CHAPTER DIVISION 3: BUILDING BLOCKS

11B-301 General

11B-301.1 Scope. The provisions of Chapter Division 3 shall apply where required by Chapter Division 2 or where referenced by a requirement in this document chapter.

11B-302 Floor or Ground Surfaces

11B-302.1 General. Floor and ground surfaces shall be stable, firm, and slip resistant and shall comply with 11B-302.

EXCEPTIONS: 1. Within animal containment areas, floor and ground surfaces shall not be required to be stable, firm, and slip resistant.
2. Areas of sport activity shall not be required to comply with 11B-302.

11B-302.2 Carpet. Carpet or carpet tile shall be securely attached and shall have a firm cushion, pad, or backing or no cushion or pad. Carpet or carpet tile shall have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. Pile height shall be ½ inch (12.7 mm) maximum. Exposed edges of carpet shall be fastened to floor surfaces and shall have trim on the entire length of the exposed edge. Carpet edge trim shall comply with 11B-303.

\[ \frac{1}{2} \text{ max} \]

\[ 13 \]

Figure 11B-302.2
Carpet Pile Height

11B-302.3 Openings. Openings in floor or ground surfaces shall not allow passage of a sphere more than ½ inch (12.7 mm) diameter except as allowed in 11B-407.4.3, 11B-409.4.3, 11B-410.4, 11B-810.5.3 and 11B-810.10. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.
11B-303 Changes in Level

11B-303.1 General. Where changes in level are permitted in floor or ground surfaces, they shall comply with 11B-303.

EXCEPTIONS: 1. Animal containment areas shall not be required to comply with 11B-303.
2. Areas of sport activity shall not be required to comply with 11B-303.

11B-303.2 Vertical. Changes in level of ¼ inch (6.4 mm) high maximum shall be permitted to be vertical and without edge treatment.
11B-303.3 Beveled. Changes in level between \( \frac{1}{4} \) inch (6.4 mm) high minimum and \( \frac{1}{2} \) inch (12.7 mm) high maximum shall be beveled with a slope not steeper than 1:2.

![Figure 11B-303.3 Beveled Change in Level](image)

11B-303.4 Ramps. Changes in level greater than \( \frac{1}{2} \) inch (12.7 mm) high shall be ramped, and shall comply with 11B-405 or 11B-406 or 11B-407.

11B-304 Turning Space

11B-304.1 General. Turning space shall comply with 11B-304.

11B-304.2 Floor or Ground Surfaces. Floor or ground surfaces of a turning space shall comply with 11B-302. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

11B-304.3 Size. Turning space shall comply with 11B-304.3.1 or 11B-304.3.2.

11B-304.3.1 Circular Space. The turning space shall be a space of 60 inches (1524 mm) diameter minimum. The space shall be permitted to include knee and toe clearance complying with 11B-306.

11B-304.3.2 T-Shaped Space. The turning space shall be a T-shaped space within a 60 inch (1524 mm) square minimum with arms and base 36 inches (914 mm) wide minimum. Each arm of the T shall be clear of obstructions 12 inches (305 mm) minimum in each direction and the base shall be clear of obstructions 24 inches (610 mm) minimum. The space shall be permitted to include knee and toe clearance complying with 11B-306 only at the end of either the base or one arm.
11B-304.4 Door Swing. Doors shall be permitted to swing into turning spaces.

11B-305 Clear Floor or Ground Space

11B-305.1 General. Clear floor or ground space shall comply with 11B-305.

11B-305.2 Floor or Ground Surfaces. Floor or ground surfaces of a clear floor or ground space shall comply with 11B-302. Changes in level are not permitted.

**EXCEPTION:** Slopes not steeper than 1:48 shall be permitted.

11B-305.3 Size. The clear floor or ground space shall be 30 inches (762 mm) minimum by 48 inches (1219 mm) minimum.

11B-305.4 Knee and Toe Clearance. Unless otherwise specified, clear floor or ground space shall be permitted to include knee and toe clearance complying with 11B-306.
11B-305.5 **Position.** Unless otherwise specified, clear floor or ground space shall be positioned for either forward or parallel approach to an element.

![Diagram showing forward and parallel approach](image)

(a) forward  
(b) parallel

**Figure 11B-305.5**  
Position of Clear Floor or Ground Space

11B-305.6 **Approach.** One full unobstructed side of the clear floor or ground space shall adjoin an accessible route or adjoin another clear floor or ground space.

11B-305.7 **Maneuvering Clearance.** Where a clear floor or ground space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearance shall be provided in accordance with 11B-305.7.1 and 11B-305.7.2.

11B-305.7.1 **Forward Approach.** Alcoves shall be 36 inches (914 mm) wide minimum where the depth exceeds 24 inches (610 mm).

![Diagram showing maneuvering clearance in an alcove, forward approach](image)

**Figure 11B-305.7.1**  
Maneuvering Clearance in an Alcove, Forward Approach
11B-305.7.2 Parallel Approach. Alcoves shall be 60 inches (1524 mm) wide minimum where the depth exceeds 15 inches (381 mm).

![Figure 11B-305.7.2 Maneuvering Clearance in an Alcove, Parallel Approach](image)

**Figure 11B-305.7.2 Maneuvering Clearance in an Alcove, Parallel Approach**

11B-306 Knee and Toe Clearance

11B-306.1 General. Where space beneath an element is included as part of clear floor or ground space or turning space, the space shall comply with 11B-306. Additional space shall not be prohibited beneath an element but shall not be considered as part of the clear floor or ground space or turning space.

11B-306.2 Toe Clearance.

11B-306.2.1 General. Space under an element between the finish floor or ground and 9 inches (229 mm) above the finish floor or ground shall be considered toe clearance and shall comply with 11B-306.2.

11B-306.2.2 Maximum Depth. Toe clearance shall extend 25 inches (635 mm) maximum under an element.

11B-306.2.3 Minimum Required Depth. Where toe clearance is required at an element as part of a clear floor space, the toe clearance shall extend 17 inches (432 mm) minimum under the element.

**EXCEPTION:** The toe clearance shall extend 19 inches (483 mm) minimum under accessible sinks.

11B-306.2.4 Additional Clearance. Space extending greater than 6 inches (152 mm) beyond the available knee clearance at 9 inches (229 mm) above the finish floor or ground shall not be considered toe clearance.

11B-306.2.5 Width. Toe clearance shall be 30 inches (762 mm) wide minimum.
11B-306.3 Knee Clearance.

11B-306.3.1 General. Space under an element between 9 inches (229 mm) and 27 inches (686 mm) above the finish floor or ground shall be considered knee clearance and shall comply with 11B-306.3.

11B-306.3.2 Maximum Depth. Knee clearance shall extend 25 inches (635 mm) maximum under an element at 9 inches (229 mm) above the finish floor or ground.

11B-306.3.3 Minimum Required Depth. Where knee clearance is required under an element as part of a clear floor space, the knee clearance shall be 11 inches (279 mm) deep minimum at 9 inches (229 mm) above the finish floor or ground, and 8 inches (203 mm) deep minimum at 27 inches (686 mm) above the finish floor or ground.

11B-306.3.4 Clearance Reduction. Between 9 inches (229 mm) and 27 inches (686 mm) above the finish floor or ground, the knee clearance shall be permitted to reduce at a rate of 1 inch (25 mm) in depth for each 6 inches (152 mm) in height.

11B-306.3.5 Width. Knee clearance shall be 30 inches (762 mm) wide minimum.
11B-307 Protruding Objects


11B-307.2 Protrusion Limits. Objects with leading edges more than 27 inches (686 mm) and not more than 80 inches (2032 mm) above the finish floor or ground shall protrude 4 inches (102 mm) maximum horizontally into the circulation path.

EXCEPTION: Handrails shall be permitted to protrude 4½ inches (114 mm) maximum.
11B-307.3 Post-Mounted Objects. Free-standing objects mounted on posts or pylons shall overhang circulation paths 12 inches (305 mm) maximum when located 27 inches (686 mm) minimum and 80 inches (2032 mm) maximum above the finish floor or ground. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (686 mm) maximum or 80 inches (2032 mm) minimum above the finish floor or ground.

**EXCEPTION:** 1. The sloping portions of handrails serving stairs and ramps shall not be required to comply with 11B-307.3.

11B-307.3.1 Edges and Corners. Where signs or other objects are mounted on posts or pylons, and their bottom edges are less than 80 inches (2032 mm) above the floor or ground surface, the edges of such signs and objects shall be rounded or eased and the corners shall have a minimum radius of $\frac{1}{8}$ inch (3.2 mm).

![Figure 11B-307.3](image)

**Figure 11B-307.3**

Post-Mounted Protruding Objects

11B-307.4 Vertical Clearance. Vertical clearance shall be 80 inches (2032 mm) high minimum. Guardrails or other barriers shall be provided where the vertical clearance is less than 80 inches (2032 mm) high. The leading edge of such guardrail or barrier shall be located 27 inches (686 mm) maximum above the finish floor or ground.

**EXCEPTION:** Door closers and door stops shall be permitted to be 78 inches (1981 mm) minimum above the finish floor or ground.
11B-307.5 Required Clear Width. Protruding objects shall not reduce the clear width required for accessible routes or maneuvering spaces.

11B-308 Reach Ranges

11B-308.1 General. Reach ranges shall comply with 11B-308.

11B-308.2 Forward Reach.

11B-308.2.1 Unobstructed. Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1219 mm) maximum and the low forward reach shall be 15 inches (381 mm) minimum above the finish floor or ground.

11B-308.2.2 Obstructed High Reach. Where a high forward reach is over an obstruction, the clear floor space shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches (1219 mm) maximum where the reach depth is 20 inches (508 mm) maximum. Where the reach depth is less than 20 inches, the high forward reach shall be 48 inches (1219 mm) maximum minus the reach depth.
depth exceeds 20 inches (508 mm), the high forward reach shall be 44 inches (1118 mm) maximum and the reach depth shall be 25 inches (635 mm) maximum.

Figure 11B-308.2.2
Obstructed High Forward Reach

11B-308.3 Side Reach.

11B-308.3.1 Unobstructed. Where a clear floor or ground space allows a parallel approach to an element and the side reach is unobstructed, the high side reach shall be 48 inches (1219 mm) maximum and the low side reach shall be 15 inches (381 mm) minimum above the finish floor or ground.

EXCEPTIONS: 1. An obstruction shall be permitted between the clear floor or ground space and the element where the depth of the obstruction is 10 inches (254 mm) maximum.
2. Operable parts of fuel dispensers shall be permitted to be 54 inches (1372 mm) maximum measured from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

Figure 11B-308.3.1
Unobstructed Side Reach
11B-308.3.2 Obstructed High Reach. Where a clear floor or ground space allows a parallel approach to an element and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches (864 mm) maximum and the depth of the obstruction shall be 24 inches (610 mm) maximum. The high side reach shall be 48 inches (1219 mm) maximum for a reach depth of 10 inches (254 mm) maximum. Where the reach depth exceeds 10 inches (254 mm), the high side reach shall be 46 inches (1168 mm) maximum for a reach depth of 24 inches (610 mm) maximum.

EXCEPTIONS: 1. The top of washing machines and clothes dryers shall be permitted to be 36 inches (914 mm) maximum above the finish floor.  
2. Operable parts of fuel dispensers shall be permitted to be 54 inches (1372 mm) maximum measured from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

Figure 11B-308.3.2  
Obstructed High Side Reach

11B-309 Operable Parts

11B-309.1 General. Operable parts shall comply with 11B-309.

11B-309.2 Clear Floor Space. A clear floor or ground space complying with 11B-305 shall be provided.

11B-309.3 Height. Operable parts shall be placed within one or more of the reach ranges specified in 11B-308.

11B-309.4 Operation. Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum.

EXCEPTION: Gas pump nozzles shall not be required to provide operable parts that have an activating force of 5 pounds (22.2 N) maximum.