

**SUGGESTIONS FOR
DISABLED ACCESS DESIGN
IN NEW SINGLE FAMILY HOMES**

**From the
Department of Planning & Building
City of Palm Springs, California**

For more information please contact:

**The Americans With Disabilities Act Coordinator
760-323-8219**



If you are designing or building your own home, building residential income property or developing large housing complexes, the following may assist you in making important decisions about your project.

Over the course of our lives many of us will experience home environments that could pose accessibility challenges due to a disability. Family members, friends, or we ourselves may become disabled. By incorporating disabled access features in the original design of new single family homes, people with disabilities can live more independently and could avoid expensive alterations at a later date. The suggestions below describe some basic architectural design features that will make the new home accessible. **This information is derived from our California Multifamily Disabled Access Regulations and conforms to the California Building Code, the American National Standards Institution and the American Building Officials Guidelines regarding disabled access.**

ENTRANCE: Access to the main entrance of the home can be from either a level or a ramped path of travel. The slope of any ramp should not exceed 8.33 % or 1: 12. Also, It is best to have at least a 5-foot square level landing area serving the main entrance door.

DOORS: Provide a main entrance door that is 36 to 42 inches wide. All interior doors should be a minimum 32 inches wide with lever style handles to accommodate people with grasping impairments.

HALLWAYS: Interior hallways should be a minimum of 42 inches wide with 48 inches being preferable.

ELECTRICAL OUTLETS & LIGHT SWITCHES: Installation of electrical outlets is to be no lower than 15 inches up from the floor. Climate controls are to be located between 44 inches and 48 inches above the finished floor while it is recommended that light switches be located 36 inches to 44 inches above the floor.

BATHROOMS: For wheelchair access into the bathroom, a minimum of 42 inches clearance in front of the bathroom door is required. The bathroom interior floor space needs to provide a 60-inch turning radius. The use of wall mount or pedestal sinks can often assist in creating this needed clear floor space. In addition, the use of lever style handles for the lavatory faucets are best because they operate without grasping, pinching or twisting of the wrist.

If a shower compartment is provided it should be a roll in shower that can accommodate a wheelchair user. It needs to be a minimum 42 inches in width and a minimum 48 inches in depth. When a bathtub is used, grab bars with reinforced backing are to be located to serve the full length of the back wall. They are to run horizontal and be mounted 33 to 36 inches up from the floor (see attached diagrams on pages 8, 10, 11 and 12).

Access to the toilet is to provide 48-inch clearance in front of the toilet and a minimum of 48 inches on one side. Grab bar reinforcement is to be placed next to the toilet and on the back wall to accommodate a grab bar 33 to 36 inches up from the floor (see diagram on page 14).

ALL REINFORCED GRAB BARS MUST TO BE ABLE TO SUPPORT AT LEAST 250 POUNDS

Inside the Dwelling Unit

General

1109A.1 **General.** When buildings are required to be accessible, building facilities (telephones, drinking fountains, bathrooms, kitchens, etc.) must be accessible to persons with physical disabilities. Where specific floors of a building are required to be accessible, the requirements shall apply only to the facilities located on accessible floors.

1107A.20 Dwelling units shall be considered adaptable when they comply with the appropriate provisions of adaptability contained in Section 1109A and Chapter 10.

Doors

1109A.1
Exception **Every entry, opening or passage door of the covered dwelling unit must provide a minimum of 32 inches nominal clear space between the face of the door and the stop, when the door is in the 90 degree open position. A 34-inch door is acceptable. A standard 6-foot sliding patio door assembly is acceptable.**

1007.4.4a **Interior Doors.** All interior doors shall have a level area on the side to which the door swings, extending 18 inches past the strike edge of the door.

1004.14 Interior passage doors shall have hardware centered, between 30 inches and 44 inches, above the floor and shall be operable with a single effort by lever type hardware.

1004.10
Exception **Landings at the Interior Passage Doors.** Interior passage doors shall have landings on each side of the door. The length of landings shall be a minimum of 36 inches in the direction of travel. The minimum width of landings shall be not less than the width of the door plus the required strike side clearance.

Hallways

1107A.4
Exception **General.** Hallways within dwelling units shall be a minimum of 36 inches in width.

Flooring

- 1116A If carpet or carpet tile is used in a common-use area on a ground floor surface, it shall have firm backing or no backing. The maximum pile height shall be 1/2 inch. 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 the requirements for changes in level (I 1107A.9).

Switches

- 380-8(c.1) The center of the grip of the operating handle of switches used to control light switches, thermostats and other environmental controls shall be located no higher than 48 inches, and no lower than 15 inches, above the floor. If the reach is over an obstruction (for example, a kitchen base cabinet) between 20 and 25 inches in depth, the maximum height is reduced to 44 inches for forward approach, or 46 inches for side approach, provided the obstruction is no more than 24 inches in depth. Obstruction may not extend more than 25 inches from the wall beneath a control.

Other controls are acceptable provided that comparable controls that perform the same function are provided within the same area and are accessible.

Electrical Outlets

- 210-7 The center of 15, 20, and 30-ampere electrical outlets must be installed no higher than 48 inches, and no lower than 15 inches above the floor. This requirement does not apply to electrical outlets installed as a part of permanently install baseboard heaters, outlets required in areas adjacent to sliding panels or walls, or other electrical convenience floor outlets. The requirement also does not apply to baseboard electrical outlets used in movable partitions, or in walls with windows.

If the reach is over an obstruction (for example, a kitchen base cabinet) between 20 and 25 inches in depth, the maximum height is reduced to 44 inches for forward approach, or 46 inches for side approach, provided the obstruction is no more than 24 inches in depth. Obstructions may not extend more than 25 inches from the wall beneath the receptacle.

Other outlets are acceptable provided that comparable outlets, that perform the same functions, are provided within the same area and are accessible.

Kitchens

- 1112A Kitchens within adaptable dwelling units shall be accessible. See figures 7.1 & 7.2 on page 68.
- 1112A **Exception** **In privately-funded multifamily dwelling units, U-shaped kitchens with cabinets, appliances or fixtures on three walls shall be designed and constructed to provide a minimum clear space of 60 inches between cabinet fronts, appliances or fixtures to allow a parallel approach, or base cabinets shall be removable at that location, to a height of 27 inches above the floor to permit a forward approach. Base cabinets directly under the kitchen sink counter area, including toeboard, and shelving, must be removable without special knowledge or tools to provide clearance for a wheelchair. Flooring must be installed beneath such countertop. A minimum clear space of 48 inches must be provided for all other kitchen designs.**
- 1112A.4 **Base Cabinets.** In dwelling units required to be accessible, base cabinets directly under the kitchen sink counter area, including toeboard and shelving, shall be removable without the use of specialized tools or specialized knowledge to provide clearance for a wheelchair. Finished flooring shall be provided on the floor beneath the countertop.
- 1112A A clear floor space at least 30 inches by 48 inches must be provided that allows a parallel approach by a person in a wheelchair at the range or cooktop and either a parallel or forward approach at the oven, dishwasher, refrigerator/freezer and trash compactor.
- 1112A.3 **Lower Shelving.** Lower shelving and/or drawer space must be provided in the kitchen at a height of no more than 48 inches.
- 1112A.2 **Countertops.** At least 30 inches of countertop must be provided for the kitchen sink. At least 30 inches shall be provided for a work space. Both the sink and work space counter areas shall be designed to enable repositioning to a minimum height of 28 inches. The sink and work surface counter area may be a single integral unit or separate components.
- The sides and back of adjacent cabinets, which may become exposed to moisture or food handling when a countertop is lowered, are to be constructed of durable, nonabsorbent materials appropriate for such uses.
- Install finished flooring on the floor beneath such countertop.
- Note: Plumbing shall be installed in a manner to permit repositioning of the sink and countertop.

1112A.2
Exception 1

Five percent (5%) of the privately-funded apartment house dwelling units required to be accessible, must comply with the requirements for repositionable countertops. All other privately-funded covered multi-family dwelling units are exempt.

1112A.2
Exception 2

Stone, cultured stone, and tiled countertops may be used without meeting the repositioning requirements.

1112A.2
Exception 3

In privately-funded apartment house dwelling units, two 15-inch minimum width breadboards may be provided in lieu of the required 30 inches of countertop work surface.

1508

Kitchen sink faucet controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbs. Lever-operated, push-type, and electronically-controlled mechanisms are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds.

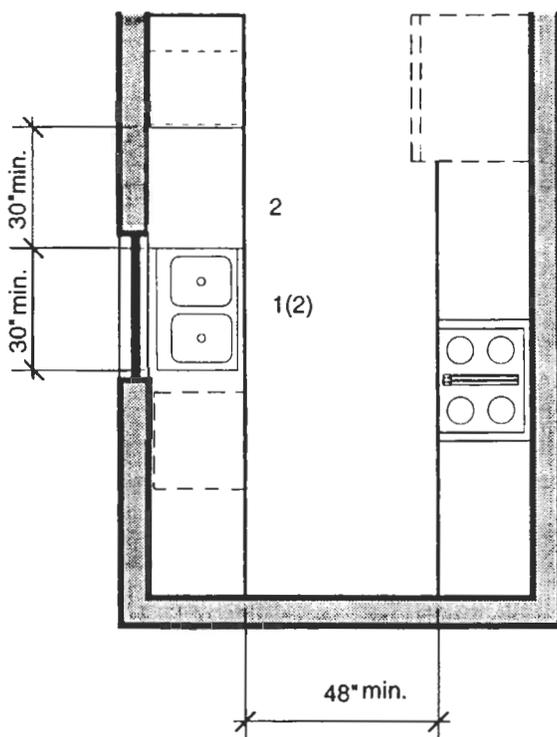


Fig. 7.1 Typical Kitchen

1. Removable base cabinet with finish flooring beneath.
2. 30" wide repositionable counter top work space and sink.

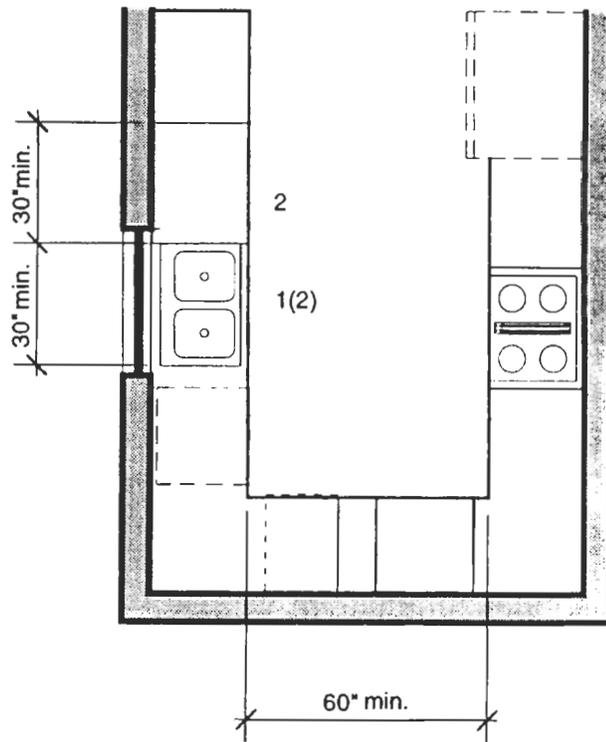
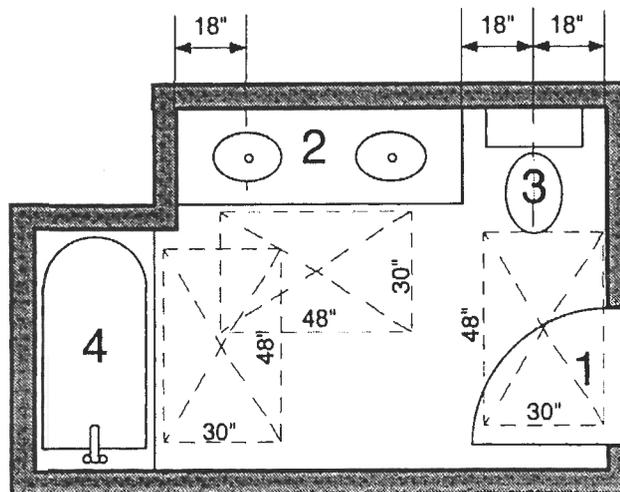


Fig. 7.2 U-Shaped Kitchen

1. Removable base cabinet with finish flooring beneath.
2. 30" wide repositionable counter top work space and sink.

Bathrooms

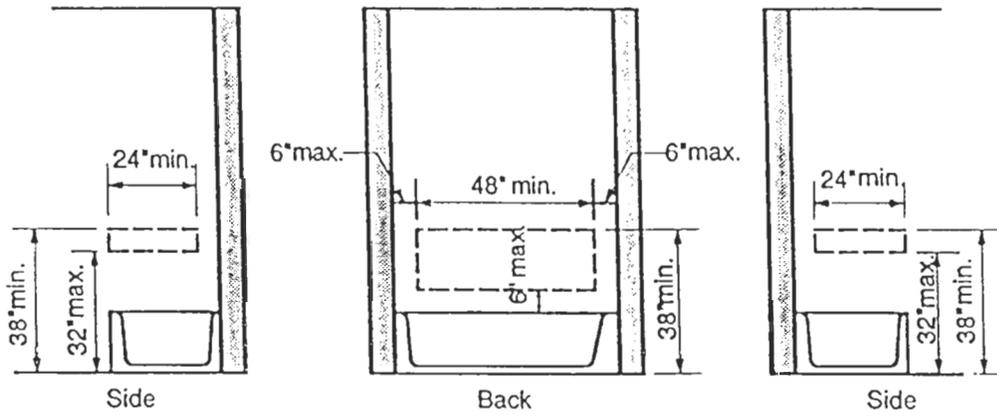
- 1109A.2.1 **Bathing Facilities.** See Tables 1109A.2-1 and 1109A.2-21 for complying bathrooms. (See figure 7.3)
- 1109A.2.2 Only one bathroom in privately-funded accessible dwelling units need comply with the requirements for the physically disabled.
- 1109A.2.3 If a developer desires to provide requirements for the physically disabled in all bathrooms, use Table 1109A.2-1.
- 1109A.2.4 If a developer desires to provide requirements for the physically disabled in only one bathroom, use Table 1109A.2-2.
- Note: See figures 7.4, 7.5, and 7.6 for knee space below the vanity.
- 1504(b) Hot water and drain pipes under lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under lavatories.
- 1504(c) Lavatory faucet controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbs. Lever-operated, push-type, and electronically-controlled mechanisms are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds.



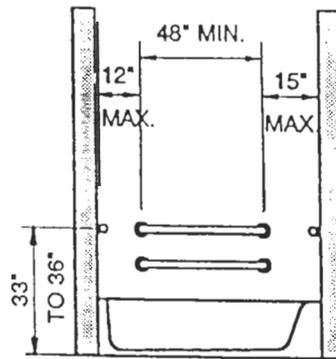
Provide 30" x 48" clear space in front of:
1. Door 2. Lav. 3. Water Closet 4. Tub

Fig. 7.3 Typical Bathroom

LOCATION OF GRAB BAR REINFORCEMENT BACKING FOR BATHTUBS



OPTION OF PROVIDING TWO GRAB BARS ON BACK WALL OF A BATHTUB



BATHROOM SHOWER STALL AND ACCESSORIES

Shower Unit. A shower spray unit with a hose at least 60 inches long that can be used as a fixed shower head or as a hand-held shower shall be provided.

Bathtub Enclosures. If provided, enclosures for bathtubs shall not obstruct controls or transfer from wheelchairs onto bathtub seats or into tubs. Enclosures on bathtubs shall not have tracks mounted on their rims.

Compartment Showers. Compartment showers shall conform to the following requirements:

Size. Compartments shall be a minimum 42 inches in width between wall surfaces and a minimum 48 inches in depth with an entrance opening width of 36 inches minimum.

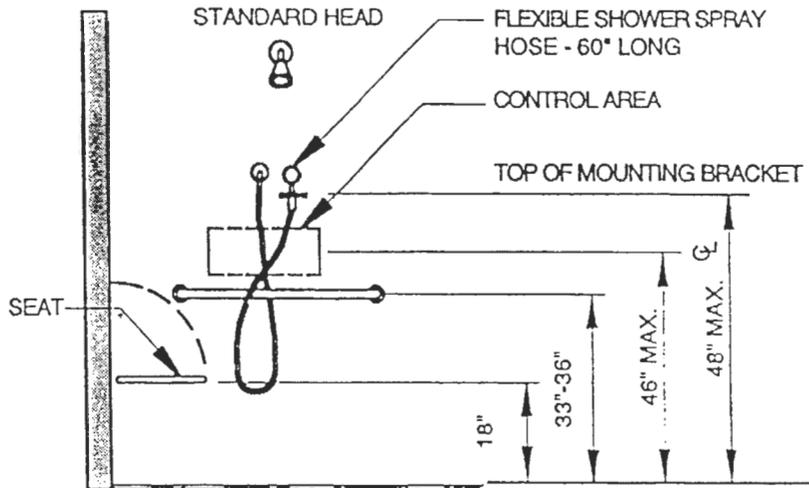
Threshold. When a threshold or recessed drop is used, it shall be a maximum of 1/2-inch in height and shall be beveled or sloped at an angle not exceeding 45 degrees (100 percent gradient) from the horizontal.

Floor. The shower floor shall slope toward the rear to a drain located within 6 inches of the rear wall. Maximum slope of floor shall be 1/2inch per foot in any direction. The floor surfaces shall be of Carborundum or grit-faced tile or of material providing equivalent slip resistance.

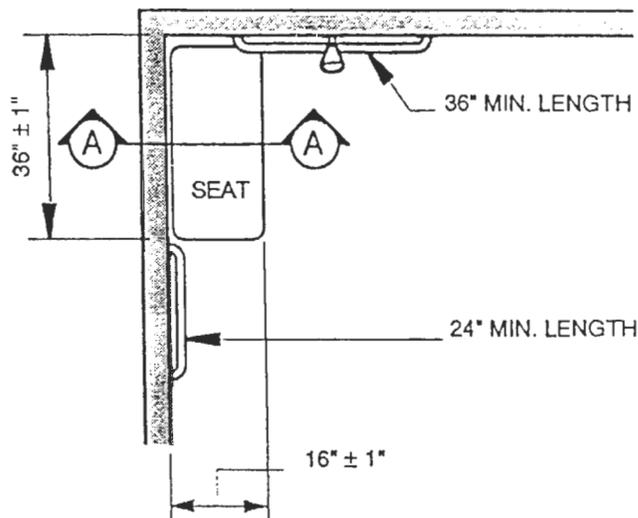
Shower Accessories. Shower accessories shall include:

1. A folding seat located on the wall opposite controls and mounted 18 inches above the shower floor. **See Figure 6.4.**
2. Grab bars located on walls adjacent to and opposite the seat. Grab bars shall also comply with the diameter, loading and projection requirements of Section 1115B.8. L-shaped shower grab bars shall not be less than 24 inches by 36 inches in length positioned on the wall of the shower. The 36-inch side shall extend on the wall having the shower head and controls. Grab bars shall be mounted 33 inches to 36 inches above the shower floor. **See Figure 6.4.**

Open Showers. Where no separate shower compartments are provided, the shower for persons with disabilities shall be located in a corner with L-shaped grab bars extending along two adjacent walls with a folding seat adjacent to the shower controls. See **Figure 6.5**



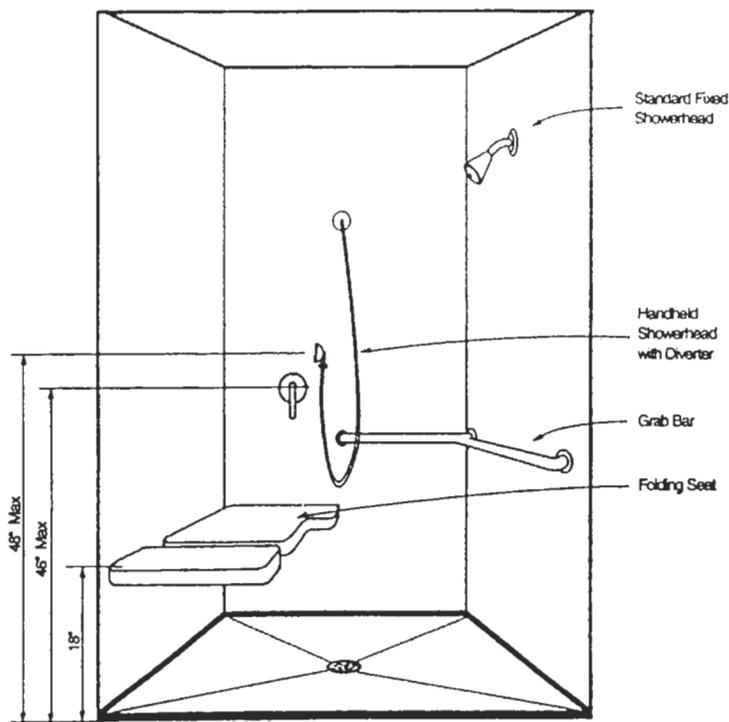
SECTION A-A



PLAN

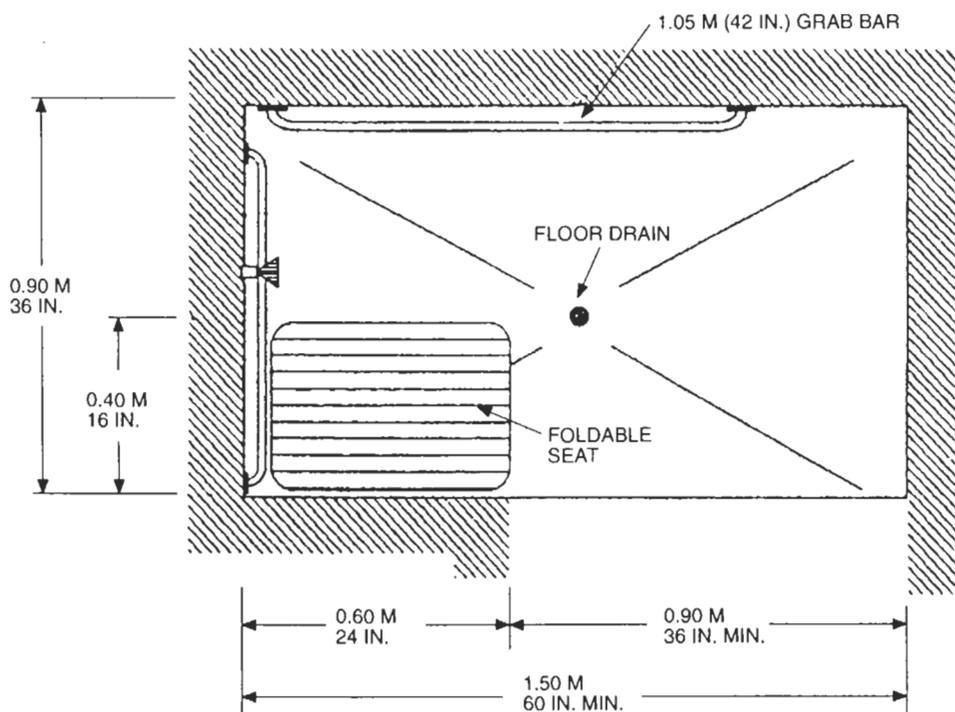
Figure 6.5 OPEN SHOWER

Additional Shower Diagrams



PERSPECTIVE OF ROLL-IN SHOWER—B
42" × 48" CALIFORNIA SIZE

Roll-in-Shower Stall



Open Shower

Grab Bars

- 1109A.5 **Fixtures in Adaptable Dwelling Units.** Grab bars need not be installed in either a bathing or toilet facility within an adaptable dwelling unit provided all structural reinforcements for future installation of grab bars are provided in the appropriate locations in the adjoining walls. The reinforcement shall be of sufficient length to permit the installation of grab bars as specified.
- The reinforced wall shall be capable of supporting a load of at least 250 pounds in conformance with this Section.
- The structural strength of grab bars, tub and shower seats, fasteners, and mounting devices must withstand at least a 250-pound load.
- 3105(b.1)2.H(3)e Grab bars cannot rotate within their fittings.
- 3105(b.1)2.H(4) A grab bar and any wall or surface adjacent to it must be free of any sharp or abrasive elements. Edges must have a minimum radius of 1/8 inch. Grab bar height shall be between 33 - 36 inches above the finished floor.

Toilet Facilities

1109A.3 Water closets in bathrooms required to be accessible shall conform to the provisions of Section 1502, California Plumbing Code, Title 24, California Code of Regulations. The water closet can be located in a space 36 inches in clear width, as long as 48 inches of clear space is provided in front of the water closet. This space may include the maneuverable area under the lavatory. Water closet seats must be at least 15 inches above the floor (See Figure 7.7).

1109A.3 **Exception** In privately-funded multifamily dwelling units, the water closet may be located in a space 48 inches in clear width with 36 inches of clear space provided in front of the water closet.

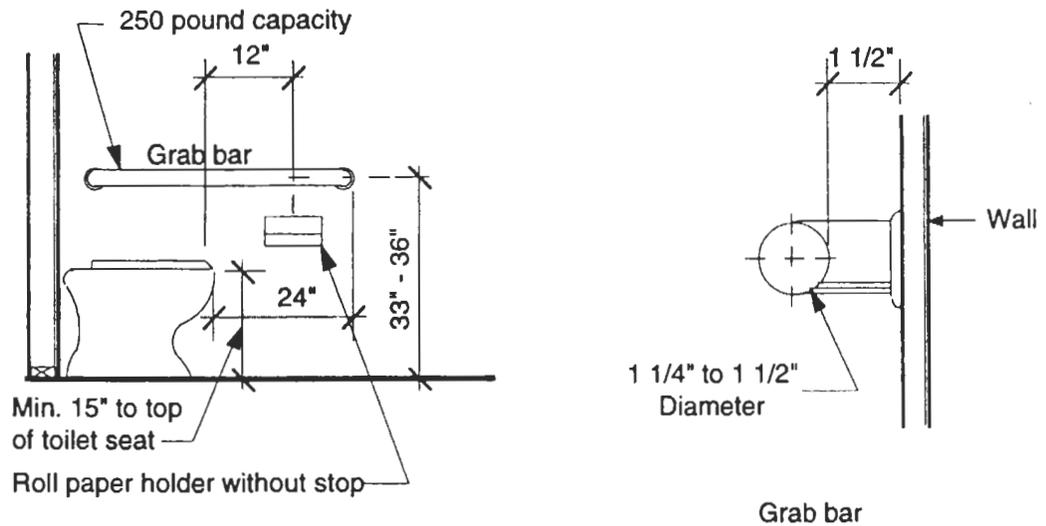


Fig.. 7.7 Toilet facilities