

## **CODE REFERENCES:**

2007 CBC Section Nos.      1008.1.8.1  
   1008.1.8.3  
   1114B.1.3  
   1133B.2.1

## **ISSUE:**

Glass panels, without framing, are being used as the entry and exit doors at retail and office occupancies. In the egress direction push bars and/or push panels are being used as egress hardware. Also – key locking hardware is being used as allowed by the “Doors to remain unlocked when the building is occupied” (CBC Section 1008.1.8.3 exception).

Because the doors are made out of glass, the architects want to place these key locking hardware at the bottom of the door within a few inches of the ground. Is this allowed ?

## **BACKGROUND:**

Numerous design professionals have claimed that glass doors cannot be made with hardware at the required height of 34-inches to 48-inches (CBC Section No. 1008.1.8.1). If not, then how are these doors to be accessible by persons with disabilities ?

## **DISCUSSION / OPTIONS:**

If the locks are located at a location that is not accessible (located beyond the 34-inches to 48-inches zone) to persons with disabilities, then the last employee to leave a premises or the first employee to arrive at a premises cannot be disabled. This seems to violate the intent of the accessibility laws.

On the other hand, would the wording contained in CBC Section No. 1008.1.8.2, “Locks used only for security purposes and not used for normal operation are permitted to be located at any height” be applicable ??

Also – what is the definition of “normal operation” ??

Finally, as a “compromise” would allowing the lock to be located a minimum of 9-inches from the bottom, similar to the “reach” (see attached diagram) be acceptable ?

during periods that the space is occupied. The grilles shall remain secured in the full-open position during the period of occupancy by the general public. Where two or more means of egress are required, not more than one-half of the exits or exit access doorways shall be equipped with horizontal sliding or vertical security grilles.

**1008.1.4 Floor elevation.** There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope).

**Exceptions:**

1. Doors serving individual dwelling units in Groups R-2 and R-3 where the following apply:
  - 1.1. A door is permitted to open at the top step of an interior flight of stairs, provided the door does not swing over the top step.
  - 1.2. Screen doors and storm doors are permitted to swing over stairs or landings.
2. Exterior doors as provided for in Section 1003.5, Exception 1, and Section 1018.2, which are not on an accessible route.
3. In Group R-3 occupancies not required to be *adaptable or accessible*, the landing at an exterior doorway shall not be more than 7.75 inches (197 mm) below the top of the threshold, provided the door, other than an exterior storm or screen door, does not swing over the landing.
4. Variations in elevation due to differences in finish materials, but not more than 0.5 inch (12.7 mm).

**1008.1.5 Landings at doors.** Landings shall have a width not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches (178 mm). When a landing serves an occupant load of 50 or more, doors in any position shall not reduce the landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches (1118 mm).

**Exception:** Landing length in the direction of travel in Groups R-3 and U and within individual units of Group R-2 need not exceed 36 inches (914 mm).

**1008.1.6 Thresholds.** Thresholds at doorways shall not exceed 0.75 inch (19.1 mm) in height for sliding doors serving dwelling units or 0.5 inch (12.7 mm) for other doors. Raised thresholds and floor level changes greater than 0.25 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

**Exception:** The threshold height shall be limited to 7.75 inches (197 mm) where the occupancy is Group R-2 or R-3; the door is an exterior door that is not a component of the required means of egress; the door, other than an exterior storm or screen door does not swing over the

landing or step; and the doorway is not on an accessible route as required by *Chapter 11A or 11B* and is not part of an *adaptable or accessible dwelling unit*.

**1008.1.7 Door arrangement.** Space between two doors in a series shall be 48 inches (1219 mm) minimum plus the width of a door swinging into the space. Doors in a series shall swing either in the same direction or away from the space between the doors.

**Exceptions:**

1. The minimum distance between horizontal sliding power-operated doors in a series shall be 48 inches (1219 mm).
2. Storm and screen doors serving individual dwelling units in Groups R-2 and R-3 need not be spaced 48 inches (1219 mm) from the other door.
3. Doors within individual dwelling units in Groups R-2 and R-3 *occupancies* other than *adaptable or accessible dwelling units*.

**1008.1.8 Door operations.** Except as specifically permitted by this section egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.

**1008.1.8.1 Hardware.** Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by *Chapter 11A or Chapter 11B* shall not require tight grasping, tight pinching or twisting of the wrist to operate.

**1008.1.8.2 Hardware height.** Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches (864 mm) minimum and 48 inches (1219 mm) maximum above the finished floor. **Locks used only for security purposes and not used for normal operation are permitted at any height.**

**Exception:** Access doors or gates in barrier walls and fences protecting pools, spas and hot tubs shall be permitted to have operable parts of the release of latch on self-latching devices at 54 inches (1370 mm) maximum above the finished floor or ground, provided the self-latching devices are not also self-locking devices operated by means of a key, electronic opener or integral combination lock.

**1008.1.8.3 Locks and latches.** Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

1. Places of detention or restraint.
2. In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M and S, and in places of religious worship, the main exterior door or doors are permitted to be equipped with **key-operated locking devices from the egress side provided:**
  - 2.1. The locking device is readily distinguishable as locked,
  - 2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door

plies with Section 1115B.4.5 or at least one accessible shower that complies with Section 1115B.4.4 of this code shall be provided.

7. **Toilet facilities.** Toilet facilities shall comply with Section 1111B.4.6, as modified for hotel, motel and dormitory accommodations.

**1111B.4.7 Dormitory rooms.** Dormitory rooms beyond those specified herein shall comply with the adaptability requirements of Section 1111B.5.

**1111B.5 Buildings and complexes containing publicly funded dwelling units.**

**1111B.5.1 General.** Buildings and complexes containing publicly funded dwelling units shall be accessible as required by Chapter 11A, Housing Accessibility, except that scoping requirements for covered multifamily dwellings include one or more publicly funded dwelling units, and are required to comply with Division IV—Accessibility for Existing Buildings, beginning with Section 1134B.

**SECTION 1112B  
Reserved**

**SECTION 1113B  
Reserved**

**SECTION 1114B  
FACILITY ACCESSIBILITY**

When buildings are required to be accessible, buildings and facilities shall be accessible as provided in this section.

**1114B.1 Design and construction.**

**1114B.1.1 General.** When accessibility is required by this chapter, it shall be designed and constructed to meet the minimum requirements of the following sections:

**Chapter 11B, Accessibility;** Division I, New Buildings; Division II, Site Accessibility; Division III, Accessibility for Entrances, Exits and Paths of Travel; and Division IV, Accessibility for Existing Buildings

**Entrances**—[for HCD 1-AC] Section 1120A.1; [for DSA-AC] Section 1133B.1.1

**Doors**—[for HCD 1-AC] Sections 1114A.4.4, 1117A.2, 1122A.3.4, 1126A, 1132A; [for DSA-AC] Section 1133B.2

**Corridors**—[for HCD 1-AC] Section 1120A; [for DSA-AC] Section 1133B.3

**Stairways**—[for HCD 1-AC] Sections 1115A.6, 1123A; [for DSA-AC] Section 1133B.4

**Ramps**—[for HCD 1-AC] Sections 1112A, 1114A, 1122A; [for DSA-AC] Section 1133B.5

**Aisles**—[for DSA-AC] Section 1133B.6

**Walks and Sidewalks**—[for HCD 1-AC] Section 1113A; [for DSA-AC] Section 1133B.7

**Hazards**—[for HCD 1-AC] Sections 1116A, 1125A; [for DSA-AC] Section 1133B.8

**Elevators**—[for HCD 1-AC] Section 3003; [for DSA-AC] Section 1116B

**Special Access (Wheelchair) Lifts**—[for HCD 1-AC] Section 1124A; [for DSA-AC] Section 1116B.2

**Alarms**—Chapter 9, Sections 907.9.1 and 907.9.2

**Bathing and Toilet Facilities**—Section 1115B

**Signs and Identification**—Section 1117B.5

**Detectable Warnings**—[for DSA-AC] Sections 1121B.3.1 Item 8(a), 1127B.5.7, 1133B.8.5, Part 12—Chapters 12-11A and 12-11B

See also Part 3, California Electrical Code.

**1114B.1.2 Accessible route of travel.** When a building, or portion of a building, is required to be accessible or adaptable, an accessible route of travel complying with Sections 1102B, 1114B, 1124B, 1133B.3, 1133B.5, 1133B.7 and 1133B.8.6 shall be provided to all portions of the building, to accessible building entrances and between the building and the public way. Except within an individual dwelling unit, an accessible route of travel shall not pass through kitchens, storage rooms, restrooms, closets or other spaces used for similar purposes. At least one accessible route within the boundary of the site shall be provided from public transportation stops, accessible parking and accessible passenger loading zones and public streets or sidewalks to the accessible building entrance they serve. The accessible route shall, to the maximum extent feasible, coincide with the route for the general public. At least one accessible route shall connect accessible buildings, facilities, elements and spaces that are on the same site. At least one accessible route shall connect accessible building or facility entrances with all accessible spaces and elements and with all accessible dwelling units within the building or facility. An accessible route shall connect at least one accessible entrance of each accessible dwelling unit with those exterior and interior spaces and facilities that serve the accessible dwelling unit.

Where more than one route of travel is provided, all routes shall be accessible.

**Exception:** Where an elevator is provided for vertical access, only one elevator is required. Where more than one elevator is provided, all elevators shall be accessible. See Section 1114B.1.1 for a list of code sections applicable to accessible routes of travel.

**1114B.1.3 Primary entry access.** All entrances and all exterior ground-level exits shall be accessible in compliance with Section 1133B.1.1.

**1114B.1.4 Signs.** See Section 1117B.5.

**1114B.1.5 Adaptable dwelling units.** See Section 1111B.

### Division III—ACCESSIBILITY FOR ENTRANCES, EXITS AND PATHS OF TRAVEL

This division includes additional requirements which supersede less restrictive requirements in Chapter 10 where access is required.

#### SECTION 1133B GENERAL ACCESSIBILITY FOR ENTRANCES, EXITS AND PATHS OF TRAVEL

**1133B.1 Building accessibility.** See this chapter.

##### 1133B.1.1 Entrances.

###### 1133B.1.1.1 Entrances and exterior ground floor exit doors.

**1133B.1.1.1.1** All entrances and exterior ground-floor exit doors to buildings and facilities shall be made accessible to persons with disabilities. Such entrances shall be connected by an accessible route (complying with Section 1114B.1.2) to public transportation stops, to accessible parking and passenger loading zones and to public streets or sidewalks, if available. Entrances shall be connected by an accessible route to all accessible spaces or elements within the building or facility. Doorways shall have a minimum clear opening of 32 inches (813 mm) with the door open 90 degrees, measured between the face of the door and the opposite stop (see Figure 11B-5B). Openings more than 24 inches (610 mm) in depth shall comply with Section 1118B.1.

##### Exceptions:

1. Exterior ground-floor exits serving smoke-proof enclosures, stairwells and exit doors servicing stairs only need not be made accessible.
2. Exits in excess of those required by Chapter 10, and which are more than 24 inches (610 mm) above grade are not required to be accessible. Such doors shall have signs warning that they are not accessible. Warning signs shall comply with Section 1117B.5.1, Item 2.
3. In existing buildings where the enforcing agency determines that compliance with the building standards of this section would create an unreasonable hardship, an exception shall be granted when equivalent facilitation is provided. Equivalent facilitation would require at least one entrance to be accessible to and usable by persons with disabilities.
4. These building standards shall not apply to existing buildings when legal or physical constraints will not allow compliance with these building standards or equivalent facilitation without creating an unreasonable

hardship. See Section 109.1.5, Special Conditions for Persons with Disabilities Requiring Appeals Action Ratification.

**1133B.1.1.1.2 Temporary restrictions.** During periods of partial or restricted use of a building or facility, the entrances used for primary access shall be accessible to and usable by persons with disabilities.

**1133B.1.1.1.3 Recessed doormats.** Recessed doormats shall be adequately anchored to prevent interference with wheelchair traffic.

**1133B.1.1.1.4 Gates.** All gates, including ticket gates, shall meet all applicable specifications for doors.

##### 1133B.2 Doors.

**1133B.2.1 Type of lock or latch.** See Chapter 10, Section 1008.1.8.

**1133B.2.2 Width and height.** Every required exit doorway shall be of a size as to permit the installation of a door not less than 3 feet (914 mm) in width and not less than 6 feet 8 inches (2032 mm) in height.

When installed in exit doorways, exit doors shall be capable of opening at least 90 degrees and shall be so mounted that the clear width of the exitway is not less than 32 inches (813 mm) measured between the face of the door and the opposite stop (see Figure 11B-5B). In computing the exit width the net dimension of the exitway shall be used.

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

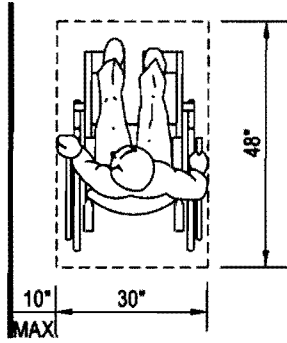
**1133B.2.3 Hinged doors.** For hinged doors, the opening width shall be measured with the door positioned at an angle of 90 degrees from its closed position.

**1133B.2.3.1 Pairs of doors.** Where a pair of doors is utilized, at least one of the doors shall provide a clear, unobstructed opening width of 32 inches (813 mm) with the leaf positioned at an angle of 90 degrees from its closed position.

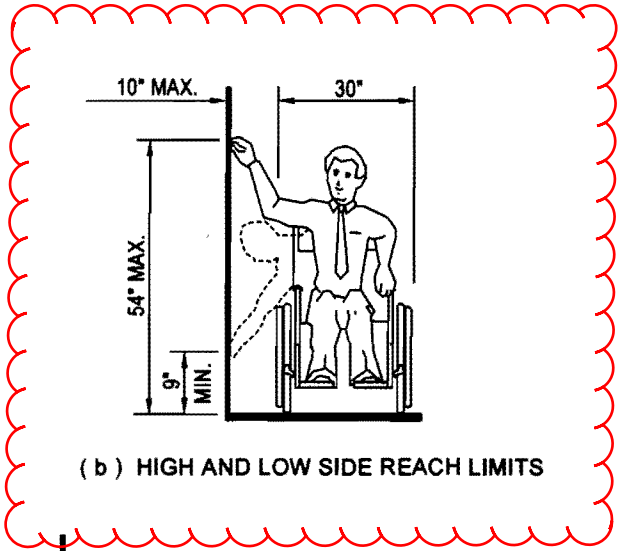
**1133B.2.3.2 Automatic and power-assisted doors.** If an automatic door is used, then it shall comply with BHMA A156.10. Slowly opening, low-powered, automatic doors shall comply with BHMA A156.19. Such doors shall not open to back check faster than 3 seconds and shall require no more than 15 lbf (66.72 N) to stop door movement. If a power-assisted door is used, its door-opening force shall comply with Section 1133B.2.5 and its closing shall conform to the requirements in BHMA A156.19. When an automatic door operator is utilized to operate a pair of doors, at least one of the doors shall provide a clear, unobstructed opening width of 32 inches (813 mm) with the door positioned at an angle of 90 degrees from its closed position.

##### Exceptions:

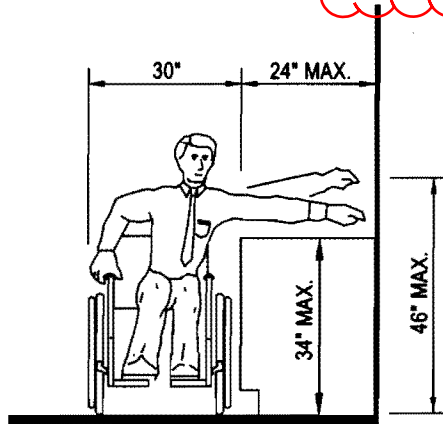
1. The provisions of Section 1133B.2.3 shall not apply to existing buildings, except when otherwise required under conditions applicable to



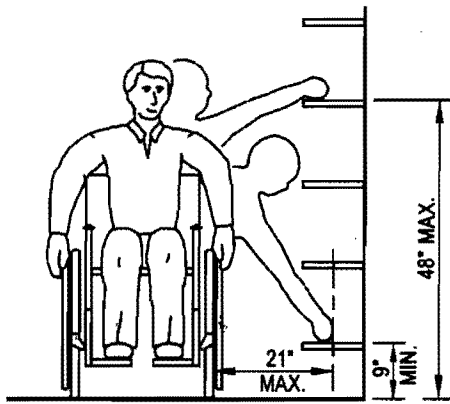
( a ) CLEAR FLOOR SPACE PARALLEL APPROACH



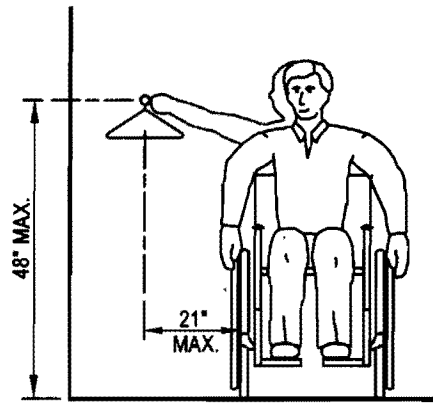
( b ) HIGH AND LOW SIDE REACH LIMITS



( c ) MAXIMUM SIDE REACH OVER OBSTRUCTION



( d ) SHELVES



( e ) CLOSETS

THESE DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND ARE INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION

FIGURE 11B-5D—SIDE REACH