Accessibility Guideline

REVISION DATE: DECEMBER 2016

Ramps

4.8.1 General: Any part of an accessible route with a slope greater than 1:20 shall be considered a ramp and shall comply with 4.8.

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

4.8.3 Clear Width: The minimum clear width of a ramp shall be 36 inches.

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

1. The landing shall be at least as wide as the ramp run leading to it.
2. The landing length shall be a minimum of 60 inches clear.
3. If the ramp changes direction at landings, the minimum landing size shall be 60 inches by 60 inches.
4. If a doorway is located at a landing, then the area in front of the doorway shall comply with 4.13.6.

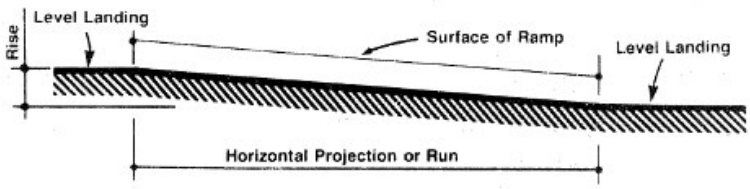
4.8.5 Handrails: If a ramp run has a rise greater than 6 inches or a horizontal projection greater than 72 inches, then it shall have handrails on both sides. Handrails are not required on curb ramps or adjacent to seating in assembly areas. Handrails shall comply with **4.26** and shall have the following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

1. Handrails shall be provided along both sides of ramp segments. The inside handrail on switchback or dogleg ramps shall always be continuous.
2. If handrails are not continuous, they shall extend at least 12 inches beyond the top and bottom of the ramp segment and shall be parallel with the floor or ground surface. **(see Fig. 17)**
3. The clear space between the handrail and the wall shall be 1 ½ inch.
4. Gripping surfaces shall be continuous.
5. Top of handrail gripping surfaces shall be mounted between 34 inches and 38 inches above ramp surfaces.
6. Ends of handrails shall be either rounded or returned smoothly to floor, wall, or post.
7. Handrails shall not rotate within their fittings.

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

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

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



	Maximum Rise		Maximum Horizontal Projection	
Slope	in	mm	ft	m
1:12 to < 1:16	30	760	30	9
1:16 to < 1:20	30	760	40	12

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

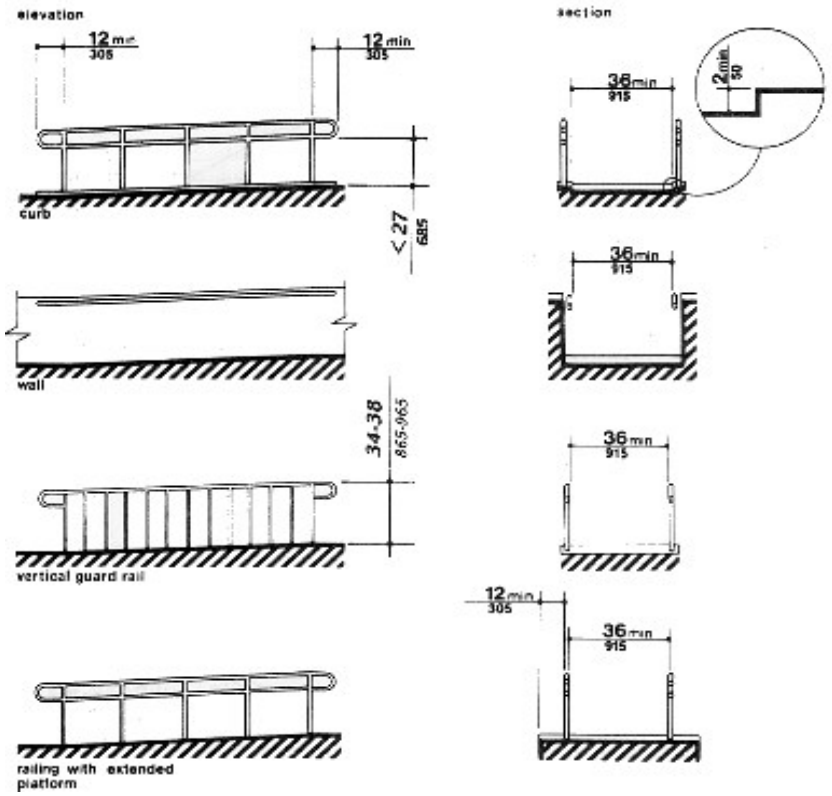


Figure 17 - Examples of Edge Protection and Handrail Extensions

Special Technical Provisions for Alterations to Existing Buildings and Facilities

Ramps: Curb ramps and interior or exterior ramps to be constructed on sites or in existing buildings or facilities where space limitations prohibit the use of a 1:12 slope or less may have slopes and rises as follows:

1. A slope between 1:10 and 1:12 is allowed for a maximum rise of 6 inches.
2. A slope between 1:8 and 1:10 is allowed for a maximum rise of 3 inches. A slope steeper than 1:8 is not allowed.

Doors

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

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

NOTE: All doors in alcoves shall comply with the clearances for front approaches.

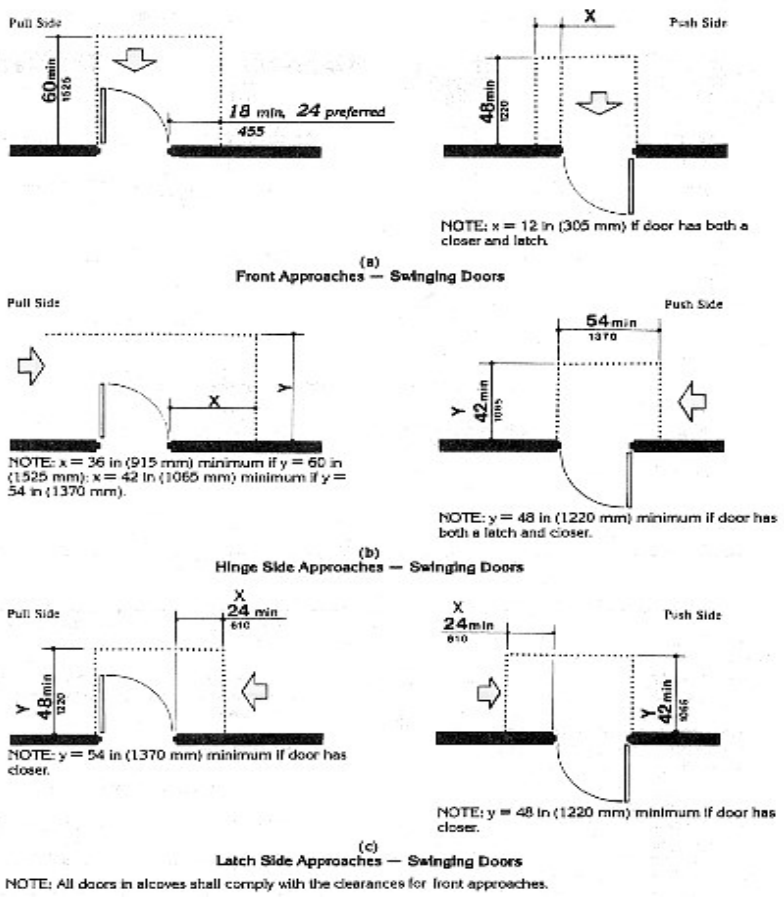


Figure 25 Maneuvering Clearances at Doors

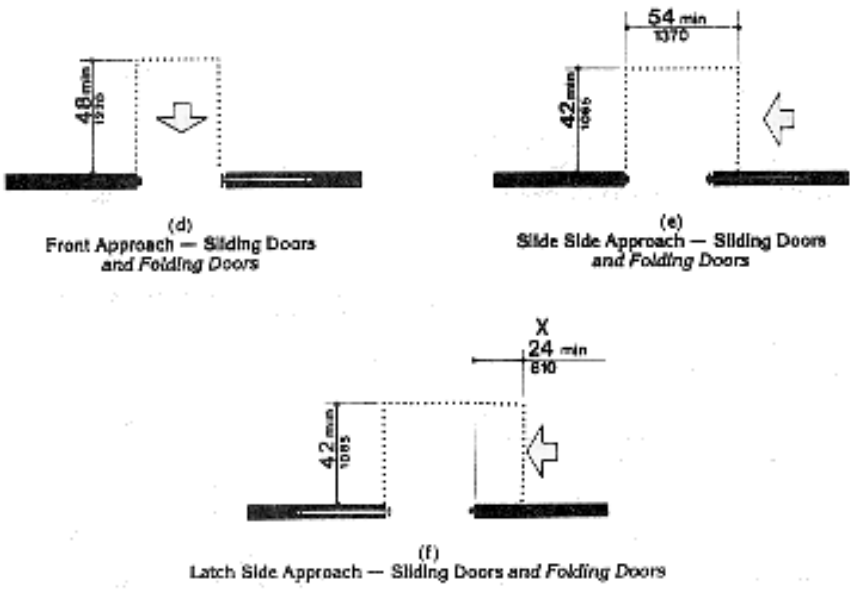


Figure 25 - Maneuvering Clearances at Doors

Handrails, Grab Bars, and Tub and Shower Seats

4.26.1 General: All handrails, grab bars, and tub and shower seats required to be accessible by 4.1, 4.8, 4.9, 4.16, 4.17, 4.20 or 4.21 shall comply with 4.26.

4.26.2 Size and Spacing of Grab Bars and Handrails: The diameter or width of the gripping surfaces of a handrail or grab bar shall be 1 ¼ to 1 ½ inches, or the shape shall provide an equivalent gripping surface. If handrails or grab bars are mounted adjacent to a wall, the space between the wall and the grab bar shall be 1 ½ inch **(see Fig. 39a, 39b, 39c, and 39e)**. Handrails may be located in a recess if the recess is a maximum of 3 inches deep and extends at least 18 inches above the top of the rail **(see Fig. 39d)**.

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

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

4. Tensile force induced in a fastener by a direct tension force of 250 pounds of force plus the maximum moment from the application of 250 pounds of force shall be less than the allowable withdrawal load between the fastener and the supporting structure.
5. Grab bars shall not rotate within their fittings.

4.26.4 Eliminating Hazards: A handrail or grab bar and any wall or other surface adjacent to it shall be free of any sharp or abrasive elements. Edges shall have a minimum radius of $^{1}/_{8}$ inch.

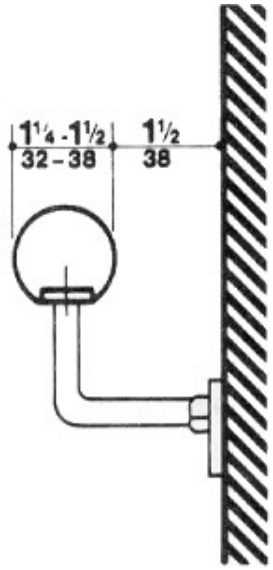


Figure 39a - Size and Spacing of Handrails And Grab Bars Handrail

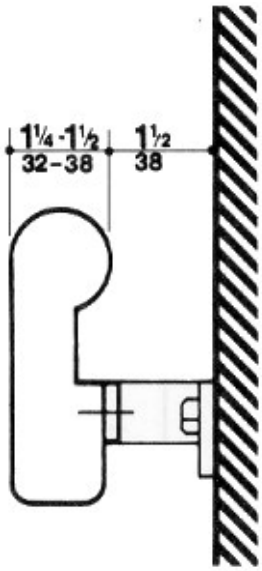


Figure 39b - Size and Spacing of Handrails and Grab Bars Handrail

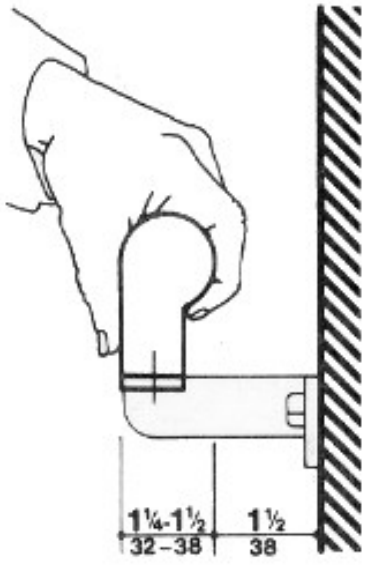


Figure 39c - Size and Spacing of Handrails and Grab Bars Handrail

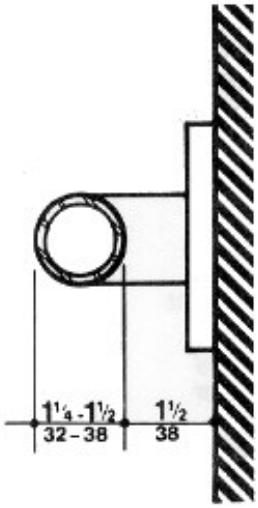


Figure 39e - Size and Spacing of Handrails and Grab Bars

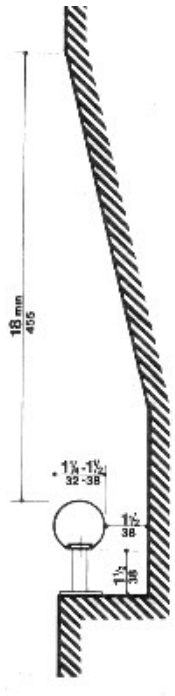


Figure 39d - Size and Spacing of Handrails and Grab Bars Handrail

Clear Floor or Ground Space for Wheelchairs

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

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

4.2.4.3 Surfaces for Wheelchair Spaces: Clear floor or ground spaces for wheelchairs shall comply with Section 4.5.

Ground and Floor Surfaces

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

4.5.2 Changes in Level: Changes in level up to ¼ inch may be vertical and without edge treatment **(see Fig. 7c)**. Changes in level between ¼ and ½ inch shall be beveled with a slope no greater than 1:2 **(see Fig. 7d)**. Changes in level greater than ½ inch shall be accomplished by means of a ramp that complies with section **4.8**.

4.5.3 Carpet: If carpet or carpet tile is used on a ground or floor surface, then it shall be securely attached; have a firm cushion, pad, or backing, or no cushion or pad; and have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. The maximum pile thickness shall be ½ inch **(see Fig. 8f)**. Exposed edges of carpet shall be fastened to floor surfaces and have trim along the entire length of the exposed edge. Carpet edge trim shall comply with section 4.5.2.

4.5.4 Gratings: If gratings are located in walking surfaces, then they shall have spaces no greater than ½ inch wide in one direction **(see Fig. 8g)**. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel **(see Fig. 8h)**

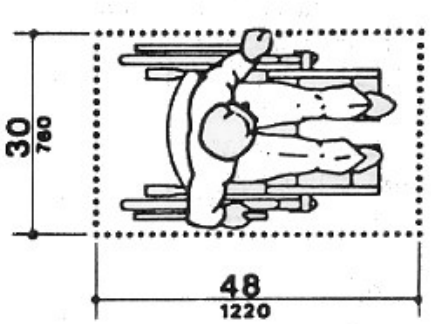


Figure 4a – Clear Floor Space

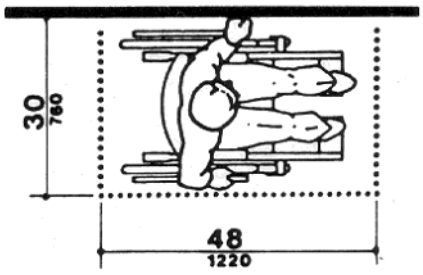


Figure 4c – Parallel Approach

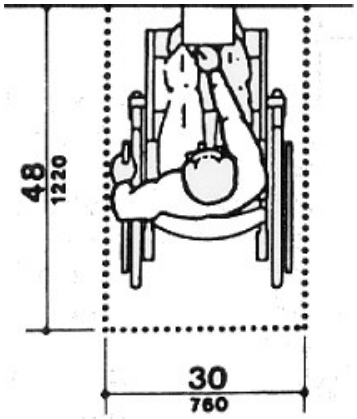


Figure 4b – Forward Approach

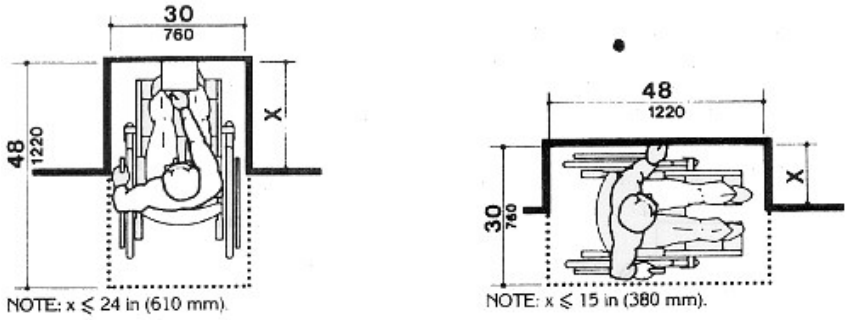


Figure 4d – Clear Floor Space in Alcoves

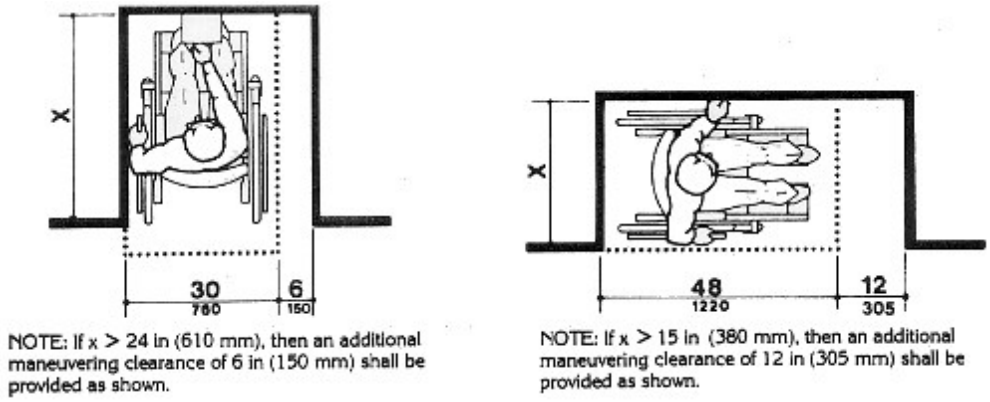


Figure 4e – Additional Maneuvering Clearance for Alcoves

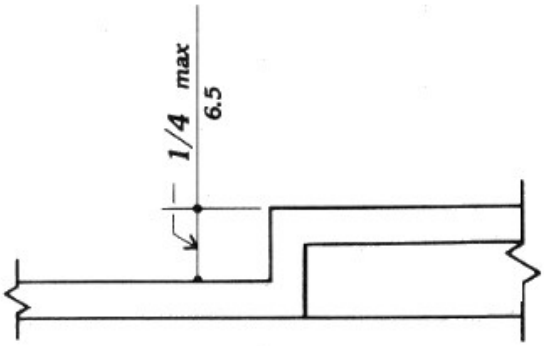


Figure 7c - Accessible Route Changes in Level

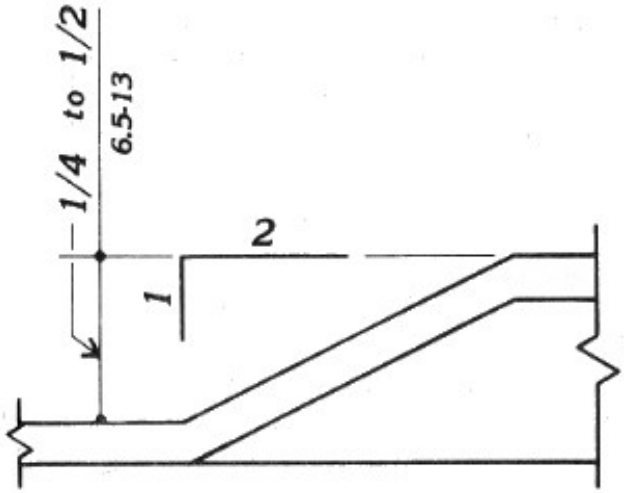


Figure 7(d) - Accessible Route Changes in Level

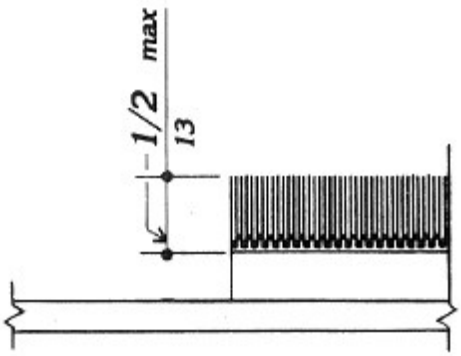


Figure 8F - Carpet Pile Thickness

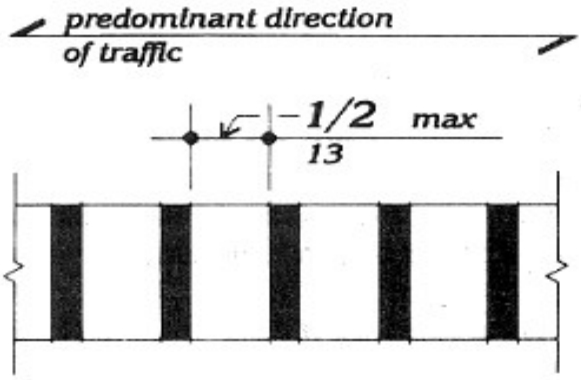


Figure 8G - Gratings

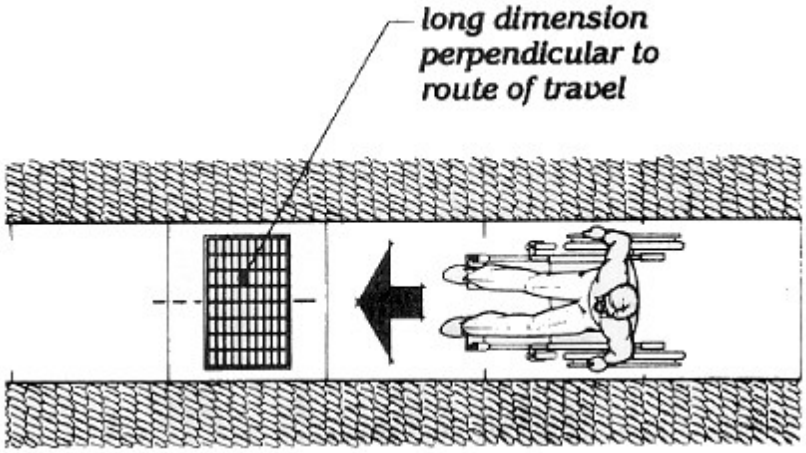


Figure 8h - Gratings Orientation

The City of Republic is located in Greene County in the southwest corner of the State of Missouri approximately ten miles from the City of Springfield, forty-five miles from Branson, and within a two-hour drive to the states of Oklahoma, Kansas, and Arkansas.

Republic began its existence in 1871 and soon thrived due in large part to the Frisco Railroad, which ran through town. Early accounts of the City indicate the existence of grain elevators within the City, a blacksmith shop and livery stable, as well as a tomato factory and cheese factory. A flourmill was built in 1890 and soon became the largest in the Middle West and carried the slogan "The World is our Field." It is unknown how the City achieved the name "Republic" but it is believed the first postmaster may have named the town. During 1904 and 1905, iron ore was mined and shipped from Republic's limekiln located south of town. Due to the fertile, gentle rolling land of this area, Republic became known as one of the major fruit producers in the Midwest, producing apples, peaches, grapes, strawberries, and tomatoes. As was common in southwest Missouri, many early citizens worked as strawberry pickers and shipped the fruit by railcar every season.

The City of Republic is fortunate to have a broad economic base. The City has several retail shops, grocery stores, factories, etc. Republic is a great place for locating a business due to the strong residential base, which provides a large pool of qualified, available work force. Republic is a pleasant place to work without the difficulties of traffic jams and limited parking. The City has no earnings tax and has ample quality office and retail space available. The City's close proximity to Springfield makes it desirable for many.

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