2010 ADA Standards for Accessible Design

CHAPTER 4: ACCESSIBLE ROUTES (cont.)

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

406.1 General. Curb ramps on accessible routes shall comply with 406, 405.2 through 405.5, and 405.10.

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.

406.3 Sides of Curb Ramps. Where provided, curb ramp flares shall not be steeper than 1:10. 406.4 Landings. Landings shall be provided at the tops of curb ramps. Figure 406.2 Counter Slope of Surfaces Adjacent to Curb Ramps The landing clear length shall be 36 - flared sides 1:10 max slope inches (915 mm) minimum. The landing clear width shall be at least as wide as the curb ramp, excluding flared sides, leading to the landing. 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. Figure 406.3 Sides of Curb Ramps 406.5 Location. Curb ramps and the flared sides of curb ramps shall be located so

that they do not project into vehicular traffic lanes, parking spaces, or parking access gisles. Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides.

406.6 Diagonal Curb Ramps. Diagonal or

corner type curb ramps with returned curbs Figure 406.4 Landings at the Top of Curb Ramps or other well-defined edges shall have the edges parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have a clear space 48 inches (1220 mm) minimum 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) long minimum located on each side of the curb ramp and within the marked crossing.

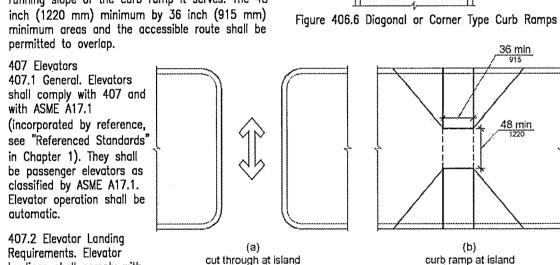
---- et least as wide as

406.7 Islands. Raised islands in crossings shall be 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) long minimum by 36 inches (915 mm) wide minimum at the top of 48 min the curb ramp in the part of the island intersected by the crossings. Each 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum area shall be oriented so that the 48 inch (1220 mm) minimum length is in the direction of the running slope of the curb ramp it serves. The 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum areas and the accessible route shall be permitted to overlap.

407 Elevators

with ASME A17.1

automatic.



landings shall comply with Figure 406.7 Islands in Crossings 407.2.1 Call Controls. Where elevator call buttons or keypads are provided, they shall comply with 407.2.1 and 309.4. Call buttons shall be raised or flush. EXCEPTION: Existing elevators shall be permitted to have recessed call buttons.

407.2.1.1 Height. Call buttons and keypads shall be located within one of the reach ranges specified in 308, measured to the centerline of the highest operable part. EXCEPTION: Existing call buttons and existing keypads shall be permitted to be located at 54 inches (1370 mm) maximum above the finish 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 407.2.1.2.

407.2.1.3 Clear Floor or Ground Space. A clear floor or ground space complying with 305 shall be provided at call controls.

407.2.1.4 Location. The call button that designates the up direction shall be located c that designates the down direction.

EXCEPTION: Destination-oriented elevators shall not be required to comply with 407.2.1 407.2.1.5 Signals. Call buttons shall have visible signals to indicate when each call is registered and when each call is answered.

1. Destination—oriented elevators shall not be required to comply with 407.2.1.5 provided that visible and audible signals complying with 407.2.2 indicating which elevator car to enter are provided. 2. Existing elevators shall not be required to comply with 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 407.4.7.2.

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

1. Visible and audible signals shall not be required at each destination—oriented elevator where a visible and audible signal complying with 407.2.2 is provided indicating the elevator car designation information. 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 finish floor or ground. The visible signal elements shall be 2 1/2 inches (64 mm) minimum measured along the vertical centerline of the element. Signals shall be visible from the floor area adjacent to the hall call button.

1. Destination—oriented elevators shall be permitted to have signals visible from the floor area adiacent to the hoistway entrance. 2. Existing elevators shall not be required to comply with 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 3000 Hz maximum. The audible signal and verbal annunciator shall be 10 dB minimum above ambient, but shall not exceed 80

of audible signals.

dB. measured at the hall call button. **FXCEPTIONS:** 1. Destination—oriented elevators shall not be required to comply

with 407.2.2.3 provided that the audible tone and verbal announcement is the same as those given at the call button or Figure 407.2.2.2 Visible Hall Signals call button keypad.

2. Existing elevators shall not be required to comply with the requirements for frequency and dB range

for Public Accommodations and Commercial Facilities: Title III 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 407.2.3.

407.2.3.1 Floor Designation. Floor designations complying with 703.2 and 703.4.1 shall be provided on both jambs of elevator hoistway entrances. Floor designations shall be provided in both tactile characters and braille. Tactile characters shall be 2 inches (51 mm) high minimum. A tactile star shall be provided on both jambs at the main entry level.

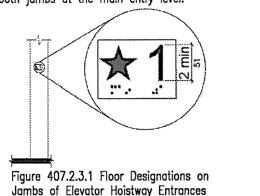


Figure 407.2.3.2 Car Designations on Jambs of Destination-Oriented Elevator Hoistway Entrances

407.2.3.2 Car Designations. Destination—oriented elevators shall provide tactile car identification complying with 703.2 on both jambs of the hoistway immediately below the floor designation. Car designations shall be provided in both tactile characters and braille. Tactile characters shall be 2 inches (51 mm) high

407.3 Elevator Door Requirements. Hoistway and car doors shall comply with 407.3.

407.3.1 Type. Elevator doors shall be the 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 that they comply 407.4.8 Car Position Indicators. Audible and visible car position indicators shall be provided in elevator with 404.2.3 and 404.2.9. Car door closing shall not be initiated until the hoistway door is closed.

407.3.3 Reopening Device. Elevator doors shall be provided with a reopening device complying with 407.3.3 407.4.8.1 Visible Indicators. Visible indicators shall comply with 407.4.8.1. that shall stop and reopen a car door and hoistway door automatically if the door becomes obstructed by an object or person. EXCEPTION: Existing elevators with manually operated doors shall not be required to comply with 407.3.3.

407.3.3.1 Height. The 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 finish floor.

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

407.3.3.3 Duration. Door reopening devices 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 or notification of the car assigned at the means for the entry of destination information until the doors of that car start to close shall be calculated from the following equation:

and D equals the distance (in feet or millimeters) from the point in the lobby or corridor 60 inches (1525 per minute (1 m/s) or less, a non-verbal audible signal with a frequency of 1500 Hz maximum which mm) directly in front of the farthest call button controlling that car to the centerline of its hoistway door. sounds as the car passes or is about to stop at a floor served by the elevator shall be permitted. 1. For cars with in-car lanterns, T shall be permitted to begin when the signal is visible from the point

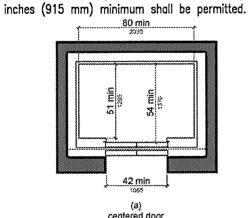
60 inches (1525 mm) directly in front of the farthest hall call button and the audible signal is sounded. 2. Destination—oriented elevators shall not be required to comply with 407.3.4.

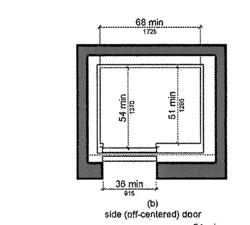
407.3.5 Door Delay. Elevator doors shall remain fully open in response to a car call for 3 seconds minimum.

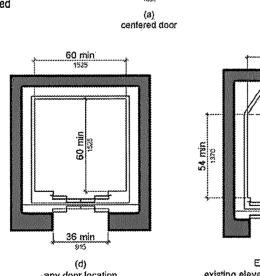
407.3.6 Width. The width of elevator doors shall comply with Table 407.4.1. EXCEPTION: In existing elevators, a power-operated car door complying with 404.2.3 shall be permitted.

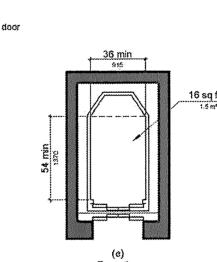
407.4 Elevator Car Requirements. Elevator cars shall comply with 407.4.

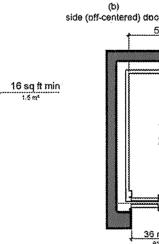
407.4.1 Car Dimensions. Inside dimensions of elevator cars and clear width of elevator doors shall comply classified by ASME A17.1. Elevator operation shall be automatic. with Figure 407.4.1 (Table 407.4.1.). EXCEPTION: Existing elevator car configurations that provide a clear floor area of 16 square feet (1.5 m2) 408.2 Elevator Landings serving limited—use/limited—application elevators shall comply with 408.2. minimum. minimum and also provide an inside clear depth 54 inches (1370 mm) minimum and a clear width 36

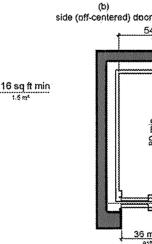


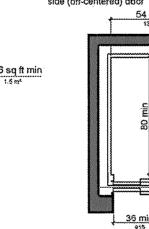




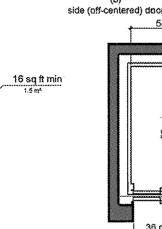








any door location



existing elevator car configuration Figure 407.4.1 Elevator Car Dimensions 407.4.2 Floor Surfaces. Floor surfaces in elevator cars shall comply with 302 and 303.

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

407.4.4 Leveling. Each car shall be equipped with a self—leveling feature that will automatically bring and maintain the car at floor landings within a tolerance of 1/2 inch (13 mm) under rated loading to zero

407.4.5 Illumination. The level of illumination at the car controls, platform, car threshold and car landing comply with 407.4.7. sill shall be 5 foot candles (54 lux) minimum.

407.4.6 Elevator Car Controls. Where provided, elevator car controls shall comply with 407.4.6 and 309.4. EXCEPTION: In existing elevators, where a new car operating panel complying with 407.4.6 is provided, existing car operating panels shall not be required to comply with 407.4.6.

407.4.6.1 Location. Controls shall be located within one of the reach ranges specified in 308.

1. Where the elevator panel serves more than 16 openings and a parallel approach is provided, buttons with floor designations shall be permitted to be 54 inches (1370 mm) maximum above the finish floor. 2. In existing elevators, car control buttons with floor designations shall be permitted to be located 54 inches (1370 mm) maximum above the finish floor where a parallel approach is provided.

407.4.6.2 Buttons. Car control buttons with floor designations shall comply with 407.4.6.2 and shall be raised 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. When two or more columns of buttons are provided they shall read from left to right.

407.4.6.3 Keypads. Car control keypads shall be in a standard telephone keypad arrangement and shall comply with 407.4.7.2.

410 Platform Lifts

comply with 302 and 303.

be 1 inch (32 mm) maximum.

a requirement in this document.

to share a common access aisle.

of the parking spaces they serve.

discourage parking in them.

shall comply with 305.

shall provide unassisted entry and exit from the lift.

410.2 Floor Surfaces, Floor surfaces in platform lifts shall

410.3 Clear Floor Space. Clear floor space in platform lifts

410.4 Platform to Runway Clearance. The clearance between

410.5 Operable Parts. Controls for platform lifts shall comply

410.6 Doors and Gates. Platform lifts shall have low-energy

shall remain open for 20 seconds minimum. End doors and

be permitted to have self-closing manual doors or gates.

have an adjacent access aisle complying with 502.3.

access aisle is 96 inches (2440 mm) wide minimum.

502.3 Access Aisle. Access aisles serving parking spaces

shall comply with 502.3. Access aisles shall adjoin an

accessible route. Two parking spaces shall be permitted

502.3.1 Width. Access aisles serving car and van parking

502.3.2 Length. Access aisles shall extend the full length

502.3.3 Marking. Access aisles shall be marked so as to

502.3.4 Location. Access aisles shall not overlap the

vehicular way. Access aisles shall be permitted to be

placed on either side of the parking space except for

located on the passenger side of the parking spaces.

angled van parking spaces which shall have access aisles

502.4 Floor or Ground Surfaces. Parking spaces and access

aisles serving them shall comply with 302. Access aisles

502.6 Identification. Parking space identification signs shall

703.7.2.1. Signs identifying van parking spaces shall contain

the designation "van accessible." Signs shall be 60 inches

include the International Symbol of Accessibility complying with

(1525 mm) minimum above the finish floor or ground surface

503.1 General. Passenger loading zones shall comply with 503.

(2440 mm) wide minimum and 20 feet (6100 mm) long minimum.

502.7 Relationship to Accessible Routes. Parking spaces and access gisles shall be designed so that cars

503.2 Vehicle Pull-Up Space. Passenger loading zones shall provide a vehicular pull-up space 96 inches

503.3 Access Aisle. Passenger loading zones shall provide access aisles complying with 503 adjacent to the

503.3.1 Width. Access aisles serving vehicle pull-up spaces shall be 60 inches (1525 mm) wide minimum.

503.5 Vertical Clearance. Vehicle pull-up spaces, access aisles serving them, and a vehicular route from an

503.3.2 Length, Access gisles shall extend the full length of the vehicle pull-up spaces they serve

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

area to be --

curb line

provide a vertical clearance of 114 inches (2895 mm) minimum.

vehicle pull-up space. Access aisles shall adjoin an accessible route and shall not overlap the vehicular way.

vehicle pull-up space

Figure 503.3 Passenger Loading Zone Access Aisle

tadius 1/2

radius of tread edge

curved nosing

Figure 504.5 Stair Nosings

30° max -

angled riser

beveled nosing

and vans, when parked, cannot obstruct the required clear width of adjacent accessible routes.

shall be at the same level as the parking spaces they

serve. Changes in level are not permitted.

measured to the bottom of the sign.

503 Passenger Loading Zones

Changes in level are not

EXCEPTION: Slopes not steeper

than 1:48 shall be permitted.

spaces shall be 60 inches (1525 mm) wide minimum.

clear width 42 inches (1065 mm) minimum.

power-operated doors or gates complying with 404.3. Doors Figure 410.6 Platform Lift Doors and

gates shall provide a clear width 32 inches (815 mm) minimum. Side doors and gates shall provide a

EXCEPTION: Platform lifts serving two landings maximum and having doors or gates on opposite sides shall

501.1 Scope. The provisions of Chapter 5 shall apply where required by Chapter 2 or where referenced by

spaces shall be 132 inches (3350 mm) wide minimum, shall be marked to define the width, and shall

EXCEPTION: Van parking spaces shall be permitted to be 96 inches (2440 mm) wide minimum where the

platform

Figure 502.2 Vehicle Parking Spaces

Figure 502.3 Parking Space Access Aisle

the platform sill and the edge of any runway landing shall

407.4.6.4 Emergency Controls. Emergency controls shall comply with 407.4.6.4.

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

407.4.6.4.2 Location, Emergency controls, including the emergency glarm, shall be grouped at the bottom 407.4.7 Designations and Indicators of Car Controls. Designations and indicators of car controls shall comply with 407.4.7.

EXCEPTION: In existing elevators, where a new car operating panel complying with 407.4.7 is provided, existing car operating panels shall not be required to comply with 407.4.7.

407.4.7.1 Buttons. Car control buttons shall comply with 407.4.7.1.

controls, markings shall be placed as near to the control as possible.

407.4.7.1.2 Location. Raised character and braille designations shall be placed immediately to the left of the control button to which the designations apply. EXCEPTION: Where space on an existing car operating panel precludes tactile markings to the left of the

407.4.7.1.3 Symbols. The control button for the emergency stop, alarm, door open, door close, main entry CHAPTER 5: GENERAL SITE AND BUILDING ELEMENTS floor, and phone, shall be identified with tactile symbols as shown in Table 407.4.7.1.3 (refer to 2010 ADA for table).

407.4.7.1.1 Type. Control buttons shall be identified by tactile characters complying with 703.2.

407.4.7.1.4 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 407.4.7.2 Keypads. Keypads shall be identified by characters complying with 703.5 and shall be centered on the corresponding keypad button. The number five key shall have a single raised dot. The dot shall be 502.1 General. Car and van parking spaces shall comply with 502. Where parking spaces are marked with bottom of the handrail gripping surface. 0.118 inch (3 mm) to 0.120 inch (3.05 mm) base diameter and in other aspects comply with Table

407.4.8.1.1 Size. Characters shall be 1/2 inch (13 mm) high minimum. 407.4.8.1.2 Location. Indicators shall be located above the car control panel or above the door.

407.4.8.1.3 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 407.4.8.1.3 provided that the visible indicators extinguish when the call has been answered. 407.4.8.1.4 Destination Indicator. In destination-oriented elevators, a display shall be provided in the car with visible indicators to show car destinations.

407.4.8.2 Audible Indicators. Audible indicators shall comply with 407.4.8.2.

407.4.8.2.1 Signal Type. The signal shall be an automatic verbal annunciator which announces the floor which the car is about to stop. T = D/(1.5 ft/s) or T = D/(455 mm/s) = 5 seconds minimum where T equals the total time in seconds EXCEPTION: For elevators other than destination—oriented elevators that have a rated speed of 200 feet 407.4.8.2.2 Signal Level. The verbal annunciator shall be 10 dB minimum above ambient, but shall not exceed 80 dB, measured at the annunciator.

407.4.8.2.3 Frequency. The verbal annunciator shall have a frequency of 300 Hz minimum to 3000 Hz

407.4.9 Emergency Communication. Emergency two-way communication systems shall comply with 308. Tactile symbols and characters shall be provided adjacent to the device and shall comply with 703.2.

408 Limited-Use/Limited-Application Elevators

EXCEPTION: Slopes not steeper than 1:48 shall be permitted. 408.1 General, Limited-use/limited-application elevators shall comply with 408 and with ASME A17.1 (incorporated by reference, see "Referenced Standards" in Chapter 1). They shall be passenger elevators as 502.5 Vertical Clearance. Parking spaces for vans and access aisles and vehicular routes serving them shall provide a vertical clearance of 98 inches (2490 mm)

408.2.1 Call Buttons. Elevator call buttons and keypods shall comply with 407.2.1.

408.2.2 Hall Signals. Hall signals shall comply with 407.2.2.

408.2.3 Hoistway Signs. Signs at elevator hoistways shall comply with 407.2.3.1.

408.3 Elevator Doors. Elevator hoistway doors shall comply with 408.3.

408.3.1 Sliding Doors, Sliding hoistway and car doors shall comply with 407.3.1 through 407.3.3 and

408.3.2 Swinging Doors. Swinging hoistway doors shall open and close automatically and shall comply with 404, 407.3.2 and 408.3.2. 408.3.2.1 Power Operation. Swinging doors shall be power-operated and shall comply with ANSI/BHMA

A156.19 (1997 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1). 408.3.2.2 Duration. Power-operated swinging doors shall remain open for 20 seconds minimum when activated.

408.4 Elevator Cars. Elevator cars shall comply with 408.4. 408.4.1 Car Dimensions and Doors. Elevator cars shall provide a clear width 42 inches (1065 mm) minimum and a clear depth 54 inches (1370 mm) minimum. Car doors shall be positioned at the narrow ends of cars and shall provide 32 inches (815 mm) minimum clear width.

503.4 Floor and Ground Surfaces. Vehicle pull-up 1. Cars that provide a clear width 51 inches (1295 mm) minimum shall be permitted to provide a clear spaces and access aisles depth 51 inches (1295 mm) minimum provided that car doors provide a clear opening 36 inches (915 serving them shall comply with 302. Access aisles shall be at 2. Existing elevator cars shall be permitted to provide a clear width 36 inches (915 mm) minimum, clear the same level as the vehicle

depth 54 inches (1370 mm) minimum, and a net clear platform area 15 square feet (1.4 m2) minimum. pull—up space they serve. 408.4.2 Floor Surfaces. Floor surfaces in elevator cars shall comply with 302 and 303.

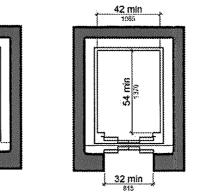
408.4.3 Platform to Hoistway Clearance. The platform to hoistway clearance shall comply with 407.4.3. 408.4.4 Leveling. Elevator car leveling shall comply with 407.4.4.

408.4.5 Illumination. Elevator car illumination shall comply with 407.4.5.

408.4.6 Car Controls. Elevator car controls shall comply with 407.4.6. Control panels shall be centered

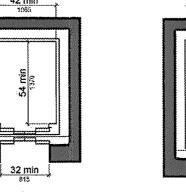
408.4.7 Designations and Indicators of Car Controls. Designations and indicators of car controls shall

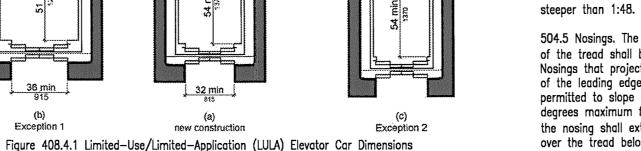
408.4.8 Emergency Communications. Car emergency signaling devices complying with 407.4.9 shall be



new construction

Exception 1





504.5 Nosings. The radius of curvature at the leading edge (typical for all profiles) of the tread shall be 1/2 inch (13 mm) maximum. 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 extend 1 1/2 inches (38 mm) maximum over the tread below.

Changes in level are not permitted.

504.1 General. Stairs shall comply with 504.

shall be 11 inches (280 mm) deep minimum.

504.3 Open Risers. Open risers are not permitted

504.4 Tread Surface. Stair treads shall comply with 302.

EXCEPTION: Treads shall be permitted to have a slope not

410.1 General. Platform lifts shall comply with ASME A18.1 (1999 edition or 2003 edition) (incorporated by 504.6 Handrails. Stairs shall have handrails complying with 505.

reference, see "Referenced Standards" in Chapter 1). Platform lifts shall not be attendant-operated and 504.7 Wet Conditions. Stair treads and landings subject to wet conditions shall be designed to prevent the accumulation of water.

> 505 Handrails 505.1 General. Handrails provided along walking surfaces complying with 403, required at ramps complying with 405, and required at stairs complying with 504 shall comply with 505.

505.2 Where Required. Handrails shall be provided on both sides of stairs and ramps. EXCEPTION: In assembly areas, handrails shall not be required on both sides of aisle ramps where a handrail is provided at either side or within the aisle width.

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 and ramps shall be continuous between flights or runs. EXCEPTION: In assembly greas, handrails on ramps shall not be required to be continuous in aisles serving

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

505.5 Clearance. Clearance between handrail gripping surfaces Figure 505.4 Handrail and adjacent surfaces shall be 1 1/2 inches (38 mm)

along their length and shall not be obstructed along their tops or sides. The bottoms of handrail gripping surfaces shall not be obstructed for more than 20 percent of their length. Where provided, horizontal Figure 505.5 Handrail Clearance projections shall occur 1 1/2 inches (38 mm) minimum below the lines, width measurements of parking spaces and access aisles shall be made from the centerline of the EXCEPTIONS: Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of handrail gripping surfaces shall be

EXCEPTION: Where parking spaces or access aisles are not adjacent to another parking space or access Figure 505.6 Horizontal Project gisle, measurements shall be permitted to include the full width of the line defining the parking space or permitted to be obstructed along their entire length where they are Below Gripping Surface integral to crash rails or bumper quards. 2. The distance between horizontal projections and the bottom of the gripping surface shall be permitted 502.2 Vehicle Spaces. Car parking spaces shall be 96 inches (2440 mm) wide minimum and van parking to be reduced by 1/8 inch (3.2 mm) for each 1/2 inch (13 mm) of additional handrail perimeter

505.6 Gripping Surface. Handrail gripping surfaces shall be continuous

dimension that exceeds 4 inches (100 mm). 505.7 Cross Section. Handrail gripping surfaces shall have a cross section complying with 505.7.1 or

505.7.1 Circular Cross Section. Handrail gripping surfaces 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 Non-Circular Cross Sections. Handrail gripping surfaces with a non-circular cross section shall have a perimeter dimension of 4 inches (100 mm) minimum and 6 1/4 inches (160 mm) maximum, and a

hazardous due to plan configuration.

adjacent stair flight.

cross-section dimension of 2 1/4 inches (57 mm) Figure 505.7.2 Handrail Non-Circular Cross Section 505.8 Surfaces. Handrail gripping surfaces and any surfaces adjacent to them shall be free of sharp or abrasive elements and shall have rounded edges.

505.9 Fittings. Handrails shall not rotate within their fittings.

505.10 Handrail Extensions. Handrail gripping surfaces shall extend beyond and in the same direction of stair flights and ramp runs in accordance with 505.10. **FXCEPTIONS:**

1. Extensions shall not be required for continuous handrails at the inside turn of switchback or dogleg 2. In assembly areas, extensions shall not be required for ramp handrails in aisles serving seating where the handrails are discontinuous to provide access to seating and to permit crossovers within gisles. 3. In alterations, full extensions of handrails shall not be required where such extensions would be

505.10.1 Top and Bottom Extension at Ramps. Ramp handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent ramp run.

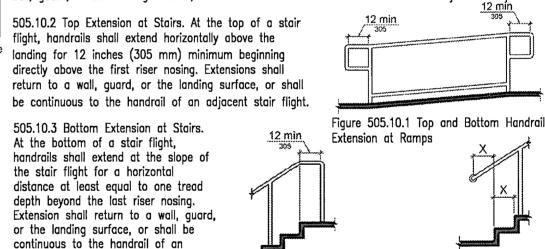


Figure 505.10.3 Bottom Handrail Figure 505.10.2 Top Handrail Extension at Stairs Extension at Stairs CHAPTER 6: PLUMBING ELEMENTS & FACILITIES

Note: X = tread depth

601.1 Scope. The provisions of Chapter 6 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

602 Drinking Fountains

602.1 General. Drinking fountains shall comply with 307 and 602. 602.2 Clear Floor Space. Units shall have a clear floor or ground space complying with 305 positioned for a forward approach and centered on the unit. Knee and toe clearance complying with 306 shall be

EXCEPTION: A parallel approach complying with 305 shall be permitted at units for children's use where the spout is 30 inches (760 mm) maximum above the finish floor or ground and is 3 1/2 inches (90 mm) maximum from the front edge of the unit, including bumpers.

602.3 Operable Parts. Operable parts shall comply with 309.

entrance to the passenger loading zone, and from the passenger loading zone to a vehicular exit shall 602.4 Spout Height. Spout outlets shall be 36 inches (915 mm) maximum above the finish floor or ground. 602.5 Spout Location. The spout shall be located 15 inches (380 mm) minimum from the vertical support and 5 inches (125 mm) maximum from the front edge of the unit, including bumpers.

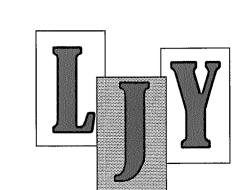
504.2 Treads and Risers. All steps on a flight of stairs shall have uniform riser heights and uniform tread 602.6 Water Flow. The spout shall provide a flow of water 4 inches (100 mm) high minimum and shall be located 5 inches (125 mm) maximum from depths. Risers shall be 4 inches (100 mm) high minimum and 7 inches (180 mm) high maximum. Treads the front of the unit. The angle of the water stream shall be measured horizontally relative to the front face of the unit. Where spouts are located less than 3 inches (75 mm) of the front of the unit, the angle of the water stream shall be 30 degrees maximum. Where spouts are located between 3

Figure 602.5 Drinking inches (75 mm) and 5 inches (125 mm) maximum from the front of the unit, the angle of the water stream shall be 15 degrees maximum 602.7 Drinking Fountains for Standing Persons. Spout outlets of drinking fountains for standing persons shall be 38 inches (965 mm) minimum and 43 inches (1090 mm) maximum above the finish floor or

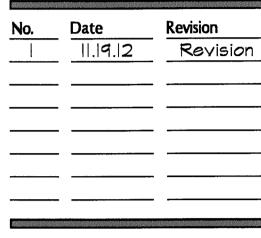
603 Toilet and Bathing Rooms

603.1 General. Toilet and bathing rooms shall comply with 603. 603.2 Clearances. Clearances shall comply with 603.2

603.2.1 Turning Space. Turning space complying with 304 shall be provided within the room.



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Drawn by LY Checked by LY

Drawing Number