



PROJECT GUIDE



pba PROJECT GUIDE

This Project Guide is intended for planners, architects, designers, specifiers, building owners and facilities/property managers.

The Americans with Disabilities Act (ADA) sets the minimum requirements – both scoping and technical – for newly designed and constructed or altered state and local government facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities.

In designing restrooms, this demands each type of fixture or feature, and the installation location, to meet accessibility requirements contained in the 2010 ADA Standards for Accessible Design.

Some projects may also need to comply with the provisions of the 2017 Edition of ICC A117.1, Accessible and Usable Buildings and Facilities (certified by the American National Standards Institute or ANSI).

The information contained herein represents pba's extract of the 2010 ADA Standards for Accessible Design (referred to as, 2010 ADA Standards) and the 2017 Edition of ICC A117.1, Accessible and Usable Buildings and Facilities (referred to as 2017 ICC Standards) and is only of an advisory nature. Using this document does not replace the study and understanding of the two accessibility standards referred to. **In addition, all plans should be compliant to local laws.**

TOE AND KNEE CLEARANCE

If an element is mounted over a clear floor or a turning space, the toe clearance (Fig.1a) between element and ground shall be 9 inches (230 mm). If a knee clearance (Fig.1a) under an element is required, it shall be 11 inches (280 mm) deep minimum at 9 inches (230 mm) above the finish floor or ground, and 8 inches (205 mm) deep minimum at 27 inches (685 mm) above the finish floor or ground. Toe clearance shall be 30 inches (760 mm) wide minimum (Fig.1b).

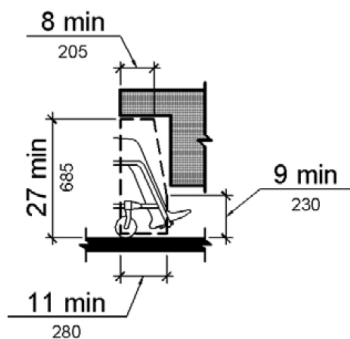


Fig.1a
Elevation

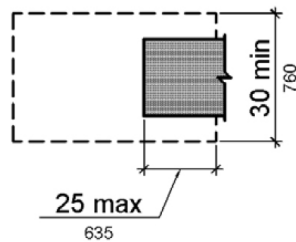


Fig.1b
Plan

PROTRUDING OBJECTS

Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the finish floor or ground shall protrude 4 inches (100 mm) maximum horizontally into the circulation path (Fig.2).

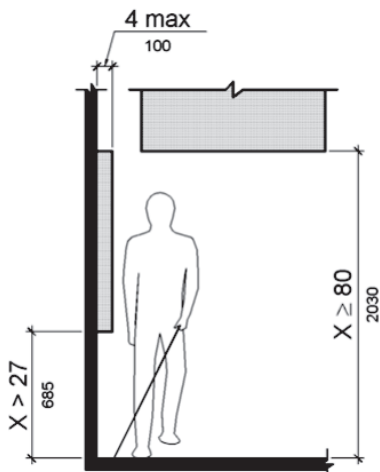


Fig.2

REACH RANGES AND SPACE REQUIREMENTS

Fig.3
Mounting Heights for Restroom Accessories

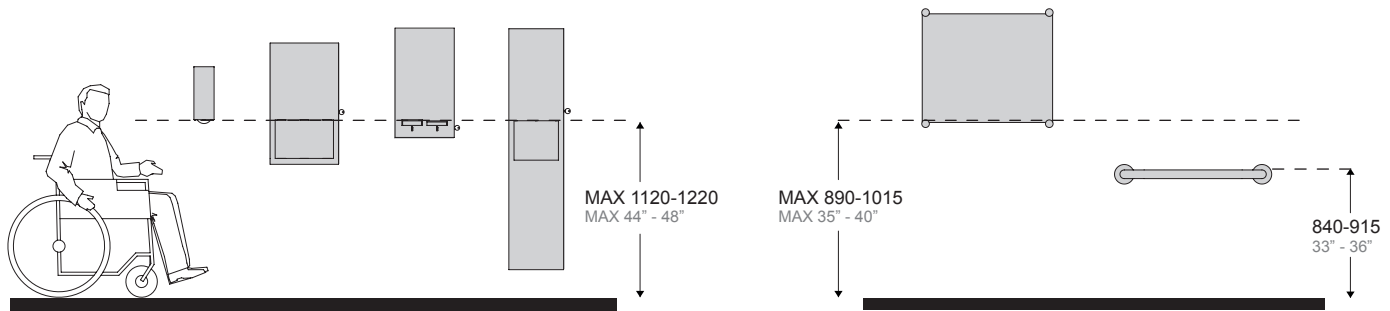


Fig.3a
Upper Range of Mounting Heights for Restroom Accessories with Operable Parts

Fig.3b
Mirror and Toilet Grab Bar Mounting Heights

Based on the position of individual accessories and the direction of reach required for their use, Reach Ranges and Mounting Heights for restroom accessories may vary within a facility.

To allow use by people with limited reach range, accessories must be mounted with their operable parts such as dispensing mechanisms, start buttons, coin slots, outlets, or dispenser openings, or coat hooks located at the max height of 48 inches (1220mm) above the finish floor (Figs.3a, 4, 5).

Where accessories are mounted above obstructions (e.g. counters or waste receptacles), depending on the nature and depth of the obstruction, they must be located at 44 inches or 48 inches (1120 or 1220mm) maximum above the finish floor (Figs.5, 6). To provide a forward approach, accessories mounted on, behind and above standard depth lavatory counters shall grant a high forward reach of 48 inches (1220mm) maximum where the reach depth is 20 inches (510 mm) maximum. Where the reach depth is between 20 to 25 inches (510-635mm), the mounting height is limited to a maximum of 44 inches (1120mm) above the floor. The operable portions of any accessory should be mounted no lower than 15 inches (380mm) above the floor.

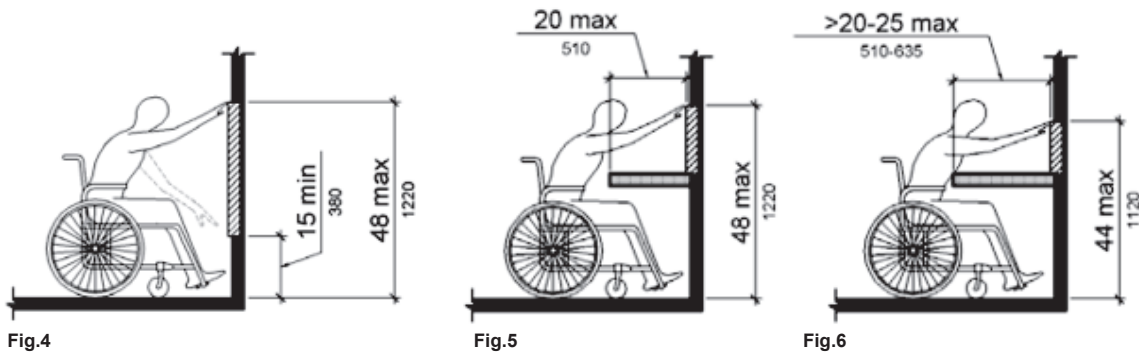


Fig.4

Fig.5

Fig.6

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 (865 mm) maximum. Where the side reach is unobstructed or less than 10 inches (255 mm), the high side shall be 48 inches (1220 mm). Where the reach depth is between 10 - 24 inches (255 - 610 mm), the high side reach shall be 46 inches (1170 mm) maximum (Fig.7).

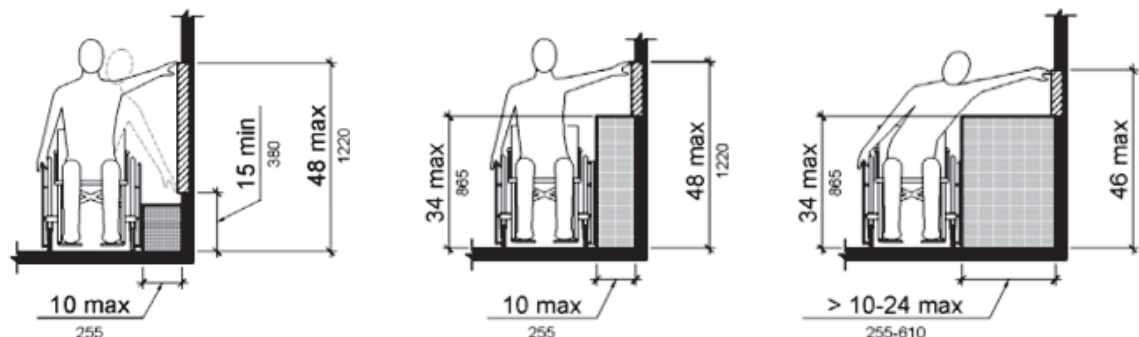


Fig.7

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 them shall be 5 pounds (22.2 N) maximum.

RESTROOM AMENITIES

Restroom accessories with leading edges more than 27 inches (685mm) and not more than 80 inches (2030mm) above the finish floor shall protrude 4 inches (100mm) maximum horizontally into the circulation path. If the leading edge is 27 inches (685mm) or below, any projection amount is allowed as long as the required minimum width of an adjacent clear access aisle is maintained. This rule is specifically designed to ensure detection when a cane is used and to avoid body contact, and can benefit any user.

All floor standing and surface-mounted units protruding more than 4 inches (100mm) it is recommended located in alcoves, or between other structural elements to avoid interference with access aisles or wheelchair turning areas. Fully recessed accessories are recommended throughout universally designed restrooms. Forward and side approaches, as well as left and right hand use should be taken into account when determining the mounting location of all restroom accessories. Operable parts shall be operable with a force lower than the defined limit.

Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches (1015mm) maximum above the finish floor (Fig.3b). Mirrors not located over lavatories or countertops shall be installed with the bottom edge of the reflecting surface no more than 35 inches (890mm) above the finish floor (Fig.3b). A single full-length mirror can accommodate a greater number of people.

Soap Dispensers installed over lavatories must be mounted so that push buttons or operable parts and outlet location meet reach ranges according to 2010 ADA Standards (Figs.4-7, 8a). Lavatory-mounted soap dispensers and lever-handle faucets should be in a suitable position to avoid interference.

Towel Dispensers and Waste Receptacles should be located in position accessible to people using wheelchairs, so as to be conveniently usable at the accessible lavatory. The operable and outlet portions of these elements must be installed complying reach ranges (Figs.1-7, 8a).

Sanitary Napkin/Tampon Dispenser are recommended in women's restrooms for a convenient access to hygienic products. All units shall meet the 2010 ADA Standards for operating mechanisms, clear floor space and reach ranges.

ACCESSORIES IN TOILET COMPARTMENT INSTALLATIONS

Every toilet compartment should include a number of accessories. These must be located on the side wall or partition nearest the toilet in accessible compartments, and just in front of the leading edge of the toilet seat for an accessible reach.

The 2010 ADA Standards require that no part of any accessory can be installed if interfering with maneuvering space or access to grab bars. If mounted above grab bars, no part of a protruding accessory can extend closer than 12 inches (305mm) to the top of the grab bar (Fig.8b). The space between the grab bar and projecting objects below and at the ends shall be 1-1/2 inches (38mm) minimum (Fig.8b). The 2010 ADA Standards require that operating mechanisms and accessible openings of dispensers and disposals inside the toilet compartment should be located 15 inches (380mm) minimum to 48 inches (1220mm) maximum above the finish floor and should not be located behind grab bars (Fig.8a.2). Note that 2017 ICC Standards defines different operable portions and outlet location of protruding and recessed dispensers in toilet compartments (Fig.8a.1). 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 above the floor.

Roll Toilet Tissue Dispensers in all accessible toilet compartments shall not be of a type that controls delivery or that does not allow continuous paper flow. As per 2010 ADA Standards, toilet paper dispensers shall be 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front of the leading edge of the toilet (Figs.8a, 8b), measured to the centerline of the dispenser.

Sanitary Napkin Disposal Units are recommended in all women's toilet compartments. They should be within reach ranges (Figs.1-7, 8a).

Toilet Seat Cover Dispensers are an optional amenity for all toilet compartments. The opening for toilet seat cover dispenser in accessible compartments needs to be mounted within reach ranges (Fig.8a).

Coat Hooks and Shelves.

According to 2010 ADA Standard, where coat hooks are provided at least one of each type must be within accessible reach ranges. Shelves must be located 40 inches min to 48 inches max. above finish floor (Fig.8c).

Fig.8
Mounting Heights and space requirements for toilet compartment accessories

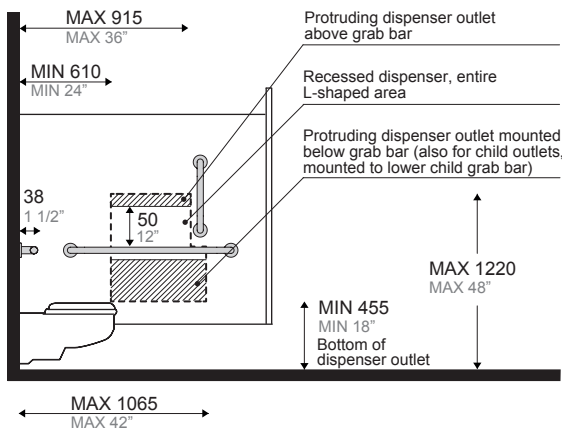


Fig.8a.1
Outlet Location for Toilet Paper Dispenser

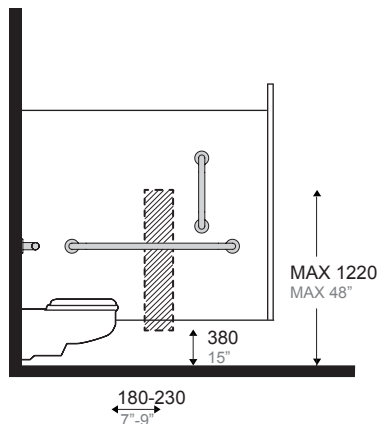


Fig.8a.2
Outlet Location for Dispenser

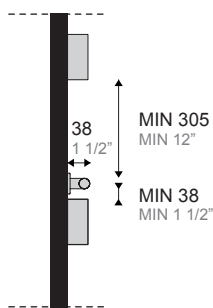


Fig.8b
Protruding Objects Mounted near Grab Bars

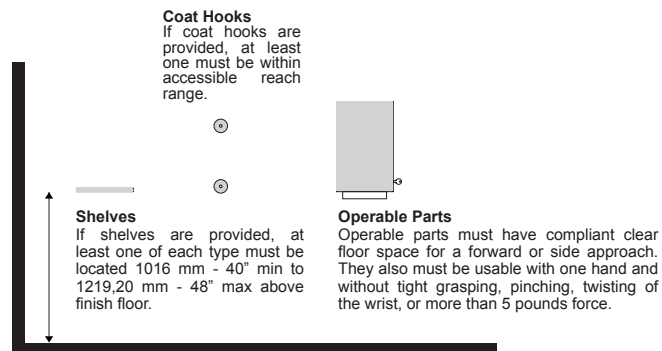


Fig.8c
Dispenser, Receptacles, Coat, Hooks and Shelves.
The 2010 ADA standard require that.

GRAB BARS

Grab bars with circular cross sections shall have an outside diameter of 1¼ inches (32 mm) minimum and 2 inches (51 mm) maximum. Grab bars with non-circular cross sections shall have a cross-section dimension of 2 inches (51 mm) maximum and a perimeter dimension of 4 inches (100 mm) minimum and 4.8 inches (120 mm) maximum.

The space (Fig.8b) between the wall and the grab bar shall be 1½ inches (38 mm). The space between the grab bar and projecting objects below and at the ends shall be 1½ inches (38 mm) minimum. The space between the grab bar and projecting objects above shall be 12 inches (305 mm) minimum.

Grab bars shall be installed in a horizontal position, 33 inches (840 mm) minimum and 36 inches (915 mm) maximum above the finish floor measured to the top of the gripping surface (Fig. 10). Same height applies to grab bars mounted in shower compartments; where multiple grab bars are used, required horizontal grab bars shall be installed at the same height above the finish floor.

Grab bars in water closets and toilet compartments shall be provided on the side wall closest to the water closet and on the rear wall. The side wall grab bar shall be 42 inches (1065 mm) long minimum, located 12 inches (305 mm) maximum from the rear wall and extending 54 inches (1370 mm) minimum from the rear wall.

The rear wall grab bar shall be 36 inches (915 mm) long minimum and extend from the centerline of the water closet 12 inches (305 mm) minimum on one side and 24 inches (610 mm) minimum on the other side. The rear grab bar shall be permitted to be 24 inches (610 mm) long minimum, centered on the water closet, where wall space does not permit a length of 36 inches (915 mm) minimum due to the location of a recessed fixture adjacent to the water closet.

In addition, according to 2017 ICC Standards, 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.

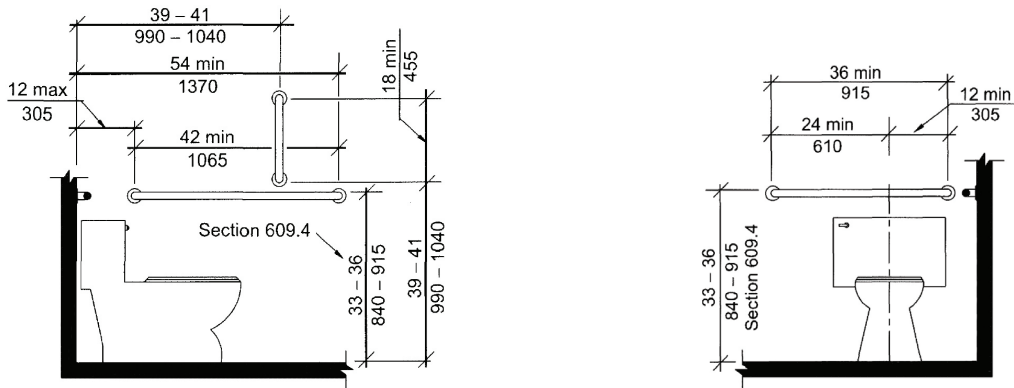


Fig.10

Grab bars provided in Transfer Type, Standard Roll-In Type and Alternate Roll-In Type Shower Compartments shall comply with the requirements illustrated respectively in Fig.11, Fig. 12 and Fig. 13.

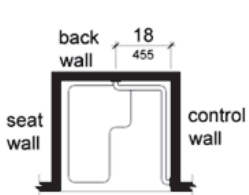


Fig.11
Transfer Type

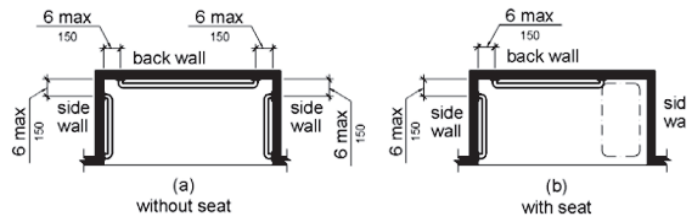


Fig.12
Standard Roll-In Type

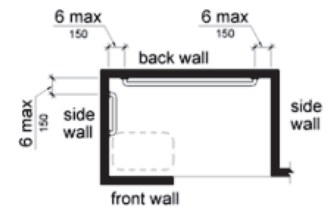


Fig.13
Alternate Roll-In Type Shower Compartments

2017 ICC Standards defines that 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 (Fig. 14).

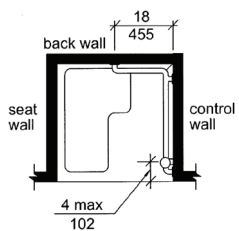


Fig.14

If an adjustable-height shower head on a vertical bar is used, the bar shall be installed so as not to obstruct the use of grab bars.

SEATS

A folding or non-folding seat shall be provided in transfer type shower compartments, while in roll-in type showers it shall be provided a folding seat. Seats could be rectangular or L-shaped.

The top of the seat shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the bathroom finish floor. Other location and seat dimensions are illustrated in Fig. 15.

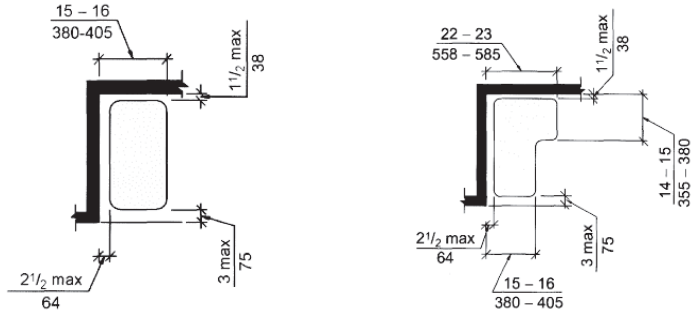


Fig.15

NOTES

Dimensions for Children

As specified by ADA standards, the technical requirements are based on adult dimensions and anthropometrics. For additional technical requirements based on children's dimensions and anthropometrics see ADA Standards.

Turning space

To see which requirements floor or ground surfaces of a turning space shall comply with, refer to ADA Standards.

Bathtubs

For bathtubs prescriptions see ADA Standards.

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