

Introduction

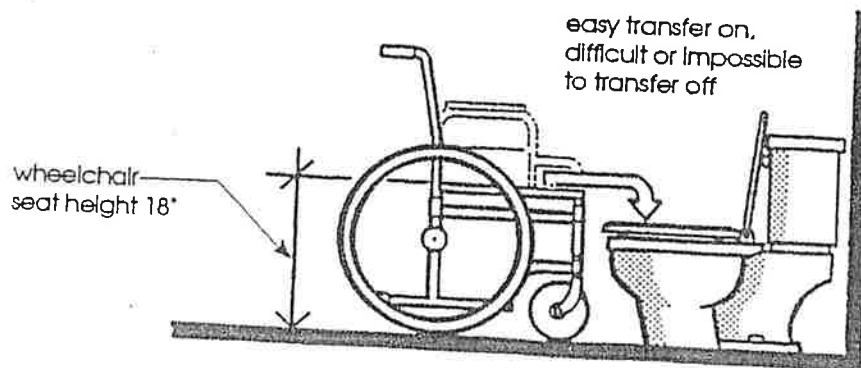
Access to and safe use of toilets* depends on proper seat height, appropriately placed grab bars and toilet paper dispensers, and usable easy-to-reach flush controls. Access is also dependent upon the provision of sufficient and properly located clear floor space to allow approach and transfer onto the toilet. When the toilet is enclosed in a toilet stall, as is the case in multi-fixture, public rest-rooms, clear floor space considerations change and are expanded to include access to the toilet stall itself (see Toilet Stalls and Toilet Rooms in later sections of this manual). Specific information on where accessible toilets must be located in new construction, additions, and renovations (including historic properties) can be found throughout UFAS under provisions for Toilet Rooms.

* Water closet is the technical name for the toilet fixture. For clarity, the more common term, toilet, will be used throughout this manual.

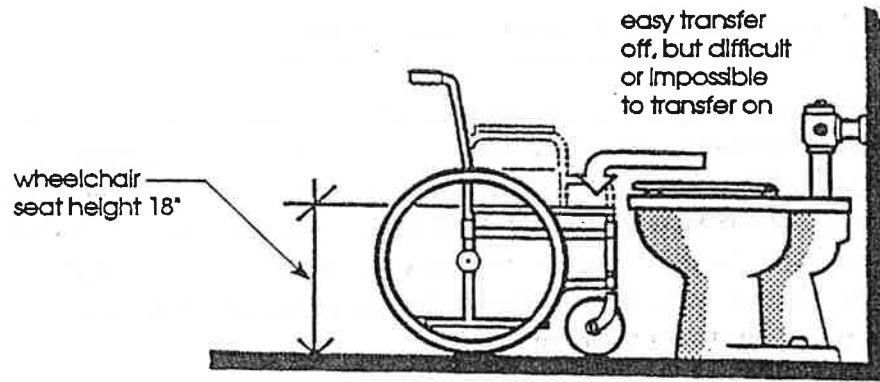
Proper Seat Height

Basic Design Considerations

Seat heights from 17 inches to 19 inches are easier for both standing mobility impaired people and wheelchair users to use. An 18 inch seat height is generally recommended because most wheelchair seats are approximately 18 inches high. The 18 inch seat height is also convenient for people who may have difficulty sitting down and getting up from standard toilets. In addition, toilet seats must not be spring loaded to return to a lifted position.



Seat Height Too Low



Seat Height Too High

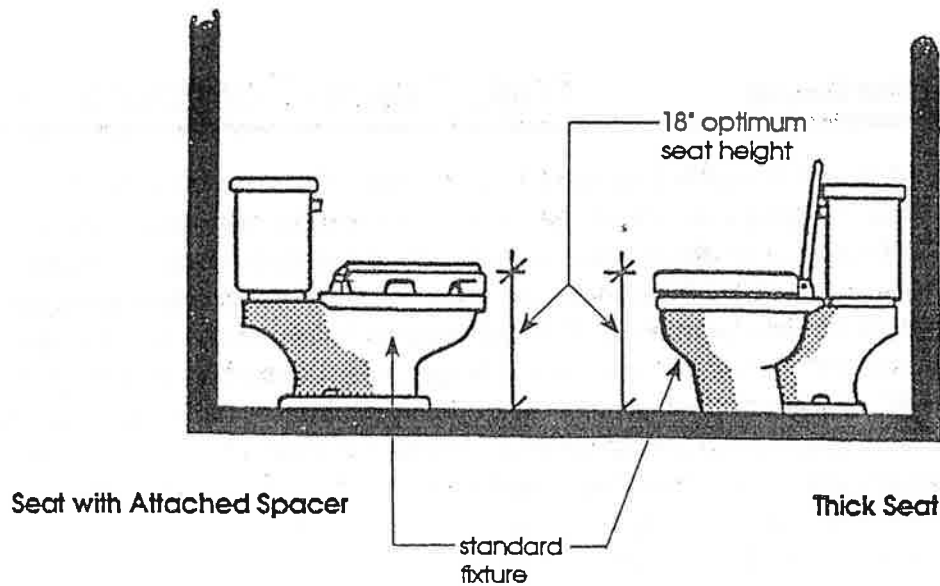
Seat Height Less Than 17 Inches

Problem

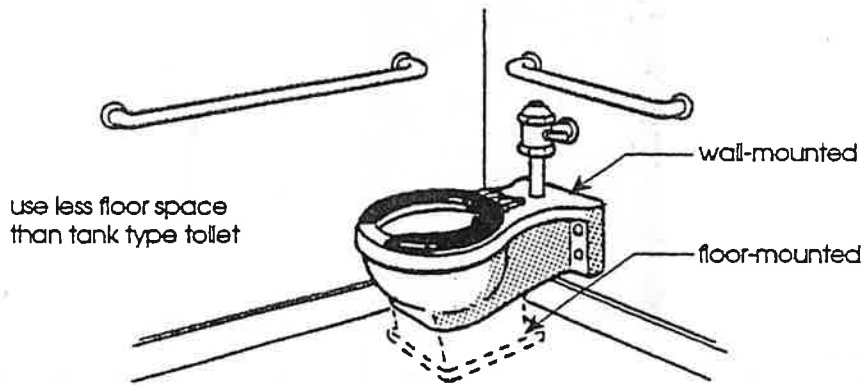
Install Thick Seat or Seat With Spacer

Solution 1

Seat height on both wall and floor-mounted toilets can be adjusted by installing special order "thick seats" or "combination seats with spacers" to raise the seat height to the required level.



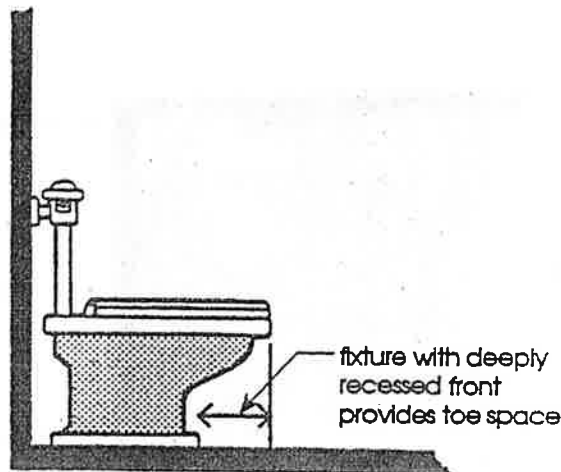
Fixture Types



Flush Valve Type



Tank Type



Fixture with Recessed Front

Insufficient Maneuvering Space at Toilet Fixture

Problem

Relocate Toilet Fixture

Solution

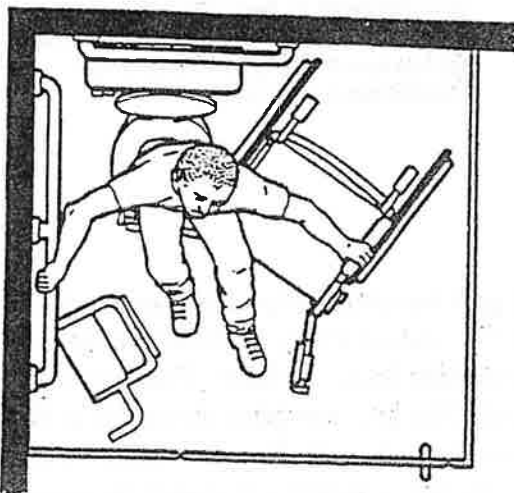
If sufficient space exists in the toilet room to provide the clear space required, then the fixture should be relocated appropriately. If ample space does not exist, then it may be necessary to provide wheelchair accessible toilets in a different space (see Toilet Stalls and Toilet Rooms in later sections of this manual).

Basic Design Considerations

Grab Bars at Toilets

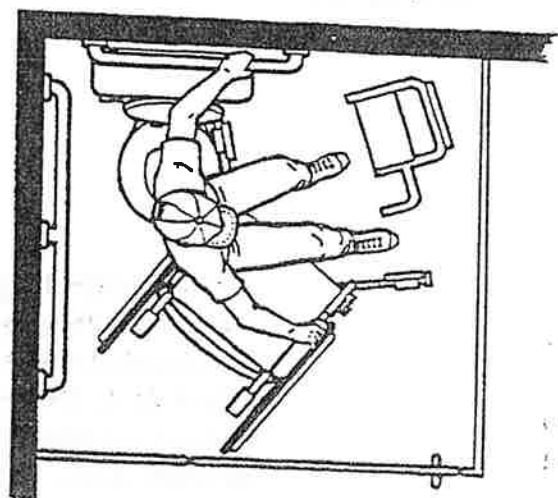
As with all grab bar installations, the general issues of location, secure mounting, appropriate size, and spacing must always be considered (see Unit Three, Performance Specifications and UFAS 4.26, page 45). Grab bars at toilets are strategically located to provide assistance to users during transfers to the toilet (also see UFAS Appendix, Figure A5(a) and (b), page 64).

Transfer Techniques



Diagonal Approach

The chair is placed at a comfortable diagonal angle to the fixture. The armrest on the chair may or may not be removed. The user slides onto the toilet seat using the grab bar and the chair for support.

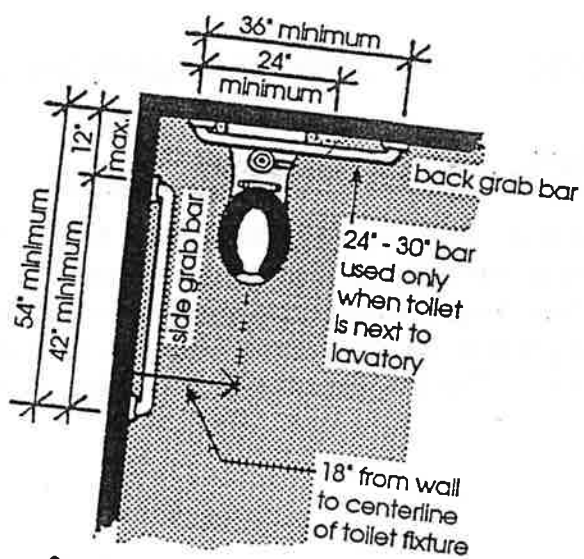


Reverse Diagonal Approach

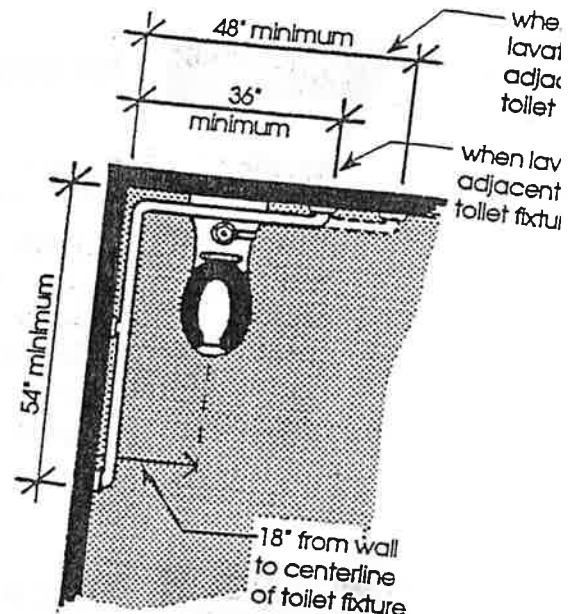
Due to the nature of their disability, many people can only transfer on one side. One of the major advantages of the 60 inch wide stall is that it allows individuals to transfer using either their left or right side, depending upon the approach to the fixture. In the reverse diagonal approach, the chair is placed at a comfortable diagonal position facing the back wall rather than forward. The armrest is removed and the individual slides onto the toilet seat using the rear grab bar and the chair for support.

Grab Bars at Toilets

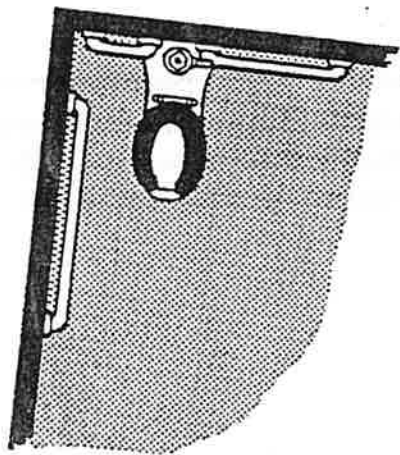
WATER C.



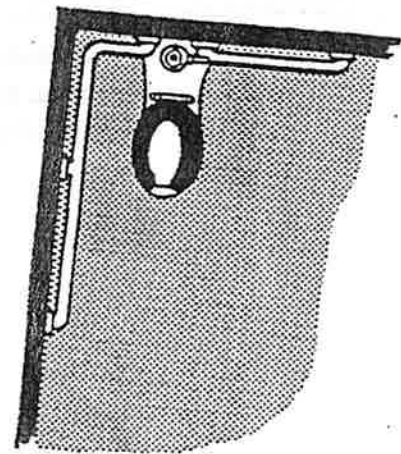
Separate Side and Back Grab Bars



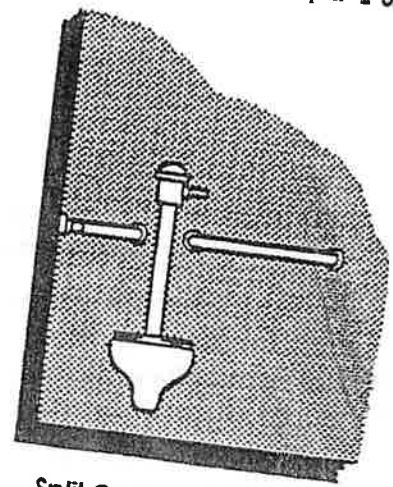
"L-Shaped" Grab Bar



Split Back Grab Bar Plan View

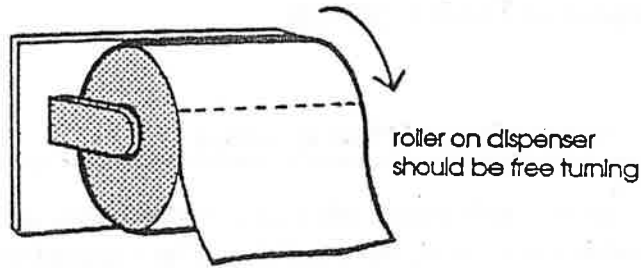


Split "L-Shaped" Grab Bar Plan View



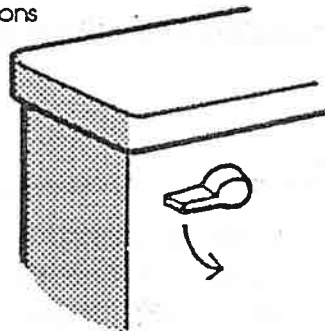
Split Grab Bar Elevation

Toilet paper dispensers must be mounted on the side wall within easy reach and with the horizontal center line no less than 19 inches above the floor. Usually the most convenient location is just below the grab bar but above the height of the toilet seat. Dispensers must allow paper to be removed from the roll easily and should be mounted so that they do not interfere with the use of the grab bar.

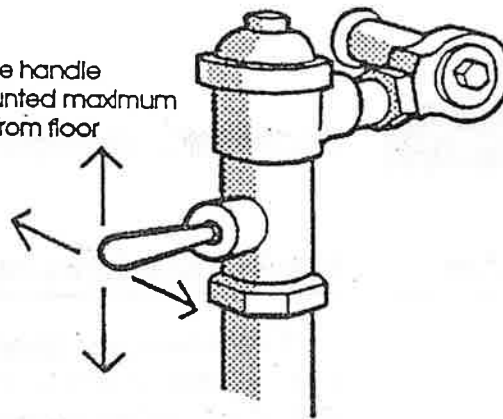


Toilet Paper Dispenser

flush controls should be automatic or easy-to-use levers or push buttons

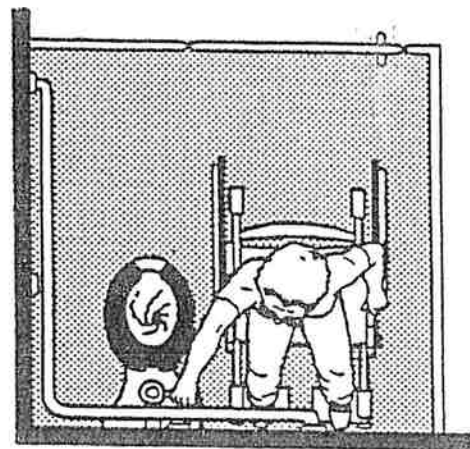
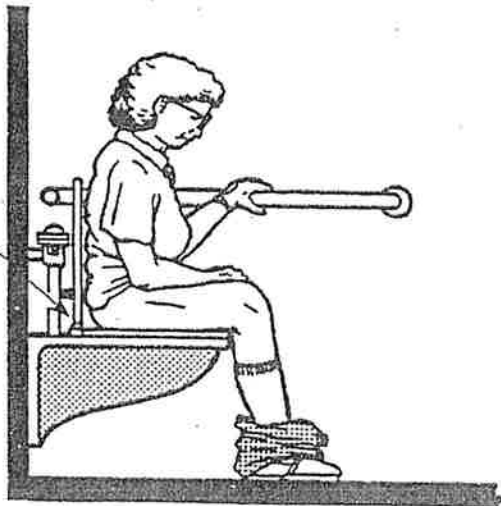


valve handle mounted maximum 44" from floor



Flush Controls

seat lid provides support for user



valve handle must be located to open side of toilet for easy reach

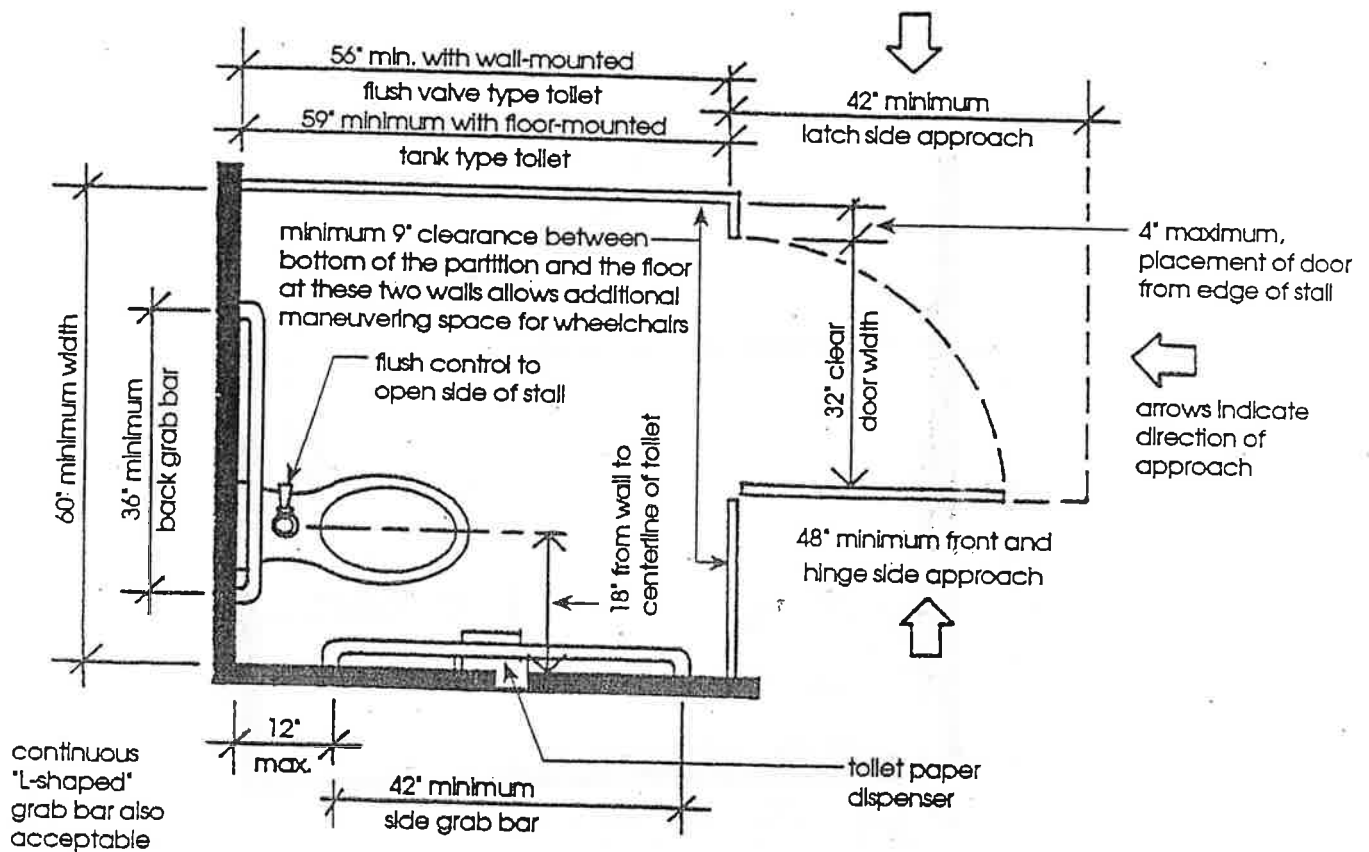
Location of Flush Controls

Reference Index to UFAS Document

Wall-Mounted, Floor-Mounted, Flush Valve and Tank Type Toilets

Primary References	UFAS page #	Secondary References	UFAS page #
<u>Toilet Types/Location</u>			
4.16.1 General/Location	37	4.1 Scope & Technical Requirements for Toilet Rooms	5-6
		4.1.5(3) Additions	11
		4.1.6(3)(c)(I) Alterations	12
		4.1.6(3)(c)(II) Alterations	12
		4.1.6(4)(e) Alterations	13
		4.1.7(2)(c) Historic Preservation	14
		4.22.4 Toilet Rooms/Water Closets	44
		4.23.4 Bathing Facilities/Water Closets	44
<u>Human Factors</u>			
4.16.2 Clear Floor Space	37		
4.16.3 Height	37	A4.16.3 Height	64
4.16.4 Grab Bars	37	4.26 Grab Bars	45
		A4.16.4 Grab Bars	64
<u>Toilet Parts</u>			
4.16.5 Flush Controls	38	4.27.4 Controls and Operating Mechanisms	45
		A4.16.5 Flush Controls	65
4.16.6 Dispensers	38		

The standard stall is designed to provide clear floor space and grab bars to facilitate a variety of transfers (see Grab Bars at Toilets in Toilets section). At least 9 inches of toe clearance under the front partition and one side partition is required for the minimum size standard stall to be fully accessible. If toe clearance cannot be provided then the stall depth must be increased to at least 60 inches.



Standard 60 Inch Stall

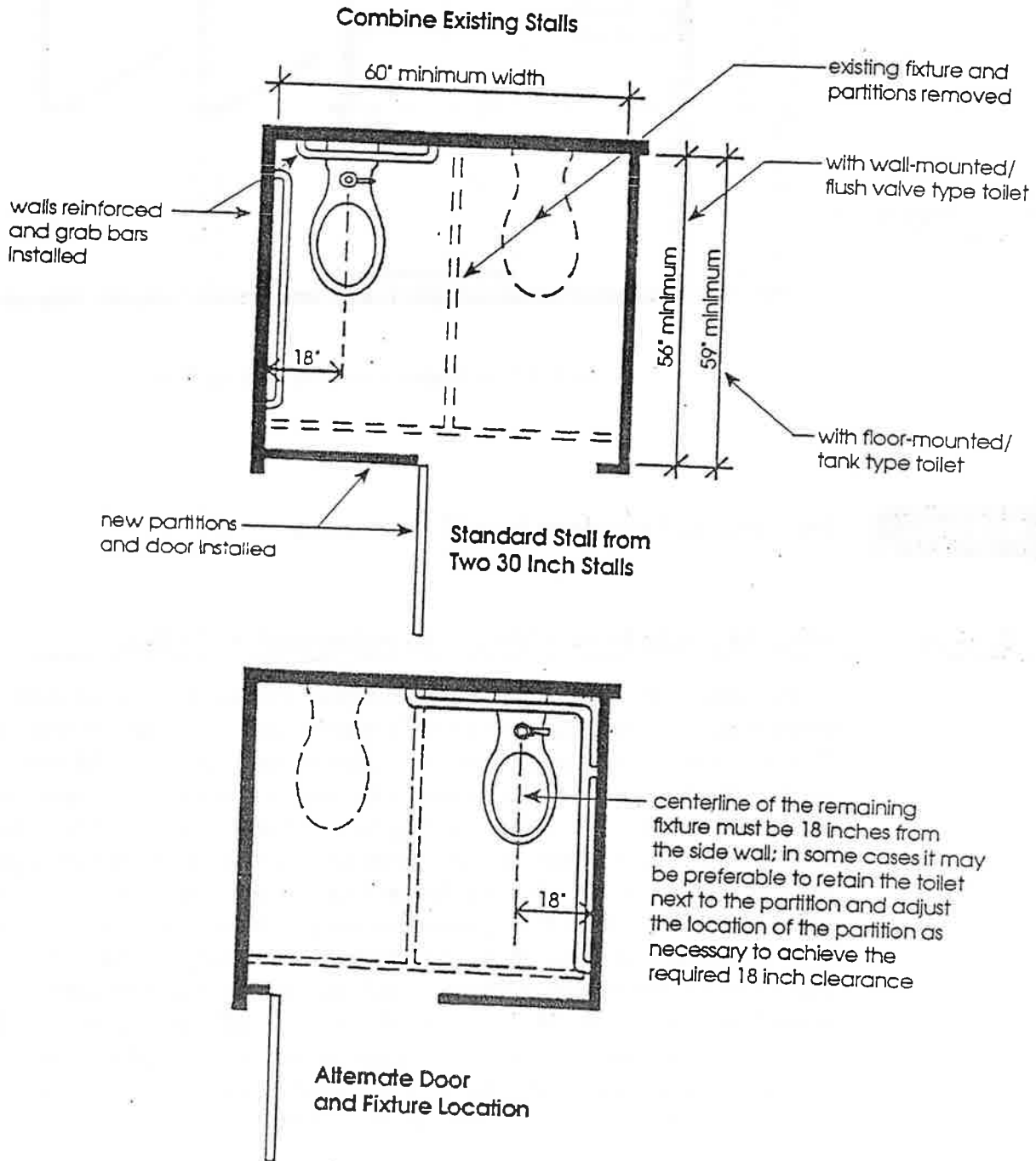
No Standard Wheelchair Accessible Stall in Existing Toilet Room

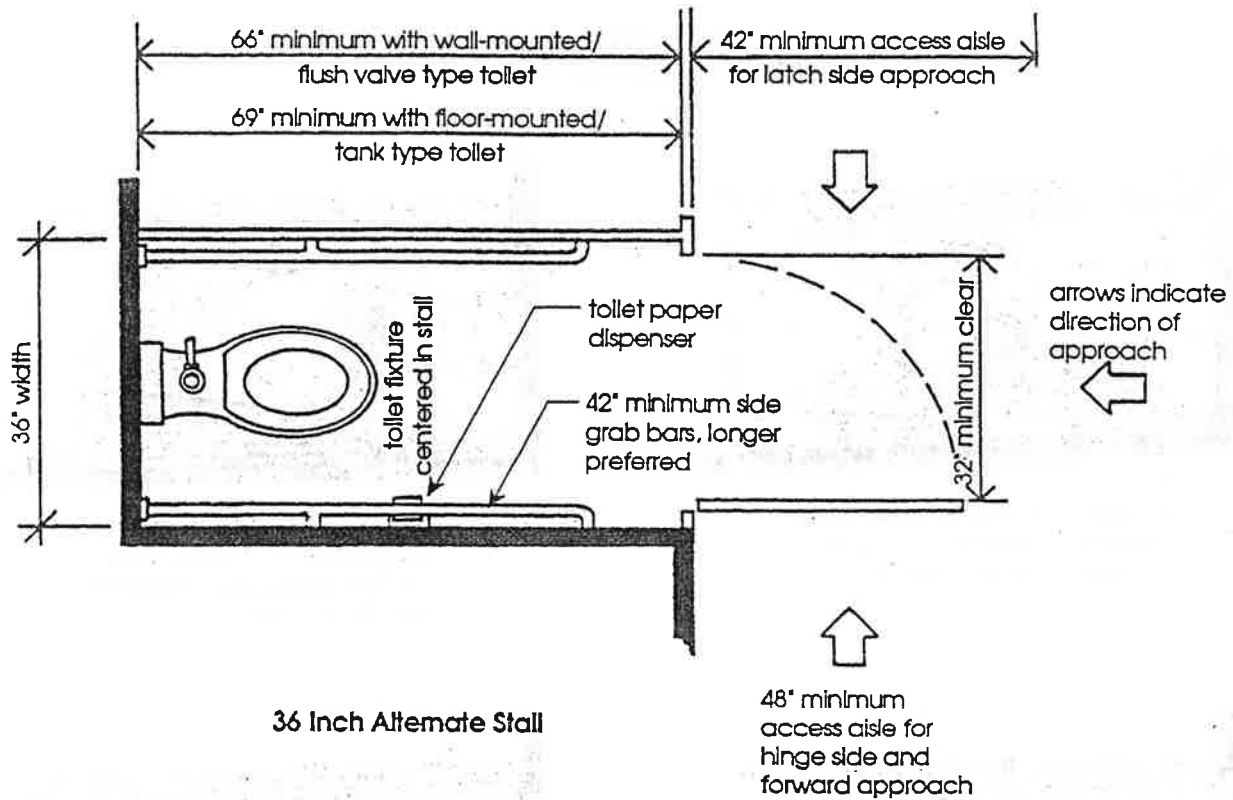
Problem

Combine Two Existing Stalls to Create Standard 60 Inch Stall

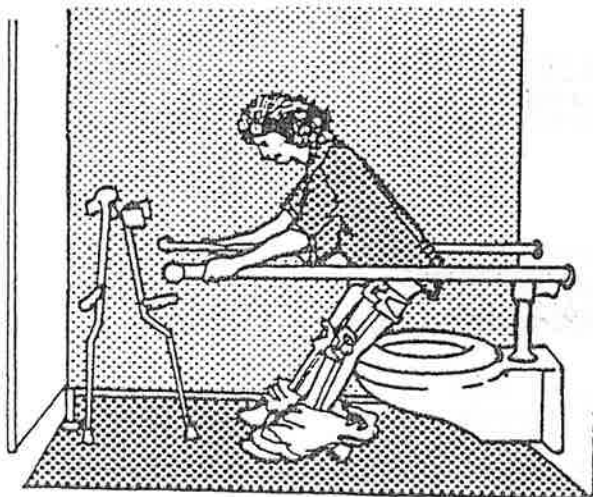
Solution

Many older facilities were constructed without provisions for wheelchair access and lack accessible toilet facilities. In these situations, a common solution is to combine two existing 30 inch stalls by removing one toilet, rearranging the partitions, installing grab bars, and replacing the stall door. This solution is only possible when the number of fixtures remaining after renovation meet the minimum plumbing code requirements (see Unit Five: Toilet Rooms for more options).





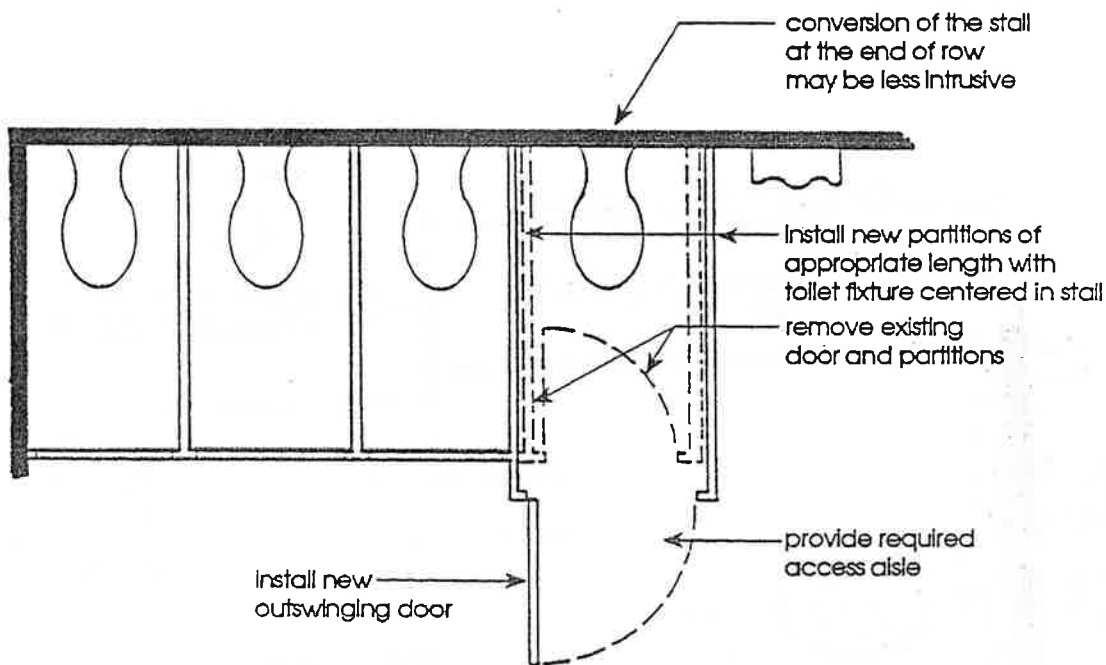
The 36 inch and 48 inch alternate toilet stalls must be 66 inches deep if a wall-mounted/flush valve type toilet is used and 69 inches deep if a floor-mounted/tank type toilet is used. Grab bars must be installed as shown in UFAS Figure 30(b). If approach to the stall door is from the latch side, the access aisle must be a minimum of 42 inches wide. If approach is from the hinge side or front of the door, a minimum of 48 inches must be allowed. Spring-loaded hinges, which pull the door closed automatically, provide privacy for wheelchair users who may be able to get into the stall but not reach behind themselves to fasten the latch.



36" Alternate Stall Ambulatory User

The 36 inch wide toilet stall with two long grab bars was originally designed for people who have difficulty sitting down and rising again to a standing position. The stall is an excellent design for people with arthritis or those who walk with braces or crutches because they can use both grab bars to lean on and to pull on while sitting down or getting up.

Most stalls in existing toilet rooms are approximately 30 inches wide and do not easily lend themselves to conversion to the 36 inch width required by the alternate stall. Although the 36 inch width can be achieved by simply moving one of the side partitions, this solution is not acceptable because it makes the adjacent stall very cramped and the toilet fixture is off center in each stall. If space exists at the end of the row, both partitions can be adjusted/moved to create a 36 inch width stall or 48 inch minimum width stall, with the toilet fixture located 18 inches from the side partition. In most cases the 36 inch and 48 inch alternate stalls will need to be deeper than existing stalls and the protrusion into circulation space may be unacceptable, especially in small toilet rooms.



Conversion of 30 Inch to Alternate 36 Inch Stall