliance doors and door latching devices shall not be required to comply with Section 309.4.

2. Bottom-hinged appliance doors, when in the open position, shall not be required to comply with 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 Approach. 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 complying with Section 306 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. ~~Ovens shall have controls on front panels, on either side of the door.~~ (10-22-12)

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. 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. 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.

1103.13 Windows. Operable windows shall comply with Section 1103.13. (5-22-12)

EXCEPTIONS:
1. Windows in kitchens are not required to comply with Section 1103.13.
2. Windows in bathrooms are not required to comply with Section 1103.13.

1103.13.1 Natural ventilation. Operable windows required to provide natural ventilation shall comply with 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 Section 309.2.

1103.14 Storage Facilities. Where storage facilities are provided, at least one of each type shall comply with Section 905.

EXCEPTION: Kitchen cabinets shall not be required to comply with Section 1103.14.

1104 Type B Units

1104.1 General. Type B units shall comply with Section 1104.

1004.1.1. Clear Floor Space. The clear floor space shall be 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width. (3-13L-12 PC9)

1004.1.2 Alcoves. Where the clear floor space is positioned for a forward approach, the alcove shall be

36 inches (915 mm) minimum in width where the depth exceeds 24 inches (610 mm). (3-13L-12 PC9)

1004.1.3 Forward reach 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. (3-13L-12 PC9)

1004.1.4. Mailboxes. Mailboxes serving Type B dwelling units and complying with Section 1001.2 shall be permitted an unobstructed side reach range at 54 inches (1370 m) maximum above the floor. (3-13L-12 PC9)

1004.1.5. Parking Space Width. Access aisles serving Type B units and adjacent to accessible and van accessible parking spaces shall be 60 inches (1525 mm) minimum in width. (3-13L-12 PC9)

1104.2 Primary Entrance. The accessible 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 is not required to unfinished attics and unfinished basements that are part of the unit.

2. One of the following is not required to be on an accessible route:
   - 2.1 A raised floor area in a portion of a living, dining, or sleeping room; or
   - 2.2 A sunken floor area in a portion of a living, dining, or sleeping room; or
   - 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 elements: walking surfaces with a slope not steeper than 1:20, doors and doorways, ramps, elevators, and platform lifts.

~~**1104.3.3 Clear Floor Space.** For the purposes of Type B units, the clear floor space shall be 48 inches (1220mm) minimum in length and 30 inches(760 mm) minimum in width.~~ (3-13L-12 PC9)

1104.4 Walking Surfaces. Walking surfaces that are part of an accessible route shall comply with Section 1104.4.

EXCEPTIONS:

1. **180 Degree Turn.** 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.

2. **Turn Around an Object.** 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 Where the clear width during the turn is 60 inches (1525 mm) minimum.

3. **90 Degree Turn.** 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.

4. **Clear Width.** 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. (3-13L-12 PC9)

1104.4.1 Clear Width. Clear width of an accessible route shall comply with Section 403.5.

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.** Storm and screen doors serving individual dwelling or sleeping units are not required to comply with Section 404.2.5.

2. **Maneuvering Clearance.** 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 (122 mm) minimum.

3. **Clearance at Sliding and Folding Doors.** For the maneuvering clearance at sliding and folding doors, for the front approach direction the dimension perpendicular to the door shall be 48 inches (122 mm) minimum. (3-13L-12 PC9)

1104.5.2 User Passage Doorways. Doorways intended for user passage shall comply with Section 1104.5.2.

1104.5.2.1 Clear Width. Doorways shall have a clear opening of 31 3/4 inches (810 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 clearance required by Section 1004.5.2.1.

1104.5.2.2 Thresholds. Thresholds shall comply with Section 303.

EXCEPTION: Thresholds at exterior sliding doors shall be permitted to be 3/4 inch (19 mm) maximum in height, provided they are beveled with a slope not steeper than 1:2.

1104.5.2.3 Automatic Doors. Automatic doors shall comply with Section 404.3.

EXCEPTION: Unobstructed Reach. 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. (3-13L-12 PC9)

1104.6 Ramps. Ramps shall comply with Section 405.

1104.7 Elevators. Elevators within the unit shall comply with Section 407, 408, or 409.

EXCEPTIONS:

1. **In a Private Residential Elevators, t**he inside dimensions of elevator cars shall provide a clear floor space in accordance with Section 1104.1.1.

2. **Controls.** Unobstructed forward reach for controls shall be permitted to comply with Section 1104.1.3.

3. **Unobstructed Reach.** 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. (3-13L-12 PC9)

1104.8 Platform Lifts. Platform lifts within the unit shall comply with Section 410.

1. **Doors.** Platform lifts with a single door or doors on opposite ends shall provide a clear floor width of 36 inches (915 mm) minimum and a clear floor space complying with Section 1104.1.1.

2. Unobstructed forward reach for controls shall be permitted to comply with Section 1104.1.3.

3. **Controls.** Unobstructed forward reach for controls shall be permitted to comply with Section 1104.1.3.

4. **Unobstructed Reach.** 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.(3-13L-12 PC9)

1004.9 Operable Parts. Lighting controls, electrical switches and receptacle outlets, environmental controls, electrical panels, and user controls for security or intercom systems shall comply with Sections ~~309.2 and~~ 309.3 and 1104.1.1. (3-13L-12) (3-13L-12 PC9)

EXCEPTIONS:

1. Unobstructed forward reach for operable parts shall be permitted to comply with Section 1104.1.3. (3-13L-12 PC9)

2. Receptacle outlets serving a dedicated use.

3. In a kitchen, where two or more receptacle outlets are provided ~~in a kitchen~~ above a length of counter top that is uninterrupted by a sink or appliance, only one receptacle outlet shall ~~not~~ be required to comply with Sections ~~309.2~~ 1104.1.1 and 309.3. (10-8-12) (10-8-12 PC2)

4. In a kitchen, where a clear floor space for a parallel approach cannot be located at a counter top in a corner between appliances, receptacle outlets over the counter top shall not be required to comply with Sections ~~309.2~~ 1104.1.1. and 309.3 provided that the counter top ~~is 7~~ area does not exceed 9 square feet (~~0.65~~ 0.835 m^2) maximum. (10-8-12 PC2)

5. Floor receptacle outlets.

6. HVAC diffusers.

7. Controls mounted on ceiling fans.

8. Controls or switches mounted on appliances.

9. Plumbing fixture controls.

10. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures.

11. Where redundant controls other than light switches are provided for a single element, one control in each space shall not be required to be accessible.

12. Within kitchens and bathrooms, lighting controls, electrical switches and receptacle outlets are permitted to be located over cabinets with counter tops 36 inches (915 mm) maximum in height and 25-1/2 inches (650 mm) maximum in depth.

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 complying with Section ~~305.3~~ 1104.1.1 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. (10-28-12) (3-13L-12) (3-13L-12 PC9)

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 and 608.2.3.2 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 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 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. When 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 15-3/4 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.

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 and ~~305.3~~ 1104.1.1. (3-13L-12) (3-13L-12 PC9)

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 complying with Section ~~305.3~~ 1104.1.1, excluding knee and toe clearances under elements, is provided within the room beyond the arc of the door swing. (3-13L-12) (3-13L-12 PC9)

1104.11.2.2 Knee and Toe Clearance. Clear floor space complying with Seciton 1104.1.1, at fixtures shall be permitted to include knee and toe clearances complying with Section 306. (3-13L-12 PC9)

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 complying with Section ~~305.3~~ 1104.1.1, positioned for a parallel approach, shall be provided at a lavatory. The clear floor space shall be centered on the lavatory. (3-13L-12) (3-13L-12 PC9)

EXCEPTION: A lavatory complying with Section 606 and 1104.1.1 shall be permitted. Cabinetry shall be permitted under the lavatory provided the following criteria are met: (3-13L-12) (3-13L-12 PC9)

(a) The cabinetry can be removed without removal or replacement of the lavatory; and

(b) The floor finish extends under the cabinetry; and

(c) The walls behind and surrounding the cabinetry are finished.

1104.11.3.1.2 Water Closet. The water closet shall comply with Section 1104.11.3.1.2.

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 Clearance. 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: Clearance complying with Sections 1103.11.2.4.2 through 1103.11.2.4.4.

1104.11.3.1.2.2.1 Clearance Width. 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 Clearance Depth. 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 clearance 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 clearance, provided the width of the remaining clearance at the water closet is 33 inches (840 mm) minimum.

1104.11.3.1.3 Bathing Fixtures. Where provided, 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.

1104.11.3.1.3.1 Parallel Approach Bathtubs. A clearance 60 inches (1525 mm) minimum in length and 30 inches (760 mm) minimum in width shall be provided in front of bathtubs with a parallel approach. Lavatories complying with Section 606 shall be permitted in the clearance. A lavatory complying with Section 1104.11.3.1.1 shall be permitted at one end of the bathtub if a clearance 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width is provided in front of the bathtub.

1104.11.3.1.3.2 Forward Approach Bathtubs. A clearance 60 inches (1525 mm) minimum in length and 48 inches (1220 mm) minimum in width shall be provided in front of bathtubs with a forward approach. A water closet and a lavatory shall be permitted in the clearance at one end of the bathtub.

1104.11.3.1.3.3 Shower Compartment. If a shower compartment is the only bathing facility, the shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth. A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the shower head wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall be provided. ~~Reinforcing for a shower seat is not required in shower compartments larger than 36 inches (915 mm) in width and 36 inches (915 mm) in depth.~~ (10-30-12)

EXCEPTIONS:

1. A shower compartment with dimensions of 30 inches (760 mm) minimum in depth and 44 inches (1120 mm) minimum in width shall be permitted. (10-31-12)

2. A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed. (10-19-12)

1104.11.3.2 Option B. One of each type of fixture provided shall comply with Section 1104.11.3.2. The accessible 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.

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 accessible 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

1104.11.3.2.3.1 Bathtub. A clearance 48 inches (1220 mm) minimum in length measured perpendicular from the control end of the bathtub, and 30 inches (760 mm) minimum in width shall be provided in front of bathtubs.

1104.11.3.2.3.2 Shower Compartment. A shower compartment shall comply with Section 1104.11.3.1.3.3.

1104.12 Kitchens. Kitchens and kitchenettes shall comply with Section 1104.12.

1104.12.1 Clearance. Clearance complying with Section 1104.12.1 shall be provided.

1104.12.1.1 Minimum Clearance. Clearance between all opposing base cabinets, counter tops, appliances, or walls within kitchen work areas shall be 40 inches (1015mm) minimum.

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.

EXCEPTION: U-shaped kitchens with an island shall be permitted to comply with Section 1104.12.1.1. (8-9-12)

1104.12.2 Clear Floor Space. Clear floor space at appliances shall comply with Sections 1104.12.2 and ~~305.3~~ 1104.1.1. (3-13L-12)

EXCEPTION: Where the clear floor space complying with Section 1104.1.1 is positioned for a forward approach, the alcove shall comply with Section 1104.1.2.

1104.12.2.1 Sink. A clear floor space complying with Section 1104.1.1, positioned for a parallel approach to the sink, shall be provided. The clear floor space shall be centered on the 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 complying with Section 306 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. ~~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.~~ The refrigerator/freezer shall comply with Section 1104.12.2.5. (10-35-12)

1104.12.2.5.1 Approach. A clear floor space positioned for a parallel or forward approach to the refrigerator/freezer shall be provided. (10-35-12)

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. (10-35-12)

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. (10-35-12)

1104.12.2.6 Trash Compactor. A clear floor space, positioned for a parallel or forward approach to the trash compactor, shall be provided.

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 1005.2 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 1005.6 and one habitable space with an area 70 square feet 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 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 elements: walking surfaces with a slope not steeper that 1:20, doors and doorways, ramps, elevators complying with Sections 407 through 409, and wheelchair (platform) lifts complying with Section 410.

1105.5.2 Walking Surfaces. Walking surfaces with slopes not steeper than1:20 shall comply with Section 303.

1105.5.2.1 Clear Width. The clear width of the circulation path shall comply with Section 403.5.

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 of 31-3/4 inches (810 mm) minimum. Clear opening 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 3/4 inch (19 mm) maximum in height, provided they are beveled with a slope not steeper than 1:2.

1105.5.4 Ramps. Ramps shall comply with Section 405.

> **Exception:** Handrails, intermediate landings and edge protection are not required where the sides of ramp runs have a vertical drop off of ½ inch (13 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 403.5.

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. Clearances at 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 ~~in width~~.

EXCEPTION: Spaces that do not provide a cooktop or conventional range shall be permitted to provide a clearance of 36 inches (915 mm) minimum ~~in width~~. (10-36-12)

1105.8 Lighting Controls and Receptacle Outlets. Receptacle outlets and operable parts of lighting controls shall be located 15 inches minimum and 48 inches 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

1106 Units with Accessible Communication Features

1106.1 General. Units required to have accessible 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 ~~105.2.2~~ 106.2.5.

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. Visible notification appliances, where provided within the unit as part of the unit smoke detection system or the building fire alarm system, 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 complying 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 within the unit. Where visible doorbell signals are located in sleeping areas, controls shall be provided to deactivate the signal. (10-37-12)

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 accessible communication features shall comply with Section 1106.6.2.