11 Washroom Facilities

11.1 General

Major problems are frequently encountered by persons with disabilities, especially persons using wheelchairs, on entering and leaving washrooms. Doors that are heavy or too narrow, vestibules with a double set of doors that can be difficult to negotiate or a privacy wall can make a washroom completely inaccessible. Entrances should be carefully designed to meet the needs of persons with disabilities. Within the washroom sufficient space is required to allow persons in wheelchairs to move freely to and from the various fixtures. (Figure 11.1) For detailed dimensions for reaching/grasping refer to Section 2.7.

At least one washroom shall be provided on each wing or each floor which has been designed to meet the needs of persons with disabilities. In existing buildings, modifications are recommended to provide bathing / showering facilities on each wing or floor. A system may be developed in which alternate wings or floors contain the modified bathing facilities. In this way, each floor will be provided with accessible facilities. In new construction, washrooms and bathing facilities designed to meet the needs of persons with disabilities should be provided on each wing of every floor.

The toilet paper dispenser should be located so as not to interfere with the grab bars; under the grab bar and in front of the toilet is a convenient location.

11.2 Washroom Identification

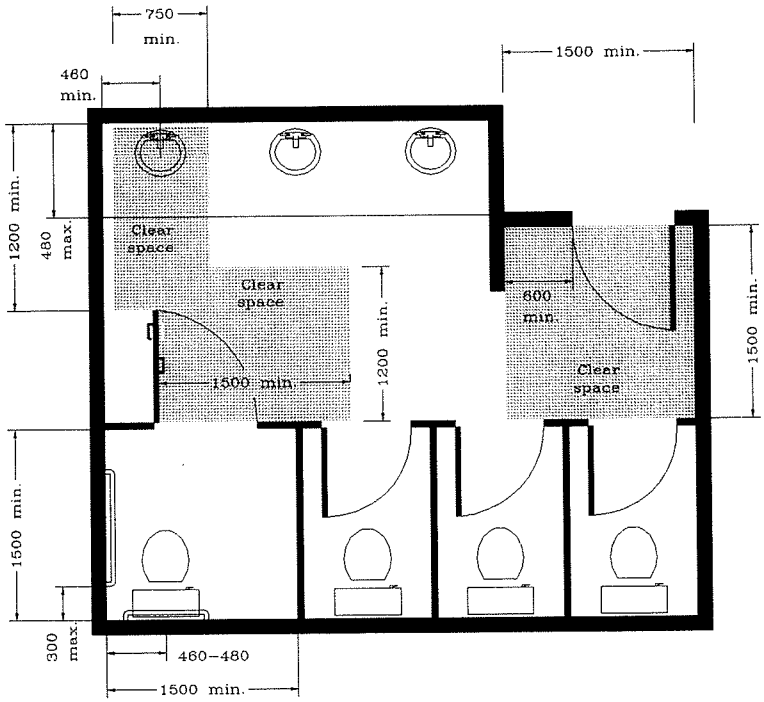
Signage for accessible washrooms shall be tactile and well-contrasting and shall comply with Section 6 Signage.

11.3 Toilet Stalls (OBC 3.7.3.8)

Toilet stalls shall
a) have internal dimensions at least 1500 × 1500 mm (Figure 11.2);
b) have a toilet complying with Clause 11.4; and
c) be equipped with a coat hook mounted not more than 1400 mm **(1200 mm preferred)** from the floor on a side wall and projecting not more than 40 mm from the wall.

d) have a clearance of at least 1700 mm between the outside of the stall face and the face of an in-swinging washroom door and 1400 mm between the outside of the stall face and any wall mounted fixture or other obstruction (See Figure 11.3).

11.3.1 Toilet stall doors shall
a) be capable of being locked from the inside by a device that is operable with one hand, does not require fine finger control, tight grasping, pinching or twisting of the wrist and requires a force not more than 22n to activate (e.g. sliding bolt or lever).
b) provide a clear opening at least 810 mm with the door in the open position;



Example of an Accessible Washroom Layout

FIGURE 11.1

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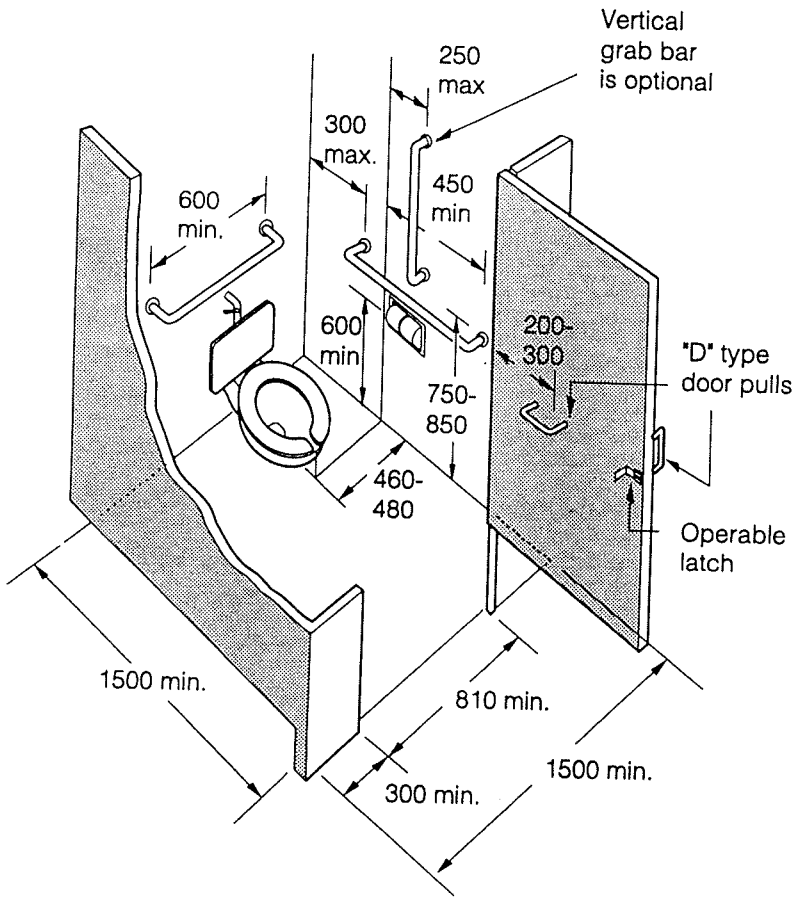

Toilet Stall

FIGURE 11.2

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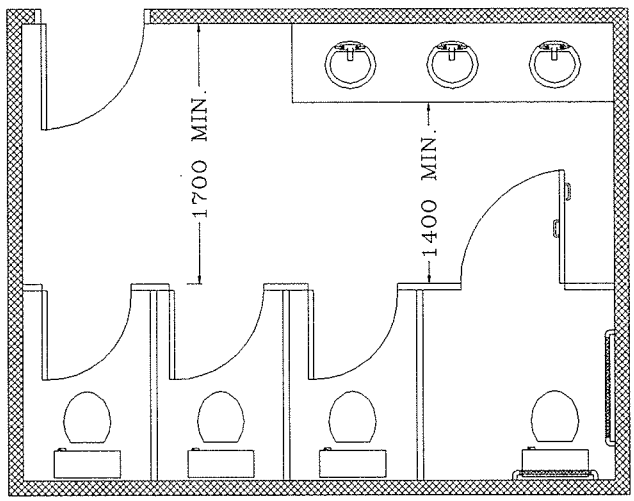

Toilet Stall Clearances

FIGURE 11.3

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c) swing outward, unless additional space is provided within the stall for the door swing;
d) be provided with a "D" type door pull, at least 140 mm long, on the inside of an out-swinging door, located so that the centre-line is between 200 and 300 mm from the hinged side of the door (Figure 11.2);
e) be provided with a "D" type door pull at least 140 mm long, on the outside, near the latch side of the door; and
f) be provided with a door having spring-type or gravity hinges so that the door closes automatically.

11.4 **Toilets**

Wall-hung toilets are preferred because they provide additional space at toe level. Preferences for toilet seat heights vary considerably. Higher seats may be an advantage to some ambulatory disabled persons but a disadvantage to persons in wheelchairs. Toilet seats 400 to 460 mm high offer a reasonable compromise. Thick seats and filler rings are available to adapt standard fixtures to these requirements. A toilet seat lid is an inexpensive means of providing a back support.

Higher seats may be an advantage to some ambulatory persons with disabilities but a disadvantage to persons in wheelchairs. Toilet seats 400 to 460 mm high offer a reasonable compromise.

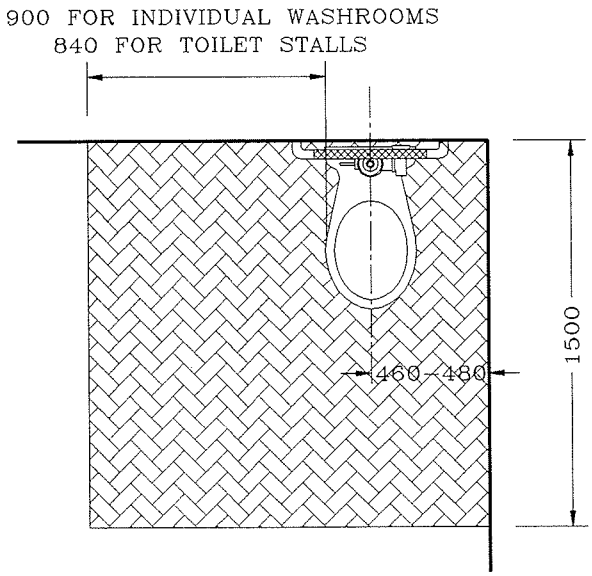
Toilets shall have (OBC 3.7.3.9)
a) the top of the seat between 407 and 445 mm (OBC 3.7.3.9) (CSA allows up to 460 mm) from the floor;

b) no spring-activated seat *(The seat should also be secured so that it does not move from side to side as this can cause someone to fall while transferring.)*;
c) a back support where there is no seat lid or tank. *A back support reduces the chance of imbalance or injury caused by leaning against exposed valves or pipes. The back support should be mounted so that it does not protrude over the seat.*; and
d) the tank top securely attached.

11.4.1 Toilets shall be located between 460 and 480 mm from the centre-line to the adjacent wall and shall have 810 mm clear space provided on the transfer side (See Figure 11.4).

11.4.2 Flush controls shall be
a) hand operated on the transfer side of the toilet; or
b) be electronically / automatically controlled.

Flush valves and related plumbing can be located behind walls, beside the toilet or behind the toilet seat. Flush controls for tank-type toilets have a standard mounting location on the left side of the tank (facing the tank). Tanks with controls mounted on the right side are often available by special order.



Clear Area Required
for Access Around the Toilet

FIGURE 11.4

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11.4.3 Although the OBC allows both an angled grab bar and an L-shaped configuration (OBC 3.7.3.8.(1d)(i)) (as in Figure 11.5), many people with disabilities prefer the L-shaped configuration. **It is preferred that toilets be served by horizontal or L-shaped grab bars** which shall

a) comply with Clause 11.11;
b) be mounted at a height between 750 and 850 mm from the floor level;
c) have one mounted on the side wall closest to the toilet extending from a point not more than 300 mm from the rear wall to at least 450 mm in front of the toilet seat; and (see Figure 11.6)
d) have the other mounted on the wall behind the toilet and be at least 600 mm long (Figure 11.6). *The stall size requirements do not preclude the addition of vertical grab bars. Flip-up grab bars can be used on the transfer side of the toilet. The toilet paper dispenser should be located so as not to interfere with the grab bar: a convenient location is under the grab bar. The napkin disposal should not interfere with the grab bar or transfer space beside the toilet.*; and
e) be L-shaped and positioned to comply with Figure 11.6.

11.5 **Urinals**

Urinals shall

a) be stall or wall-hung type with a rim not more than 430 mm from the floor;
b) have a minimum clear floor space 750 mm wide X 1200 mm deep without steps in front;
c) not have privacy shields extending beyond the front edge of the urinal rim if shields allow less than 750 mm clear width; and
d) **be identified by a colour contrasted, raised, vertical marker-strip on the wall directly above the urinal.** *The marker-strip will facilitate use of the urinal by blind or visually impaired persons.*

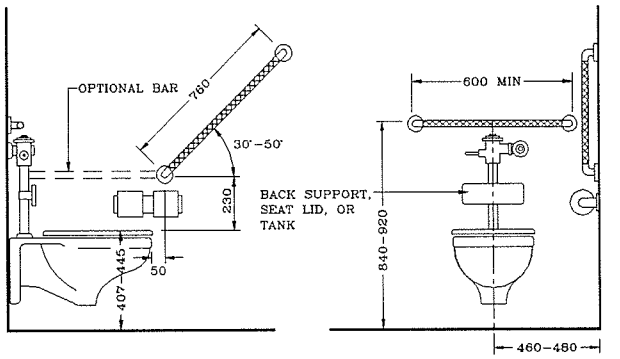
11.5.1 Flush controls shall be

a) hand operated, and
    i) not require two hands, tight grasping, pinching or twisting;
    ii) located not more than 1200 mm from the floor; or
b) be electronically / automatically controlled.

11.6 **Lavatories**

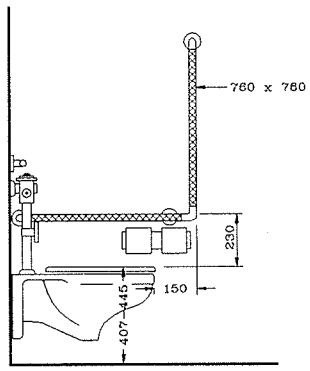
Clearance under a lavatory is required for wheelchair access. The drain pipes should be offset to the rear to ensure that the knee-space is clear of obstructions. If this is not possible, the pipes should be insulated to prevent heat injuries to the legs. Lavatories on pedestals are not recommended.

It is desirable that lavatories be located in a vanity counter. However, if that is not possible, a shelf should be provided at counter level.



SIDE ELEVATION A

FRONT ELEVATION



GRAB BAR CONFIGURATIONS TO MEET ONTARIO BUILDING CODE 1990 REQUIREMENTS. SIDE ELEVATION B IS RECOMMENDED.

SIDE ELEVATION B

OBC Grab Bar Configurations

FIGURE 11.5

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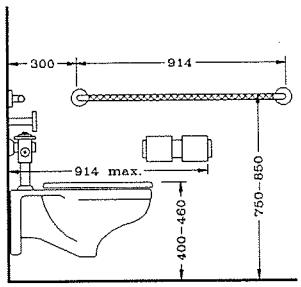
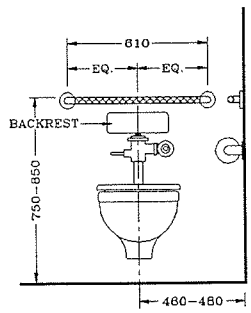
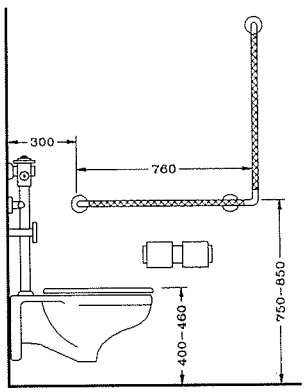


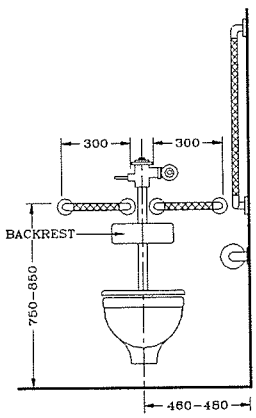
SIDE ELEVATION



FRONT ELEVATION



SIDE ELEVATION



FRONT ELEVATION

Recommended Grab Bar Configurations

FIGURE 11.6

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Lavatories shall (OBC 3.7.3.10)

a) be mounted so that the minimum distance between the centre-line of the fixture and the side wall is 460 mm;

b) have the top located between 820 and 860 mm from the floor;

c) have a knee space at least 750 mm wide, 200 mm deep and 680 mm high with an additional toe space at least 750 mm wide, 230 mm deep and 230 mm high;

d) have a minimum clear floor space 750 mm wide and 1200 mm deep located in front, of which a maximum of 480 mm in depth may be under the lavatory; and

e) have hot water and drain pipes insulated if they abut the clearances noted above. (See Figure 11.7.)

11.6.1 The front apron of a vanity shall have a minimum clearance 750 mm wide and 720 mm high. A shelf should be provided where a lavatory is not located in a vanity counter. Shelves, etc. should be located so that they do not protrude into the path of travel more than 80 mm which creates a hazard, especially for persons with visual impairments.

11.6.2 Faucets and other controls shall

a) have handles of the lever type (not self-closing) operable with a closed fist; or

b) be electronically controlled.

Faucets with lever handles allow use with a minimum of pressure. Short levered handles are not recommended. Faucets for lavatories, tubs, and showers should be colour-coded (red and blue) where possible.

11.6.3 See Section 11.11 water temperature requirements.

11.7 **Washroom Accessories**

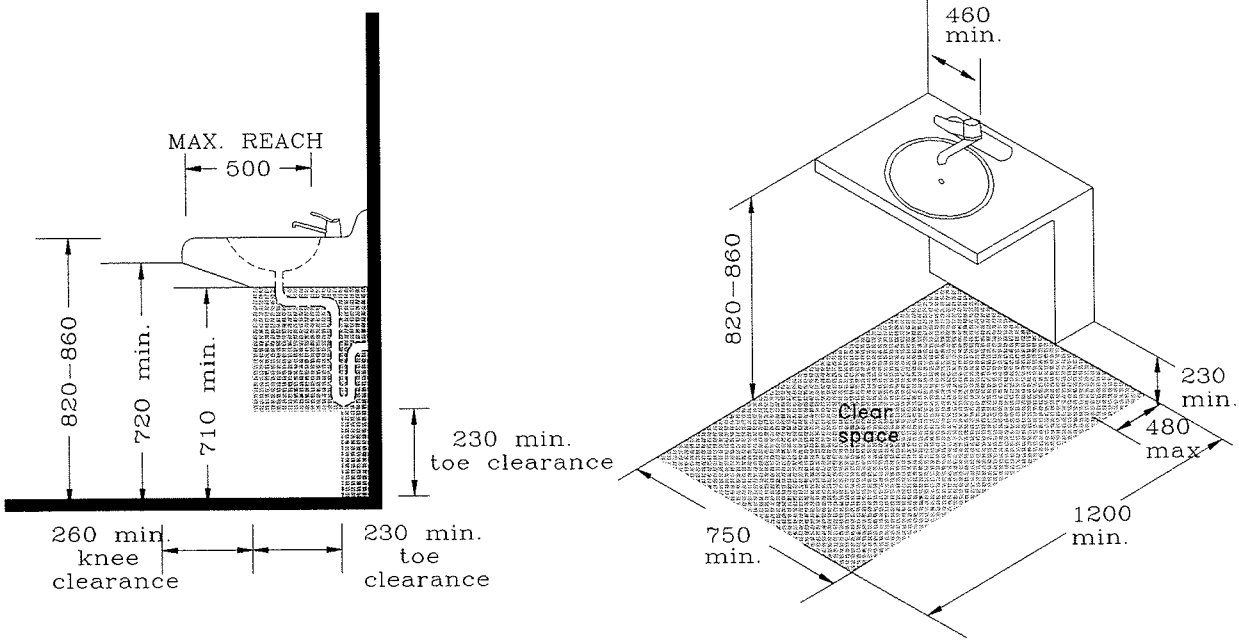
Accessories such as soap and towel dispensers, hot air blowers and waste receptacles should not protrude into the path of travel but should be placed close to the accessible lavatory, to assist a person who is blind in locating them.

At least one of each type of the washroom accessory provided shall have operable parts and controls between 900 and 1200 mm from the floor. (OBC 3.7.3.10.(1b)) (See Figure 11.8.)

11.7.1 Where mirrors are provided, at least one shall be mounted with its bottom edge not more than 1000 mm from the floor.

11.8 **Individual Washrooms**

An individual washroom (sometimes referred to as unisex, special, or unit washroom) can be used by a variety of persons, including a person with a disability with an attendant or a parent with a child. It may be desirable in certain locations, (Figure 11.9) to equip this type of washroom with an emergency call switch that activates an alarm. **Automatic door openers should be provided.**



Lavatory Clearances

FIGURE 11.7

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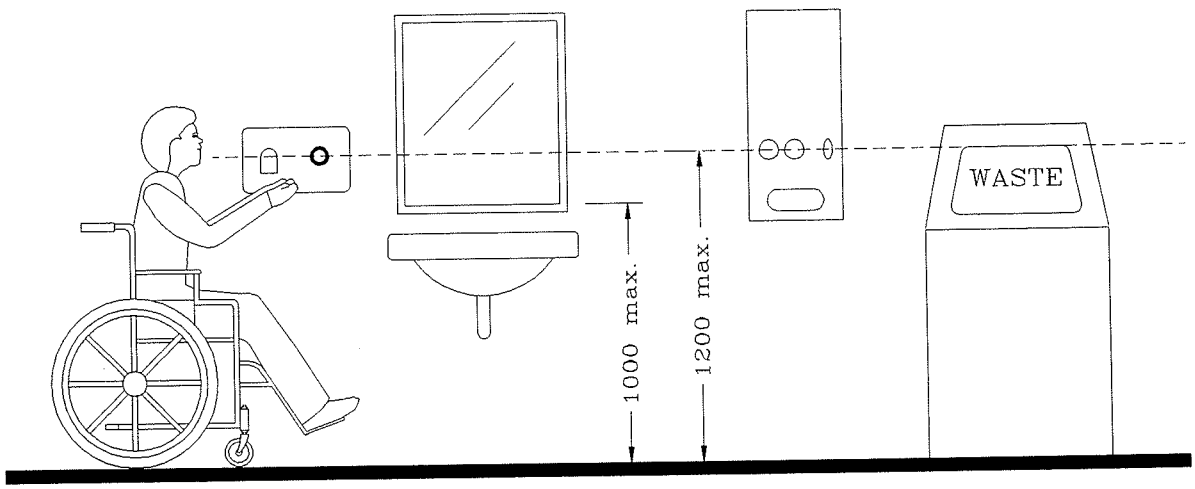
Accessories such as soap, towel dispensers and waste receptacles should not protrude into the path of travel but should be placed in close proximity to the accessible lavatory, to avoid having a person wheeling a chair with wet hands.



Washroom Accessories

FIGURE 11.8

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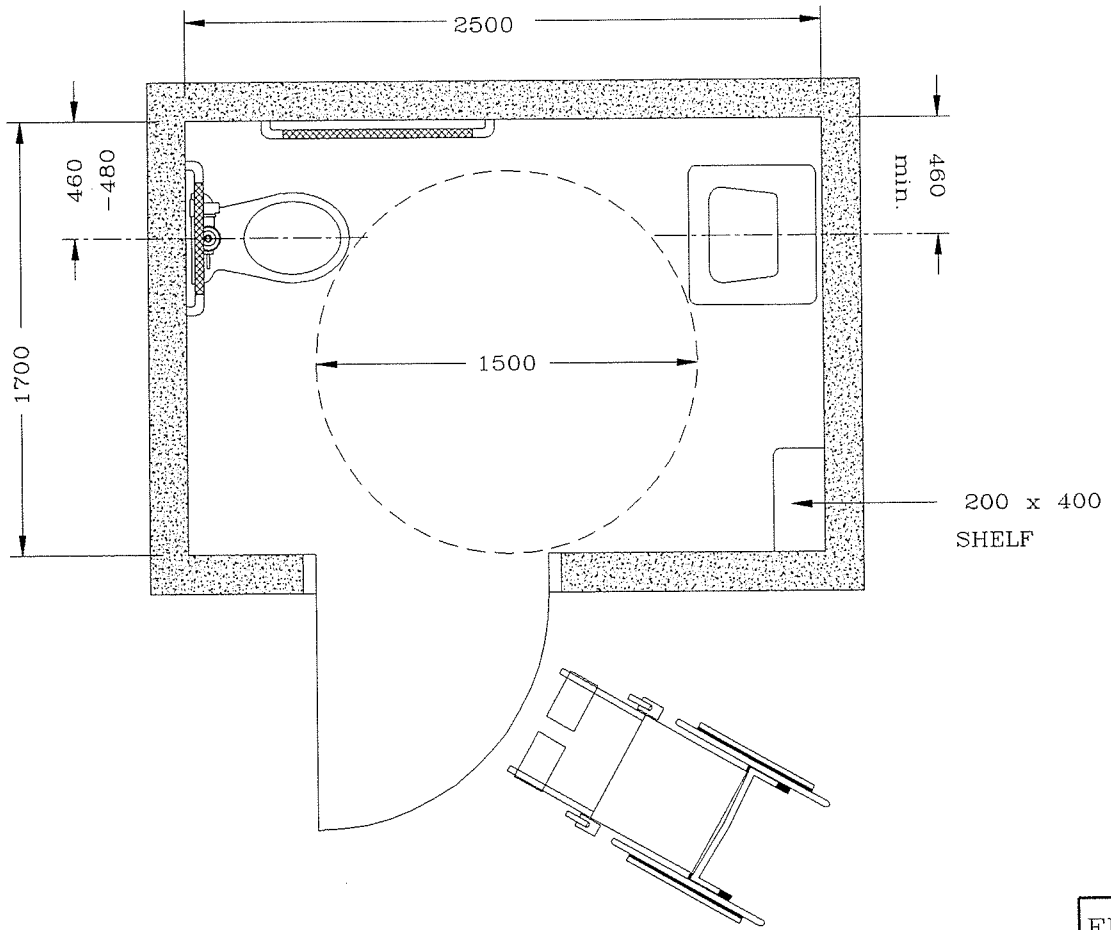

Sample Washroom Layout

FIGURE 11.9

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Where a washroom is provided for the use of persons of both sexes in lieu of facilities for persons with disabilities in washrooms for general public, (OBC 3.7.3.11.(1)) it shall

a) be provided on the same floor level within 45 m of washrooms describe previously;
b) be equipped with a tactile well-contrasted sign on the door;
c) have a floor area not less than 3.5 m^2 with no dimension between opposite walls less than 1700 mm;
d) have a clear space of at least 900 mm wide adjacent to the toilet;
e) have a toilet complying with Clause 11.4;
f) have a lavatory complying with the requirements of Clause 11.6;
g) have washroom accessories complying with Clause 11.7;
h) be equipped with a shelf or counter at least 200 X 400 mm;
i) be equipped with a coat hook mounted not more than 1400 mm **(1200 mm preferred)** from the floor on a side wall and projecting not more than 40 mm from the wall; and
j) be provided with spring-type or gravity hinges so that the door closes automatically; and be operable from the outside under emergency conditions.

11.9 **Bathtubs**

A clear floor space at least 750 mm wide shall be provided in front of the bathtub, and the lavatory can encroach a maximum of 300 mm into this space providing there is clear knee and toe space under the lavatory. (See Figure 11.10)

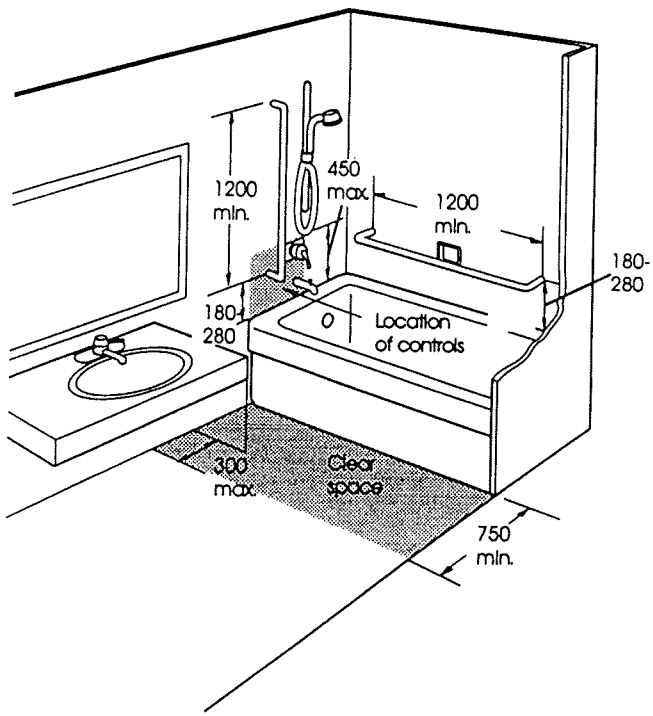
11.9.1 Grab bars shall
a) comply with Clause 11.11;
b) be at least 1200 mm long, located horizontally along the length of the bathtub, 180-280 mm above the bathtub rim; and
c) be at least 1200 mm long, located vertically at the foot end of the bathtub adjacent to the clear floor space with the lower end 180-280 mm above the bathtub rim. (Figure 11.10)

Care should be taken to ensure that the vertical grab bar does not interfere with the shower curtain. Grab bar dimensions given should be measured to the centre-line.

11.9.2 Faucets and other controls shall
a) comply with Clause 11.10.3;
b) be located at the foot end of the bathtub between the centre-line of the bathtub and the clear floor space; and
c) be not more than 450 mm above the bathtub rim.

11.9.3 A shower head complying with Clause 11.10.4 shall be provided.

11.9.4 Enclosures for bathtubs shall not
a) obstruct controls;
b) interfere with a person transferring from a wheelchair; or
c) have tracks mounted on the bathtub rim.



Bathtubs

FIGURE 11.10

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It is desirable to have a seat 400 mm deep across the width of the bathtub located at the end of the bathtub to allow easier access.

ALL

11.9.5 The floor of the tub and tub room shall be slip-resistant. (See Table 2.1 for additional guidance on slip resistance.)

11.10 **Shower Stalls**

Roll-in shower stalls accommodate persons who prefer to remain in a wheelchair while taking a shower. Shower stalls with a seat accommodate persons who prefer to transfer from a wheelchair to a fixed seat in the shower stall or persons who need to be seated while showering.

11.10.1 The minimum clear floor space in front of the shower entrance shall be 900 × 1200 mm with the 1200 mm dimension parallel to the shower entrance.

11.10.2 **Roll-In Shower Stalls**

At least one roll-in shower should be provided on each floor of a residence where an accessible room is located. Roll-in shower stalls shall have interior dimensions of at least 900 × 1500 mm. (OBC 3.7.3.12.(1a)) (Figure 11.11)

Grab bars for roll-in shower stalls shall
a) comply with the requirements of Clause 11.11;
b) be one L-shaped bar or two grab bars in L-shaped configuration; and
c) be at least 750 × 900 mm with the 900 mm arm set horizontally between 700 and 800 mm from the shower floor. (Figure 11.11)

Controls for roll-in shower stalls shall be mounted on the long wall above the grab bar, not more than 1200 mm from the floor.

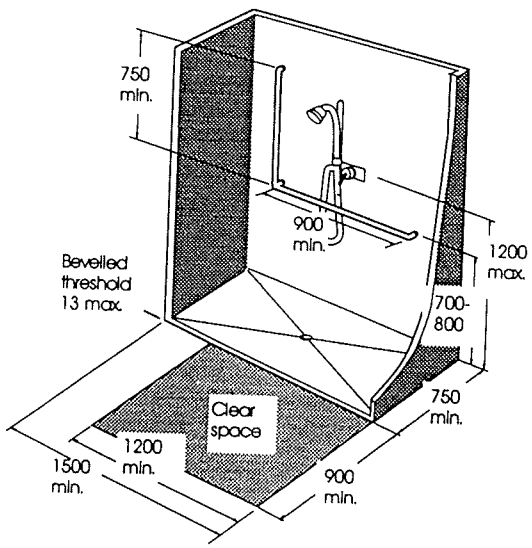
Curbs for roll-in shower stalls shall be 6 to 13 mm high, bevelled at a slope of 1:2. (OBC 3.7.3.12.(1d)). 0-6 mm is preferred if the shower has positive drainage.

11.10.3 **Shower Stalls with Seat**

A seat that folds to a vertical position when not in use will allow people to use the shower in a seated or standing position. A seat of a colour that contrasts with surrounding surfaces improves safety for people with visual impairments. Consideration should be given to providing some larger shower stalls to accommodate people who require more room.

Shower stalls with a seat shall have interior dimensions at least 900 × 900 mm. (Figure 11.12).

In shower stalls with a seat, the seat shall
a) be slip-resistant;
b) be on the wall opposite the controls;



Roll–In Shower Stall

FIGURE 11.11

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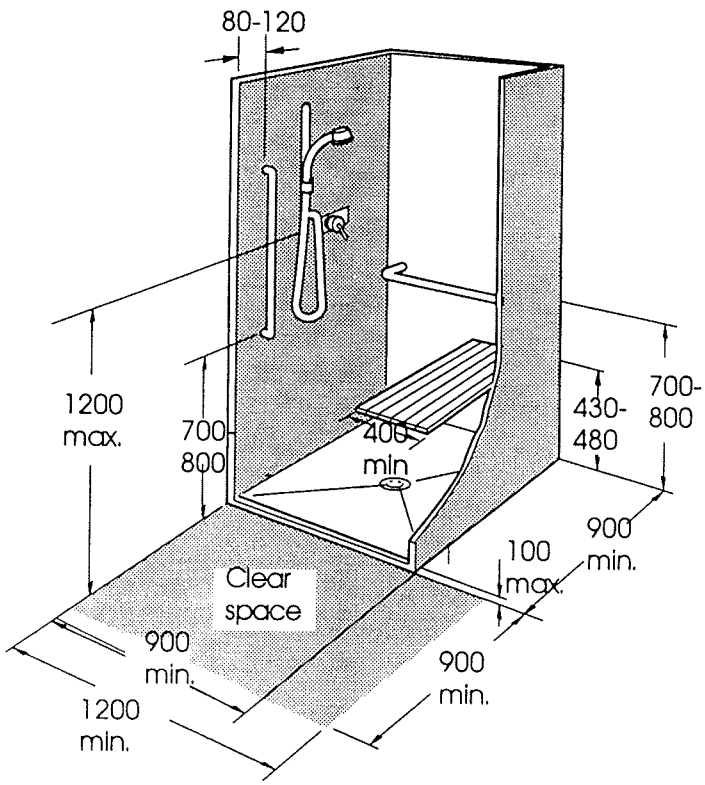

Shower Stall with Seat

FIGURE 11.12

DRAWING BY:
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c) be a minimum of 400 mm wide extending the full depth of the stall, less space allowed for a shower curtain; and
d) have its top 430-480 mm from the floor.

Grab bars in shower stalls with a seat shall
a) comply with the requirements of Clause 11.11;
b) have one grab bar at least 750 mm long installed horizontally on the back wall between 700 and 800 mm from the shower floor (Figure 11.12); and
c) have another grab bar at least 750 mm long installed vertically 80-120 mm from the front edge starting between 700 and 800 mm from the floor. (Figure 11.12.)

For shower stalls with a seat, all controls, faucets and the shower unit shall be
a) mounted on the wall opposite the seat not more than 1200 mm from the floor; and
b) the shower head should comply with Section 11.10.5.
c) accessible from outside the stall.

Curbs in shower stalls with a seat shall not be higher than 100 mm. (Figure 11.12) **Curb colour should contrast with the flooring colour to reduce the danger of tripping.**

11.10.4 Faucets and other controls shall be hand operated or electronically controlled. Hand-operated controls shall
a) be operable with one hand;
b) require no tight grasping, pinching or twisting of the wrist; and
c) require a force less than 22 N to activate.

11.10.5 A shower head shall
a) be of the handheld type;
b) be provided with a flexible hose not less than 1500 mm long; and
c) allow use in a fixed position.

Where the shower head is mounted on a vertical bar, the bar shall be installed so as not to obstruct the use of grab bars. Two hooks should be provided to allow people to mount the shower for either a standing or sitting location.

11.10.6 Enclosures for shower stalls shall not obstruct controls or obstruct transfers from wheelchairs onto shower seats.

11.10.7 The floor of the shower shall be slip-resistant. (See Table 2.1 for additional guidance on slip resistance.)

11.11 Water Temperature

Temperature of the water supplied to lavatories, tubs and showers shall be controlled by a pressure-equalizing valve or by an automatic thermostatically controlled valve to prevent

people with limited heat sensation from inadvertently burning themselves.

11.12 **Grab Bars**

People with disabilities often rely on grab bars for support and stabilization during transfers. The OBC specifies that either an angled grab bar or an L-shaped configuration be provided (Figure 11.5). Many people prefer the L-shaped or combination of horizontal and vertical grab bars. (Figure 11.6)

Grab bars shall
a) be slip-resistant;
b) have a diameter 30-40 mm, or a shape that provides an equivalent gripping surface;
c) have a space of 35-45 mm between the wall and the grab bar where mounted adjacent to a wall.

11.12.1 Grab bars shall be installed to resist a force at least 1.3 kN applied vertically or horizontally.

11.12.2 A grab bar and adjacent surfaces shall be free of any sharp or abrasive elements.

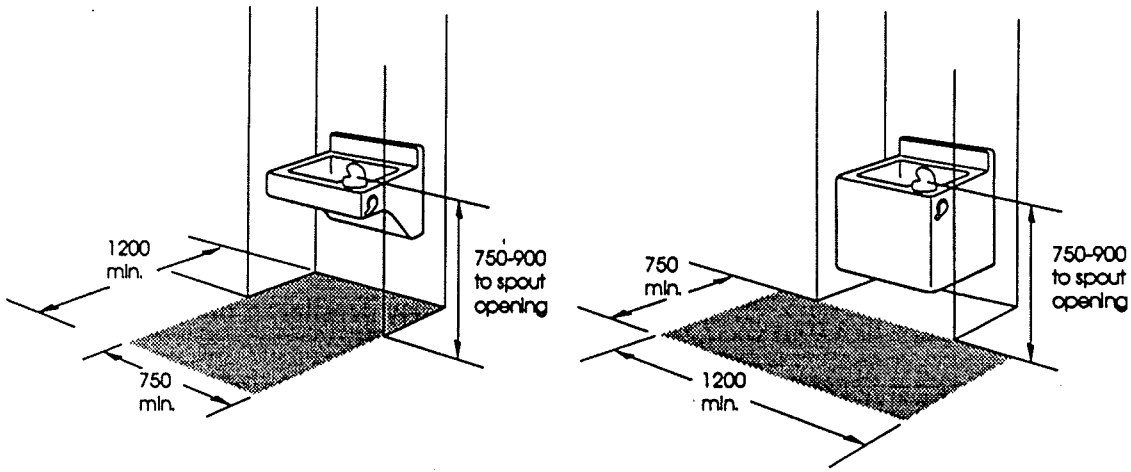
11.13 **Drinking Fountains**

A wall-mounted drinking fountain located in an alcove is preferred because it does not create a hazard for people with visual impairments. Drinking fountains that extend into corridors and have an open space underneath the fountain 680 mm in height or higher should be protected by a wall guard. The provision of two drinking fountains at different heights is very convenient for standing adults, people in wheelchairs and children.

11.13.1 Spouts shall
a) have an opening located between 750 and 900 mm from the floor or ground surface (Figure 11.13);
b) be located at the front of the unit;
c) direct the water flow in a trajectory that is parallel or nearly parallel to the front of the unit; and
d) provide a flow of water at least 100 mm high. *The 100 mm high water flow is to allow the insertion of a cup or glass.*

11.13.2 Controls shall be hand operated or electronically controlled.

Hand-operated controls shall
a) be at or near the front of the fountain;
b) be operable with one hand;
c) require no tight grasping, pinching, or twisting of the wrist;
d) require a force less than 22 N to activate; and



(a) Frontal approach

(b) Parallel approach

Built-in Drinking Fountain

FIGURE 11.13

DRAWING BY:
CSA

e) be of a contrasting colour.

11.13.3 Cantilevered drinking fountains shall
a) have a clear floor space of at least 750 × 1200 mm;
b) have a clear knee space between the bottom of the apron and the floor or ground at least 750 mm wide, 200 mm deep and 680 mm high;
c) have a toe space not less than 750 mm wide, 230 mm deep and 230 mm high; and
d) be recessed or otherwise located out of the circulation route. (Figure 11.14)

Freestanding or built-in drinking fountains not having a knee space shall have a clear floor space at least 1200 mm wide by 750 mm deep in front of the unit. (Figure 11.13b)

11.14 Portable Toilets at Special Events

11.14.1 Portable toilets are often provided for special events by local suppliers. It is important to ensure that facilities are also provided to meet the needs of persons with disabilities. Portable toilets that are accessible to persons with disabilities should be provided whenever portable toilets are used.

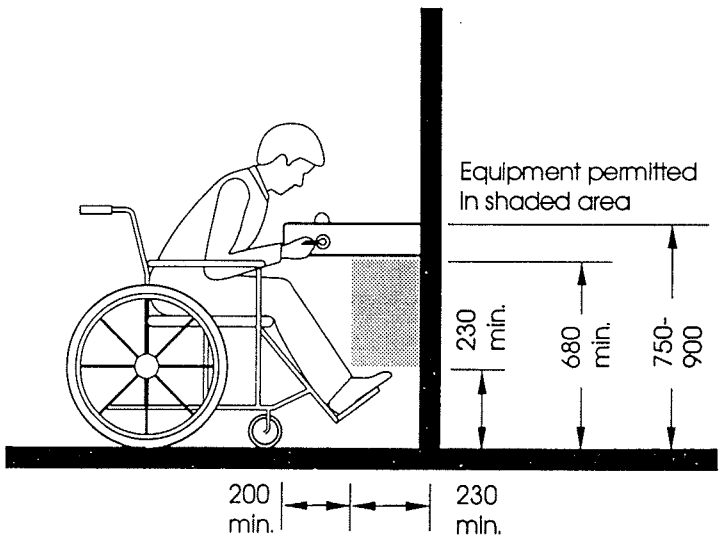
11.14.2 Portable toilets should be placed along a barrier-free and well-illuminated path of travel.

11.14.3 Doors should have a clear width of 910 mm minimum, with D-type handles and locks which do not require tight grasping, pinching or twisting of the wrist. Doors and handles should be colour contrasting.

If step access is necessary, steps should be colour contrasted and a handrail should be provided. If barrier-free washrooms are located nearby, directional signage should be provided.

11.14.4 Tactile and braille signage should be provided on portable toilets.

11.14.5 Grab bars should be provided both to assist people in getting into accessible toilet units and while in the unit.



Spout Height and Knee
Clearances at Drinking Fountain

FIGURE 11.14

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