

2026 Facility Accessibility Design Standard

THE CITY OF WINDSOR
ONTARIO, CANADA
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Version History

Version	Date	Comment
1.0	June 2026	

Acknowledgements

We would like to acknowledge and thank the City of London for permission to adopt the 2021 London Facility Accessibility Design Standard and the Windsor Accessibility Advisory Committee for their guidance and support on this project. We are grateful for the remarkable energy, time, and expertise provided by the FAD Subcommittee and the administration working group. They have contributed, through their lived experience and architectural expertise, to one of the few accessible FAD standards in Ontario and one of the few standards to directly incorporate recommendations from people with disabilities.

Mayor or CAO Remarks Reserved

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1.0 Introduction

Table of Contents

1.1 Background
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1.1 Background

The Windsor Facility Accessibility Design Standard serves to provide design standard guidance and best practices for the design and construction of new facilities and renovation or retrofitting of existing facilities owned, operated, and maintained by the City of Windsor. Such guidance and principles address the needs of people with a comprehensive range of disabilities. The accessibility design standards are based on the concept of universal design that focuses on the development of environments and products that are usable by the full spectrum of people regardless of their ability without adaptation or specialized design. This concept is enshrined in seven design principles listed in Section 1.1.1.

Architects, engineers, staff, and professionals use FADS to enhance accessibility beyond the minimal requirements of the Ontario Building Code and the Accessibility for Ontarians with Disabilities Act, 2005. Adopted with permission from the 2021 London Accessibility Design Standard, this standard shall be used when planning and designing municipal facilities in a concerted and ongoing effort to remove and prevent barriers for people with disabilities. In the event of conflicts of requirements that occur with other standards or legislation, the most accommodating requirements should apply but never less than current building code or AODA thresholds.

1.1.1 The Principles of Universal Design

This standard incorporates the belief in universal design that recognizes the broad diversity of people who use facilities. Universal design is defined as: “The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design” (Source: North Carolina State University 1997). The universal design philosophy is structured around the seven Design Principles noted below.



1.2 Scope, Application, and Enforcement

Application

The requirements of this standard shall be:

- Mandatory for all newly constructed and retrofitted facilities owned, leased, or operated by the City of Windsor; and
- Encouraged for all other facilities, whether new or retrofitted.

All areas of newly designed or newly constructed facilities and altered portions of existing facilities shall comply with Sections 2 to 5, unless otherwise provided in this section or as modified in Section 6. The specific facility types listed in Section 6 shall, in addition to all the provisions specified in Sections 2 to 5, comply with the additional design requirements specified in Section 6. Where a facility contains more than one use covered by a special application section, each portion shall comply with the requirements for that section in addition to all other general provisions. All facilities shall be accessible to employees, as well as patrons and other users. All areas intended for use by employees shall be designed and constructed to comply with this standard. This standard applies to temporary facilities, as well as permanent facilities.

Exception

The requirements of Sections 2 to 5 do not apply to:

- service rooms.
- elevator machine rooms.
- janitor rooms.
- service spaces;
- crawl spaces;
- attic or roof spaces;
- residential occupancies;
- buildings of Group F Division 1 occupancy, as defined by the Ontario Building Code (latest edition with all amendments); and
- buildings which are not intended to be occupied on a daily or full- time basis, including, but not limited to, automatic telephone exchanges, pump houses, and substations

1.2.1 Retrofitting, Alterations and Additions

Application of these standards related to retrofitting, alterations and additions also requires the following:

- Each addition to an existing facility shall be regarded as an alteration;
- Each space or element added to the existing facility shall comply with the applicable provision(s) of this standard;
- Except where the provision of accessible features is technically infeasible, no alteration shall decrease or have the effect of decreasing accessibility or usability of an existing facility to below the requirements for new construction at the time of alteration.
- If existing elements, spaces, or common areas are altered, then each such altered element / space / feature / area shall comply with all applicable provisions. If the applicable provision for new construction requires that an element / space / feature / area be on an accessible route and the altered element / space / feature / area is not on an accessible route, this route shall be altered to become accessible;
- If alterations of single elements, when considered together, amount to an alteration of a room or space in a facility, the entire space shall be made accessible;

- No alteration of an existing element, space or area of a facility shall impose a requirement for greater accessibility than that which would be required for new construction;

- If an escalator or stairs are proposed as a means of access where none existed previously, and major structural modifications are necessary for such installations, then a means of accessible access shall also be provided;

- If a planned alteration entails alterations to an entrance, and the facility has an accessible entrance, the entrance being altered is required to be accessible;

- If the alteration work is limited solely to the electrical, mechanical or plumbing system, hazardous material abatement, automatic sprinkler retrofitting, and does not involve the alteration of any elements or spaces required to be accessible under these standards, then this standard does not apply (except for alarms and assistive listening systems);

- An alteration that affects the usability of or access to an area containing a primary function shall be made to ensure that, to the maximum extent feasible, the path of travel to the altered area, the washrooms and drinking fountains serving the altered area are readily accessible to and usable by individuals with disabilities; and

- Where the provision of accessible features is technically infeasible, and the standard allows a reduction of maneuvering space from the requirements for new construction, the reduced dimensions are minimums. Where possible, larger maneuvering spaces must be provided.

1.2.2 Heritage Facilities

This standard will apply to alterations to a heritage facility, however, under the Ontario Human Rights Code, there are allowances for modification to the defining features of a heritage facility which are deemed to alter the essential nature or affect the viability of the enterprise. Public heritage facilities should be assessed for compliance with accessibility standards on an individual basis, to determine the most effective and least disruptive means of retrofit, where required. Consider the following general guidelines:

- Facilities and / or areas that are used independently by the public and have undergone extensive modernization should be permanently and fully accessible. This includes parking areas, reception areas, washrooms, food service areas, and gift shops. It can also include walkways and garden areas. If accessibility is limited by non-heritage elements, those elements should be revised;
- Facilities and / or areas which are used only by guided tour groups, through which assistance could easily be provided to open doors or to place a temporary ramp, could remain as existing or with minor temporary modifications.
- It is desirable to provide complete experience of a public heritage facility. If an accessible area or areas can be provided to fully experience a given site or facility context, access to the entire site or facility is not necessary; and;
- Access to above-grade and below-grade areas is not necessary if the context of those areas can be adequately provided on the accessible floor level. If the retrofit for

accessibility of a main public entrance in a heritage facility would threaten or destroy the historic significance of the facility, access shall be provided at an alternative entrance with directional signs at the main public entrance. The accessible entrance should have a notification system (if not used by the public) and remote monitoring (if security is an issue). Safe egress from a heritage facility is required.

1.2.3 Equivalent Facilitation

In a retrofit situation where the requirements of a section of this standard are technically infeasible to implement, equivalent facilitation may be proposed.
Equivalent facilitation proposals shall be referred to the Director, Fleet & Facilities (or delegate) for review and approval on an individual basis.

1.2.4 Implementation

The Facilities Design and Construction Division of the City of Windsor, other City departments, as well as contracted consulting firms shall be responsible for the application of the 2021 Facility Accessibility Design Standards, when designing and administering all construction and renovation projects associated with new facilities, as well as the retrofit, alteration or addition to existing facilities, owned, leased or operated by the City of Windsor. Designing and constructing to this standard shall be included as a mandatory requirement in all City of Windsor Request for Proposals, Tender Documents and Construction Contracts.

1.2.5 Enforcement

The Facilities Design and Construction Division of the City of Windsor and other City departments, through the project management function, shall ensure compliance with this standard during the pre-planning, design, construction documents preparation and contracts administrative phases.

1.3 Space and Reach Requirements

Application

The dimensions and maneuvering characteristics of wheelchairs, scooters and other mobility devices are as varied as the people who use them. Traditionally, accessibility standards have taken a conservative approach to wheelchair maneuverability, reflecting the needs of a physically strong individual using a manual wheelchair. Such an approach excludes many users without such a degree of strength or those using a larger mobility device.

This standard more accurately reflects the vast array of equipment that is used by persons to access and use facilities, as well as the diverse range of user ability. This standard incorporates more generous space requirements, particularly related to the dynamic movement of people using wheelchairs, scooters, or other assistive devices. Space and reach provisions for people who use mobility devices shall comply with this section.

1.3.1 Clearance and Turning Space Requirements

A minimum clear floor / ground space and turning space is required to accommodate diverse users and types of mobility aids. These requirements are consistently applied throughout this standard, applicable for both exterior and interior environments including a “universal” clear floor / ground space and a suitably dimensioned clear turning space / circle for users of mobility aids, as follows:

a. minimum clear floor / ground space of 920 mm by 1525 mm for a single wheelchair or scooter for forward or parallel approach to an object **(Figure 1)**. Clear floor / ground space for wheelchairs may be part of the knee space required under some objects; or

b. turning space of 2440 mm in diameter for users of mobility aids to make a 360-degree turn **(Figure 2)** or various required clearances for a 180-degree turn **(Figure 3)**.

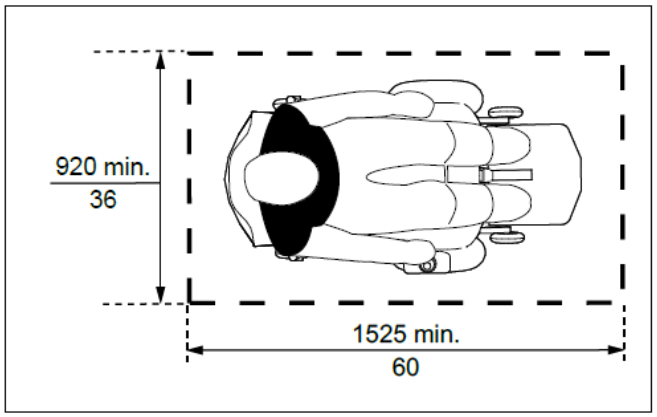


Figure 1 Universal Clear Floor / Ground

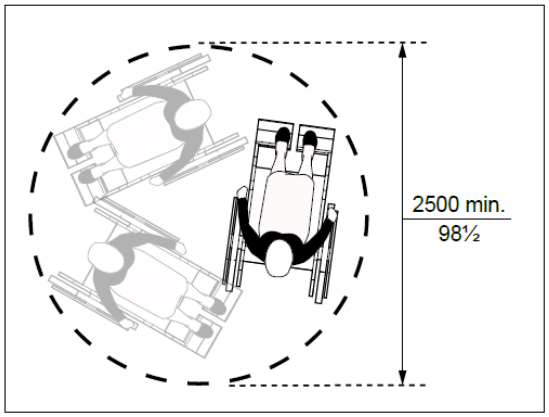


Figure 2 360° Turning Space / Circle

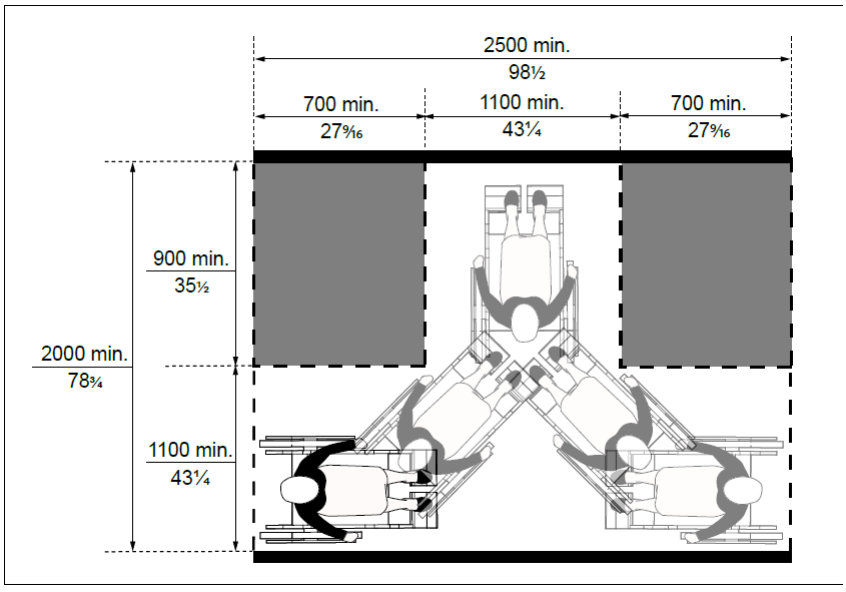


Figure 3 180° Turning Space

1.3.2 Clearances at Alcoves

One full, unobstructed side of the clear floor space or ground space for a wheelchair or scooter shall adjoin or overlap an accessible route or adjoin another clear floor space for mobility aids. If a clear floor space is in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearances are required as shown in **Figures 4-7**.

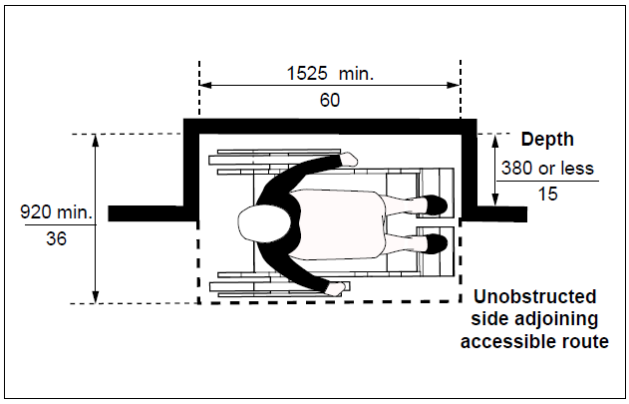


Figure 4 Clearances at Alcove - Side Approach < 380mm.

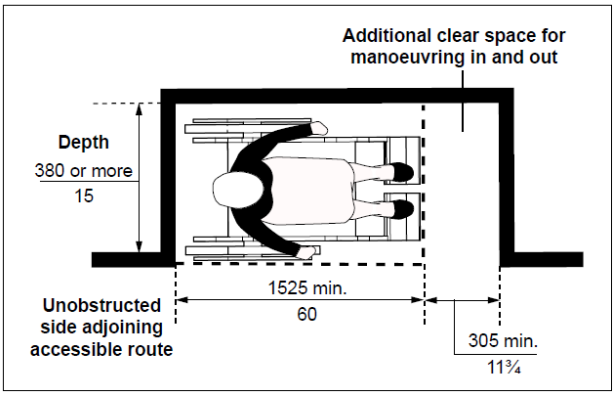


Figure 5 Clearances at Alcove - Side Approach > 380mm.

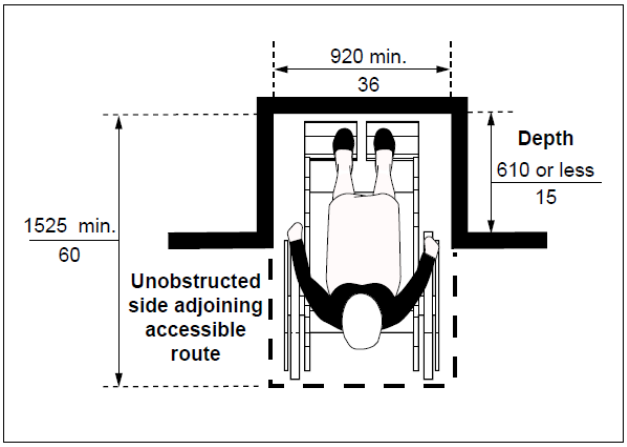


Figure 6 Clearances at Alcove - Front < 610mm.

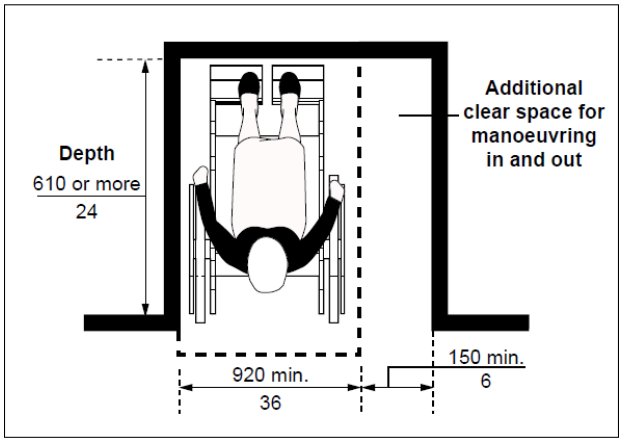


Figure 7 Clearances at Alcove - Front > 610mm.

1.3.3 Reach Requirements

The following requirements relate to minimum and maximum reach ranges, based on a forward (frontal) or a side (parallel) approach to an object, element, or feature. This includes consideration for whether the reach is without an obstruction, or whether it is over an obstruction. Additionally, reach range related specifically to touching versus grasping an object, element or feature is addressed where there is a side or forward approach over an obstruction.

1.3.3.1 Forward Reach: No Obstruction

Where a minimum clear floor space of 920 mm wide by 1525 mm depth allows a forward approach to an object, feature, or element, with no obstruction, provide: (**Figure 8)**

a. maximum high forward reach of 1200 mm above finished floor; and
b. minimum low forward reach of 400 mm above finished floor.

1.3.3.2 Forward Reach: With Obstruction

Where a minimum clear floor space of 920 mm wide by 1525 mm depth allows a forward approach to an object, feature, or element, with an obstruction, provide: (**Figures 9 and 10**)

a. maximum high forward reach of 1100 mm above finished floor, with a maximum depth for touch reach at 610 mm; or
b. maximum high forward reach of 1100 mm above finished floor, with a maximum depth for grasp reach at 510 mm.

Best Practice

Despite these requirements, optimal reach range identified in other sections of these standards is 900 to 1100 mm for either side or frontal approach, when obstructed or when there is no obstruction.

Additionally, the Ontario Building Code requires all controls for the operation of facility services to be mounted at a maximum of 1200 mm above the finished floor for thermostats or manual fire pull stations and 900 to 1100 mm for all other controls including typical light switches.

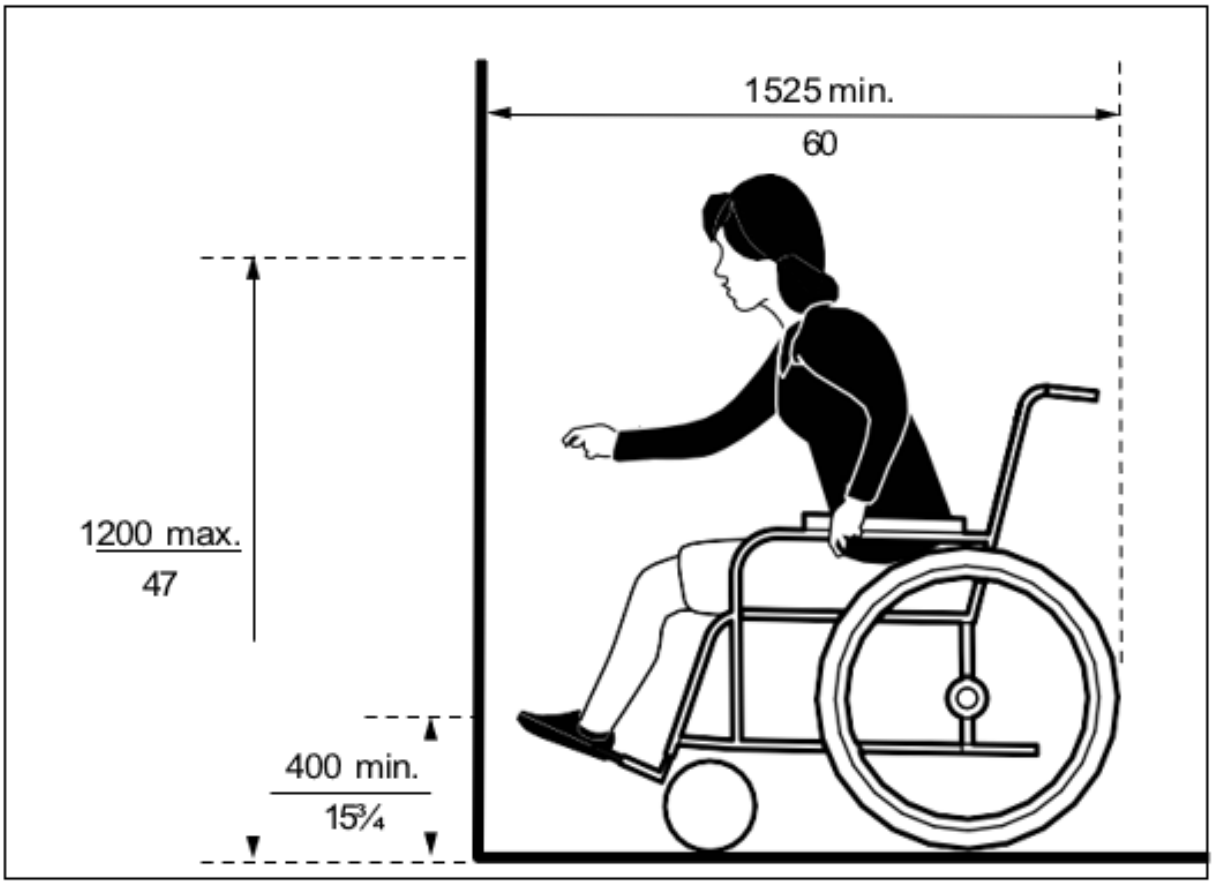


Figure 8 Forward Reach - No Obstruction

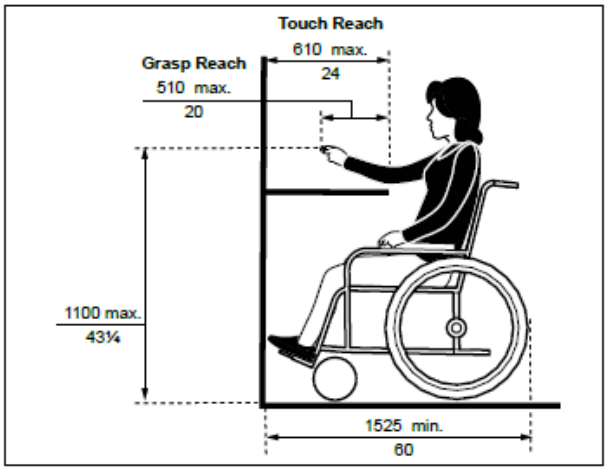


Figure 9 Forward Reach over an Obstruction

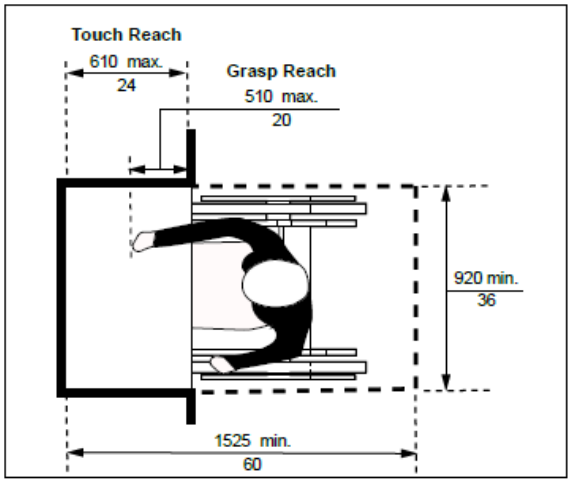


Figure 10 Forward Reach over an Obstruction - Plan View

1.3.3.3 Side Reach: No Obstruction

Where a minimum clear floor space of 920 mm wide by 1525 mm depth allows a side approach to an object, feature, or element, with no obstruction and with a maximum reach depth of 255 mm provide: (**Figures 11 and 12**)

a. maximum high side reach of 1370 mm above finished floor; and
b. minimum low side reach of 230 mm above finished floor.

1.3.3.4 Side Reach: With Obstruction

Where a minimum clear floor space of 920 mm wide by 1525 mm depth allows a side approach to an object, feature, or element, over an obstruction that is maximum height of 865 mm provide: (**Figure 13**)

a. maximum high side reach of 1170 mm above finished floor, with a maximum depth for touch reach at 610 mm; or
b. maximum high side reach of 1170 mm above finished floor, with a maximum depth for grasp reach at 510 mm

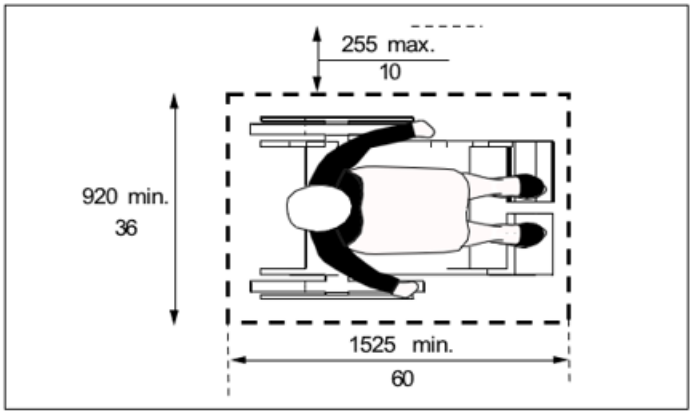


Figure 11 Side Reach - No Obstruction - Plan View

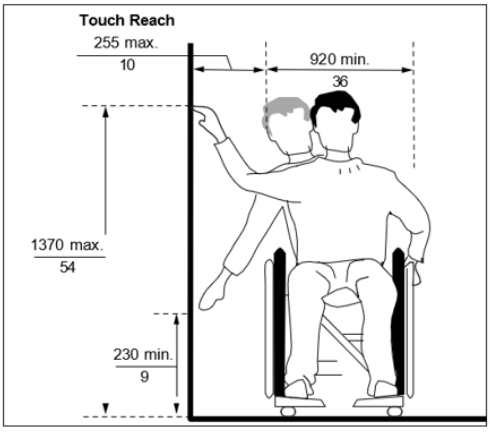


Figure 12 Side Reach - No Obstruction - Section View

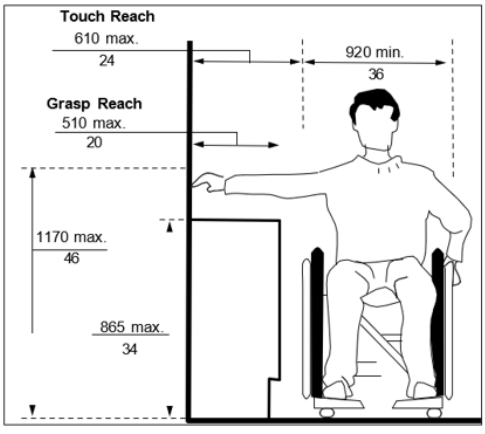


Figure 13 Side Reach over an Obstruction - Section View

1.4 How to use this Document

1.4.1 Standard Organization

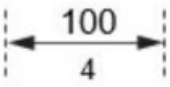
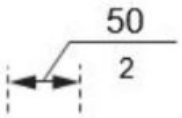
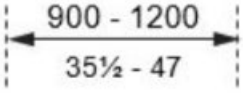
These standards are organized to provide accessibility criteria in the following sections, to group and identify issues that are related. These Chapters are identified as follows:

1 Introduction
2 Common Elements
3 Exterior Elements
4 Interior Elements
5 Systems, Controls, and Communications
6 Special Facilities and Spaces
7 Tables, Charts, Figures, and Glossary

These sections are further divided into additional subsections that refer to specific site or facility elements. At the start of each section, the “Application” of the standards is identified to assist with implementation and how each section relates or applies to the built environment, element or feature.

1.4.2 Dimensions

The dimensions for specific accessibility criteria are stated in millimeters (mm) or meters (m) throughout this document, rounded up to the nearest multiple of five. Measurements in inches (in) or feet (ft) are provided adjacent to metric measurements in brackets, for example 1525 mm and are converted from the metric measurement. Where metric measurements are too small or specific, imperial conversion is not provided to maintain accuracy. Dimensions that are not marked as “maximum” or “minimum” are absolute, unless otherwise indicated. All dimensions for construction purposes are subject to conventional industry tolerances. Dimension conventions for diagrams are as follows:

Convention	Description
	Dimension showing measurements in millimeters (unless otherwise specified) above the line and inches (unless otherwise specified) below the line
	Dimension for small measurements
	Dimension showing a range with minimum - maximum
Min.	Minimum
Max.	Maximum

1.4.3 Tables, Figures, and Graphs

Through these standards, several tables, figures, and graphics are provided to assist the user with understanding the application of the accessibility criteria and design issues under consideration. These are summarized in the Appendices under Section 7.1 Tables, Figures, and Graphs

1.4.4 Definitions

Throughout this document, terminology may be used that may not be familiar or understood. For the purposes of this standard, words and terms have their meanings defined in Section 7.5 Glossary

1.4.5 Feedback

The City of Windsor recognizes that accessibility best practices continue to evolve and change over time, with the expectation that these standards are recognized as a “living document” and will be updated on a regular basis. Feedback from the public, city administration, and vendors may be directed to **accessibility@citywindsor.ca**

2.0 Common Elements

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2.9 Drinking Fountains and Bottle Filling Stations
2.10 Materials and Finishes
2.11 Texture and Color

2.1 Ground and Floor Surfaces

Application

This section applies to ground and floor surfaces throughout interior and exterior environments. The type of materials and finishes used for ground and floor surfaces are essential in determining accessibility.

Reference

Sec. 3.3 Exterior Paths of Travel
Sec. 4.3 Interior Accessible Routes
Sec. 5.4 Acoustics
Sec. 5.7 Lighting

Note

Regular surfaces, such as cobblestones or pea-gravel finished concrete are difficult for both walking and pushing a wheeled mobility device. The use of pavers along accessible routes should be carefully considered since they may heave or settle due to weather conditions and can become potential tripping hazards. When using pavers, provide controls to prevent any potential heaving due to frost and minimize the number of joints. Pavers may be used as accent banding to delineate the accessible route.

Uneven surfaces can create unpleasant and damaging vibration for users of wheeled mobility aids and gravel surfaces are extremely difficult surfaces for users of mobility aids to maneuver.

2.1.1 Surfaces

Ensure all ground and floor surfaces in interior and exterior environments (**Figures 14 & 15**)

a. are firm, stable and slip-resistant;
b. have a matte finish to minimize glare;
c. are well-drained;
d. have joints between surfaces no wider than 6 mm (preferred) or a maximum of 13 mm and
e. where ground and floor surfaces have a change in level (**Table 1**):
   I. no bevel is required (e.g., vertical change permitted), where the change in level is less than 6 mm
   ii. provide a beveled slope of 1:2 (maximum - the ratio rise to run), where the change in level is between 6.1 mm and 13 mm;
   iii. provide a slope, ramp, or curb ramp, where the change in level is greater than 13 mm; and
   iv. for exterior ground surfaces, **refer to Section 3.3, Exterior Paths of Travel** for additional details.

Note

A firm surface does not change under vertical force / pressure. A stable surface does not change or erode under angular forces.

Hard floor surfaces, such as marble or terrazzo, may amplify footsteps and add another level of noise for persons who are Deaf, deafened, or hard of hearing.

Glare from polished floors can be uncomfortable for all users and can be a particular obstacle to people with vision loss by obscuring important orientation and safety features.

Table 1 Changes in Level - Edge Treatments

Change in Level (height)	Edge Treatments
0 - 6 mm (0 - ¼ in)	May be vertical
6.1 - 13 mm	Bevel, maximum slope 1:2
over 13 mm (over ½ in)	treat as a sloped floor, ramp, or curb ramp

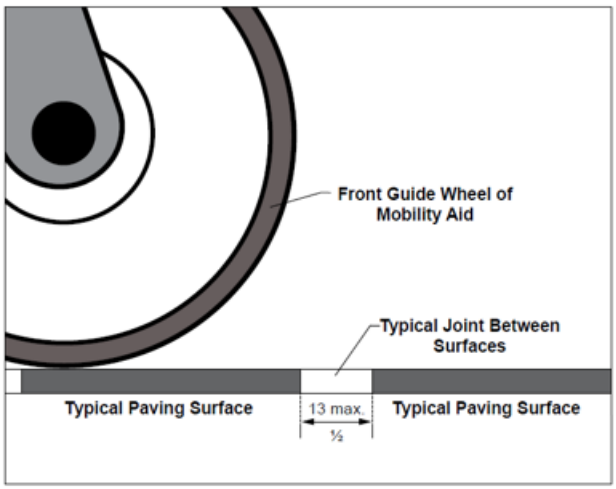


Figure 14 Joints Between Surfaces - Section View

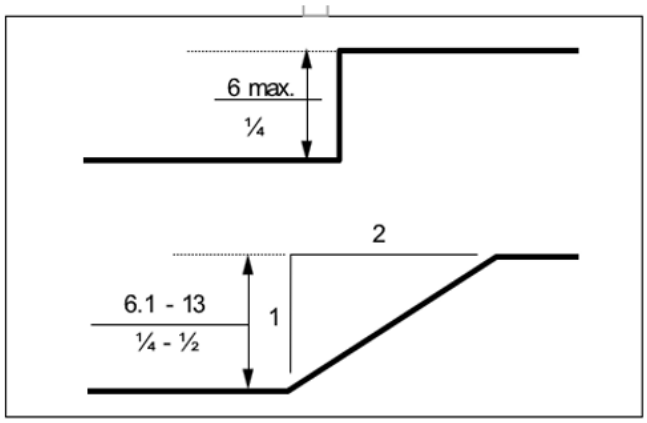


Figure 15 Changes in Level

2.1.2 Carpets

Where carpeting is used ensure:

a. it is securely fastened;
b. combined carpet and pad height does not exceed 13 mm
c. any cushion, under padding or backing is firm to reduce rolling resistance for wheeled mobility aids;
d. it is a low-level loop, textured loop, level cut pile, or level cut / uncut pile texture; and
e. exposed edges fasten to the floor surfaces with trim that must confirm to **Table 1**.

Note

Disruptive, confusing, and heavily patterned ground or floor surface designs can be misinterpreted as level changes by people with vision loss and are not accessible.

High colour / tonal contrasted floor mats provide textural and visual cues and can be used to indicate doorways or circulation intersections.

2.1.3 Floor Mats or Grating Systems

Where floor mats or grating systems are used:

a. ensure they are securely fixed or recessed in floor and level with surrounding floor area to prevent potential tripping hazards;
b. ensure maximum mat height of 13 mm with beveled edges; and
c. provide high colour / tonal contrast between floor mats / grating systems and surrounding surfaces.
d. ensure proper maintenance of all grating systems or mats including but not limited to maintaining drainage, cleaning, and removal of debris.



Photo 5 Image of embedded mats

2.1.4 Gratings and Covers

Openings can include sewer catch basin covers or drainage grates, utility covers, and tree grates. Where there are any openings along the path of travel, or where gratings or other covers are required in both interior and exterior environments, ensure: (**Figures 16 & 17**)

a. ensure openings do not allow passage of an object that has a diameter greater than 13 mm; and
b. elongated openings are oriented perpendicular to the pedestrian path of travel.

Best Practice

Avoid the use of any grate, opening or covering along accessible routes, especially high. traffic areas, in order to prevent any potential tripping hazards.

Note

Openings larger than 13 mm may potentially catch wheels of mobility aids, canes, or crutches.

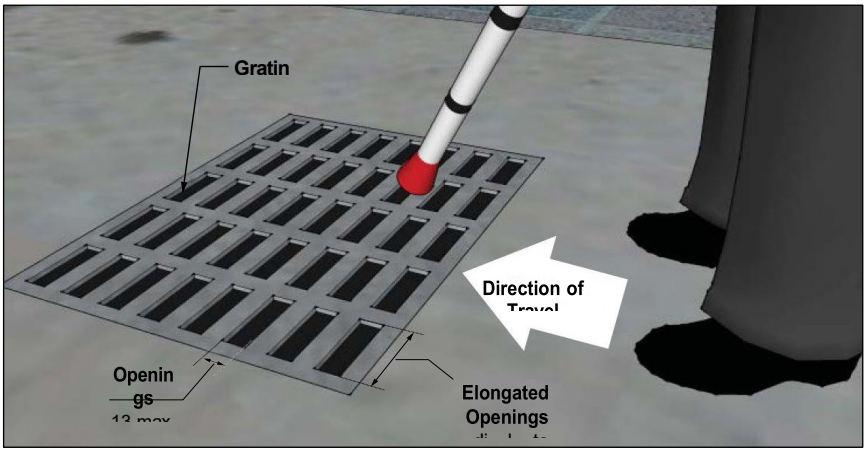


Figure 16 Grating Opening

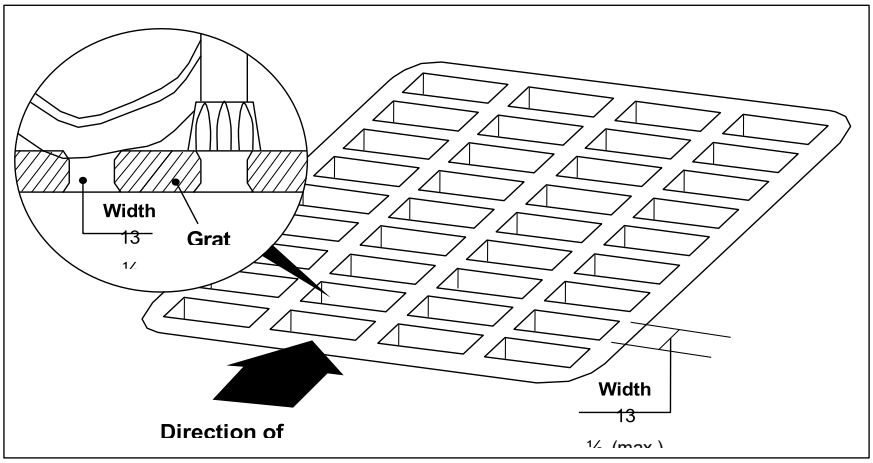


Figure 17 Gratings - Section View

2.2.1 Design Features

For accessible ramps, ensure: (**Figures 18, 28 & 29**)

a. a minimum clear width of 1100 mm
b. individual ramp sections are a maximum length of 9000 mm;
c. the provision of landings:
   i. at top and bottom of ramp;
   ii. where there is any directional change; and
   iii. between each ramp section where overall length of ramp exceeds 9000 mm;
d. a stable, firm and slip resistant surface, with surfaces for exterior ramps and their approaches designed to prevent water accumulation;
e. handrails on both sides of the ramp;
f. a wall or guard on both sides of the ramp; and
g. a minimum lighting level of 50 lux (5 foot candles) consistently over ramp surfaces, measured at floor or ground surface (**Refer to Section 5.7, Lighting**).

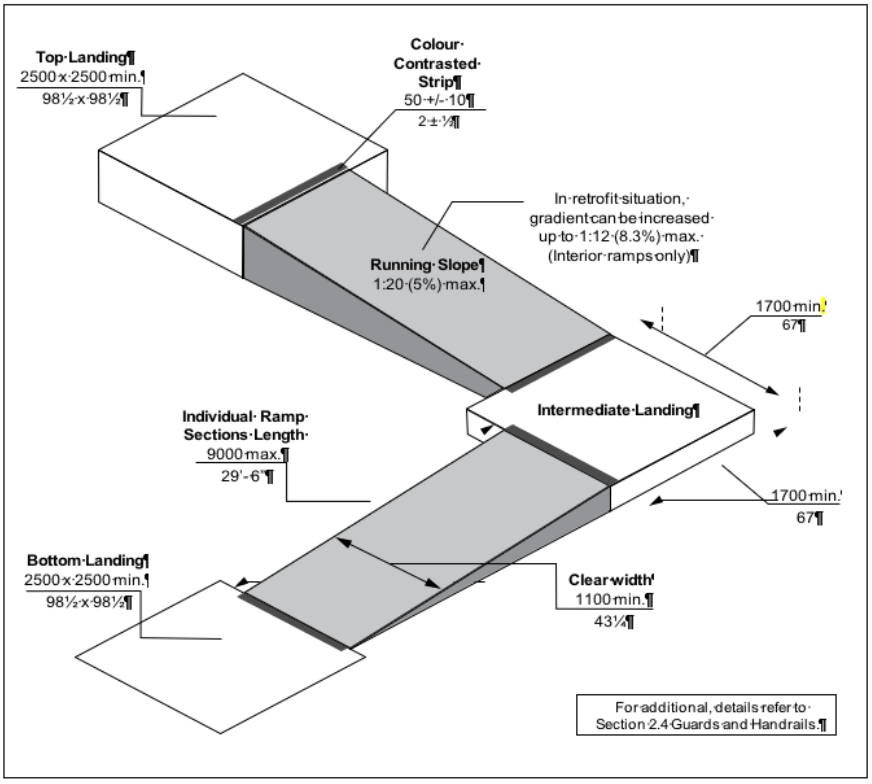


Figure 18 Ramp Design Features

Best Practice

Where ramps are specifically designed for use by persons with vision loss, a ramp surface of up to 1525 mm wide is preferred, in order to allow space for a companion or guide dog.

Exterior ramp and landing surfaces should be heated to prevent snow and ice accumulation during winter conditions. Additionally, provide designated areas for snow piling at exterior ramps, located away from any accessible pedestrian routes.

2.3 Stairs

Application

This section applies to stair systems, where provided for exterior or interior environments. Additionally, refer to the Ontario Building Code (OBC) and the Integrated Accessibility Standards Regulation (IASR) requirements for stairs.

Reference

Sec. 2.1 Ground and Floor Surfaces
Sec. 2.4 Guards and Handrails
Sec. 2.6 Tactile Walking Surface Indicators
Sec. 5.7 Lighting

2.3.1 Design Features

a. ensure surface is stable, firm, slip-resistant and non-glare; and
b. provide minimum lighting level of 100 lux (10 foot candles) consistently over stair system, measured at tread surface (**Refer to Section 5.7, Lighting**);

2.3.2 Treads and Risers

For stair treads and risers: (**Figure 30**)

a. ensure uniform riser height (rise) and tread depth (run) throughout any stair system;
b. provide riser height (rise) a minimum of 125 mm to a maximum of 180 mm;
c. provide tread depth (run) a minimum of 280 mm to a maximum of 355 mm and
d. ensure all risers are closed.

2.3.3 Nosings

For stair tread nosings: (**Figure 30**)

a. ensure no abrupt undersides;
b. ensure they do not project more than 25 mm over the tread below and are sloped to the riser at an angle greater than 60 degrees to the horizontal;
c. ensure leading tread edge is rounded, curved, or beveled profile with a radius of curvature between 6 mm and 10 mm; and
d. provide horizontal strips:
   i. 50 mm (+/- 10 mm depth;
   ii. at the leading edge of the tread, starting at a maximum of 25 mm.
   iii. with a high colour / tonal contrast compared to tread and riser finishes with slip-resistant surface; and
   iv. that extend the full width of the tread.

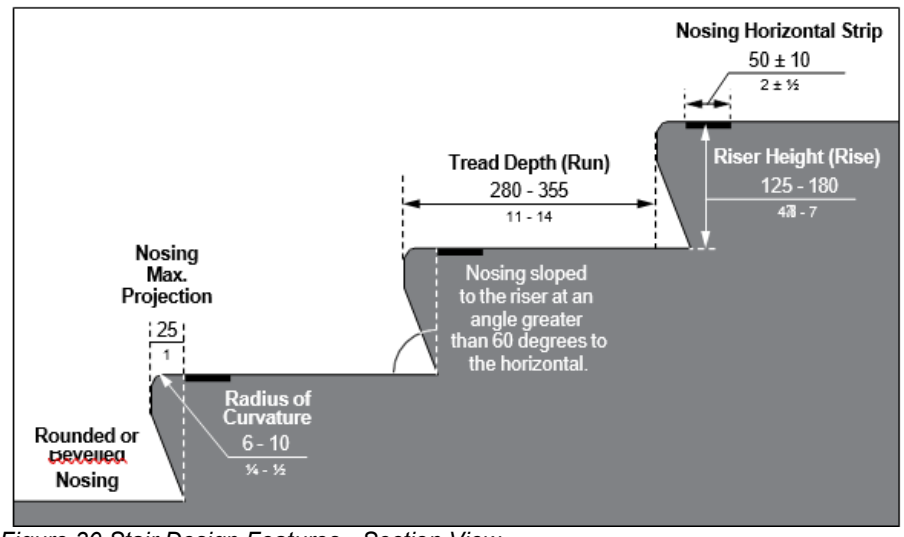


Figure 30 Stair Design Features - Section View

2.3.4 Tactile Attention Indicator (TAI) Surfaces

Best Practice

Where stairs are wider than 1800 mm, provide intermediate handrails and ensure clear width between handrails is between 900 mm and 1000 mm).

Provide TAI surfaces as follows: (**Figure 31**)

a. at the top of all flights of stairs starting one tread depth back from the leading edge of the top step;
b. at the top step, starting one tread depth back from the leading edge, at the following locations:
   i. at each landing incorporating an entrance into a stair system;
   ii. where the regular pattern of a stairway is broken; and
   iii. where the run of a landing which does not have a continuous handrail is greater than 2100 mm;
c. with a surface depth a minimum of 610 mm, extending the full width of the stair;
d. mounted a maximum of 3 mm above or below the surrounding surface; and
e. ensure all additional TAI requirements are provided (**Refer to Section 2.6, Tactile Walking Surface Indicators**).

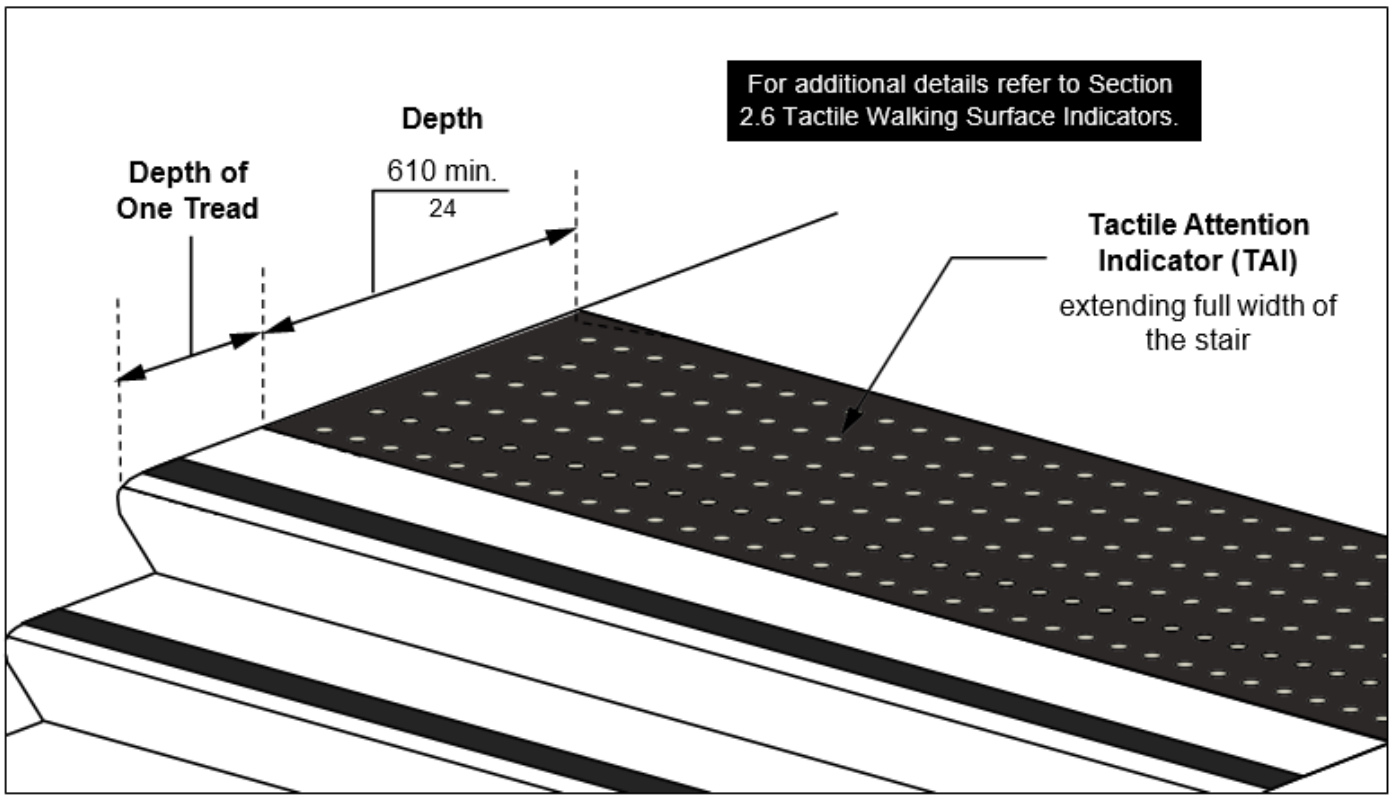


Figure 31 Tactile Attention Indicators (TAI) at Top of Stairs

2.3.5 Guards and Handrails

2.3.5.1 Guards

Where there is a change in level 600 mm or more floor level adjacent to stairs, ensure guards are provided as identified in Section 2.4, Guards and Handrails.

2.3.5.2 Handrails

Provide handrails as follows: (**Figures 32 & 33**)

a. where stair system contains three or more steps;
b. mount on both sides of stairs, at a consistent height between 865 mm and 965 mm measured from leading edge of stair tread;
c. ensure high colour / tonal contrast is provided between handrails and mounting surfaces for improved visibility;
d. be continuous around landing less than 2100 mm in length from the top of stairs, except where the landing:
    i. is intersected by an alternative accessible route; or
    ii. has an entry door leading into it;
e. be continuous on the inside edge of stairs;
f. where stairs are more than 2200 mm wide, provide one or more intermediate handrails with a maximum of 1650 mm between handrails; and
g. provide extensions with the following criteria:
    i. extend horizontally a minimum of 300 mm at the top of flight of stairs, starting immediately above tread nosing;
    ii. extend diagonally at the slope of the stair flight, for a horizontal distance equal to one tread depth beyond the bottom tread nosing, at the bottom of flight of stairs then extend 300 mm parallel to the floor surface;
    iii. design to return to the wall, post or floor;
    iv. ensure handrails are terminated in a manner that will not obstruct pedestrian travel or create hazards;

ensure all additional handrail requirements are provided (**Refer to Section 2.4, Guards & Handrails**).

Note

Handrails ensure a safe descent and climbing of stairs for all users. They are an additional wayfinding guide for users with vision loss when continuous and if a high colour / tonal contrast is provided.

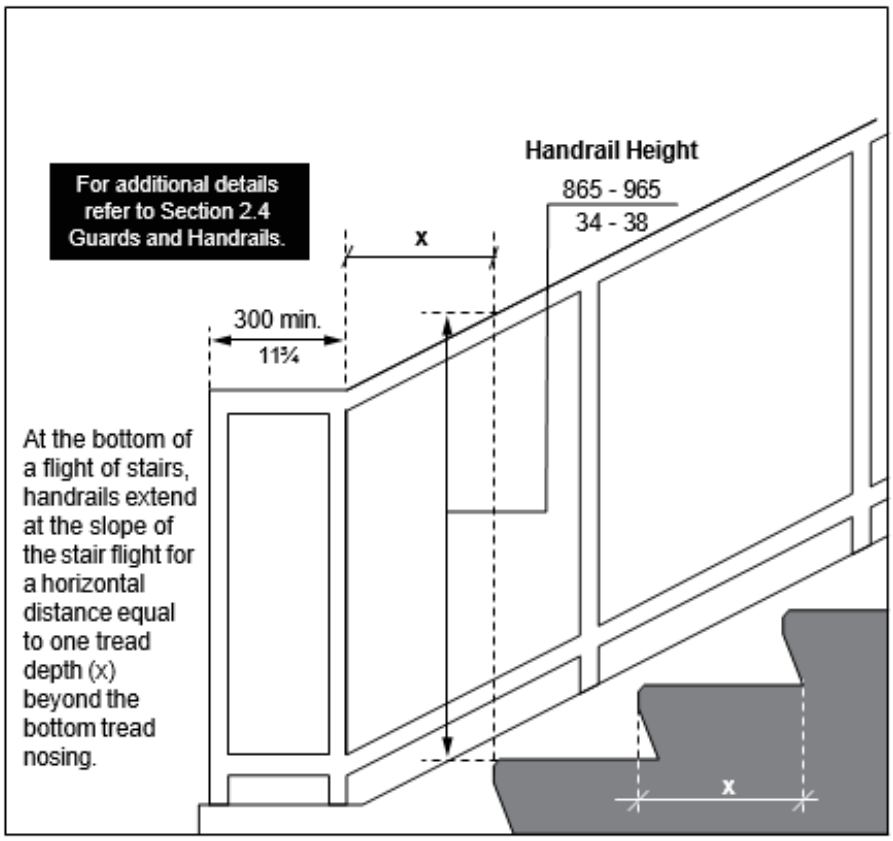


Figure 32 Handrail Extensions at Stairs –

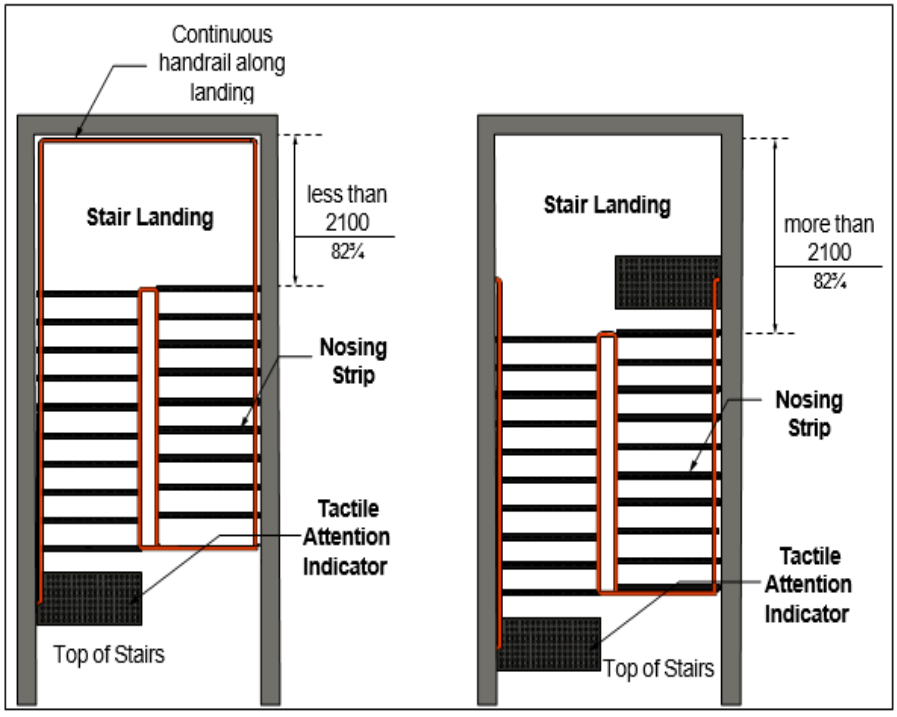


Figure 33 Continuous Handrails at Landings - Plan View

2.4 Guards and Handrails

Application

This section applies to guards and handrails at ramps, stairs, and other areas in both interior and exterior environments.

Reference
Sec. 2.2 Ramps
Sec. 2.3 Stairs

2.4.1 Guards

a. ensure they comply with additional OBC or IASR requirements, as applicable (e.g., context specific issues, including guards for exterior stairs and ramps more than 10 meters above adjacent ground level, mounted at a minimum of 1500 mm high;
b. mount at a minimum of 1070 mm high, measured vertically to the top of the guard from the ground / floor surface;
c. design to prevent the passage of a sphere with a diameter greater than 100 mm; and
d. ensure no member, attachment or opening located between 140 mm and 900 mm) high above the level protected by the guard will facilitate climbing.

Note

For improved safety, avoid horizontal guardrails that might provide opportunities for climbing. Vertical bars, glass, or other suitable materials would satisfy guardrail requirements while reducing the risks of climbing and falling.

Best Practice

In environments used frequently by children, lowered handrails are permitted, provided they are in addition to the required handrails.

Note

Guards are typically provided at ramps, stairs, terraces, and elevated viewing platforms in both interior and exterior environments.

2.4.2 Handrails

For handrails: (**Figures 34-36**)

a. ensure they comply with additional OBC or IASR requirements, as applicable
b. ensure handrails are continuous with grasping surface, uninterrupted by mounting brackets, newel posts, or any other construction elements;
c. provide rounded edges, free of abrasive elements;
d. provide outside diameter between 30 and 40mm or circular cross-section, which is preferred;
e. where non-circular cross sections are provided, ensure perimeter dimensions are a minimum of 100 mm and a maximum of 125 mm, with cross section dimension a maximum of 45 mm;
f. provide clearance of 50 mm (minimum for smooth surfaces) or 60 mm (minimum for rough surfaces) between grasping surface and any adjacent surface;
g. where handrails are in a recessed area, ensure clearance a minimum of 50 mm between handrail surface and adjacent surface with clearance of a minimum of 450 mm above the handrail; and
h. design and construct handrails and their supports to withstand:
    i. the loading values obtained from the non-concurrent application of a concentrated load not less than 0.9 Kilonewtons (kN) applied at any point and in any direction; and
    ii. a uniform load not less than 0.7 Kilonewtons (kN) / meter or (48 pounds / feet), applied in any direction.

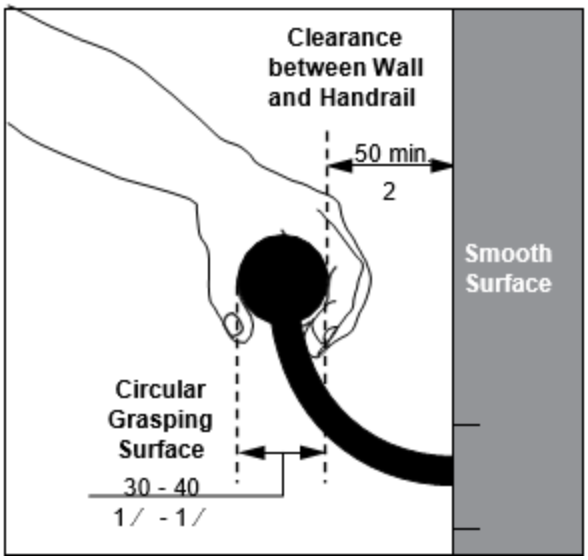


Figure 34 Handrails on Smooth Wall

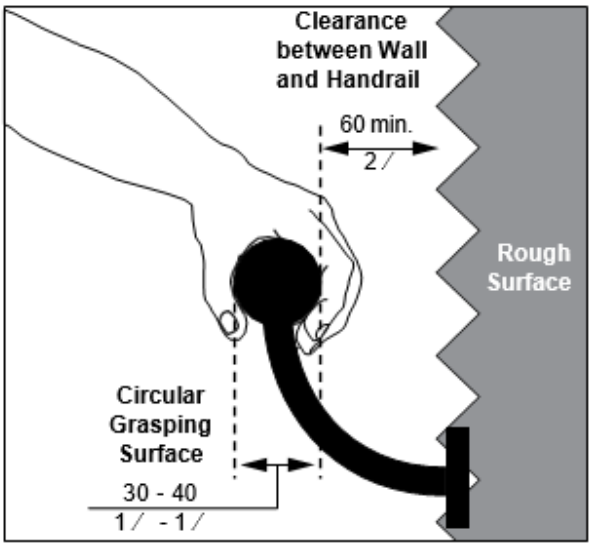


Figure 35 Handrails on Rough Wall - Section View

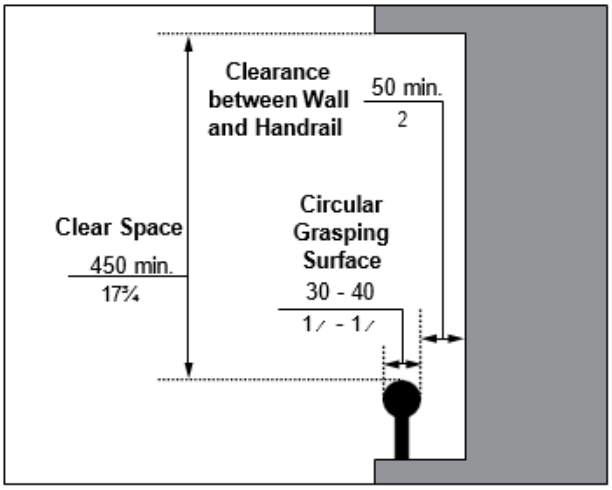


Figure 36 Handrails in Recessed Wall - Section View

2.5 Overhanging and Protruding Objects

Application

This section applies to overhanging and protruding objects throughout and around facilities (interior and exterior environments) to prevent any hazard or obstruction for all users. Protruding objects are typically mounted on walls, ceilings, or other locations adjacent to interior and exterior paths of travel.

Reference

Sec. 2.3 Stairs
Sec. 2.4 Guards and Handrails
Sec. 3.3 Exterior Paths of Travel
Sec. 4.3 Interior Accessible Routes

2.5.1 Protruding Objects

Where objects protrude along accessible paths of travel: (**Figure 38**)

a. ensure the clear width of an accessible path of travel or maneuvering space is not reduced; and
b. ensure objects protruding more than 100 mm from wall have a leading edge that is cane detectable.

Best Practice

Wing walls, extending from protruding edge to floor / ground surface, provide cane detection, where protrusion is greater than 100 mm. Where possible, an enclosure at the underside of the stairs for protection is recommended. **(Figure 39)**

2.5.2 Headroom Clearance

Where applicable: (**Figures 37,38,39,40**)

a. provide a minimum of 2100 mm headroom clearance; and
b. where the headroom clearance is less than 2100 mm over a portion of the accessible path of travel, provide a rail or other barrier with a leading edge that is cane detectable around the object that is obstructing the headroom clearance.

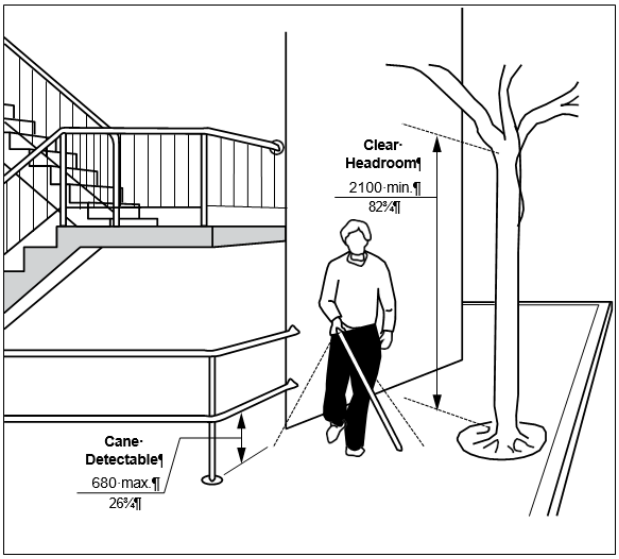


Figure 37 Headroom Clearance - Exterior

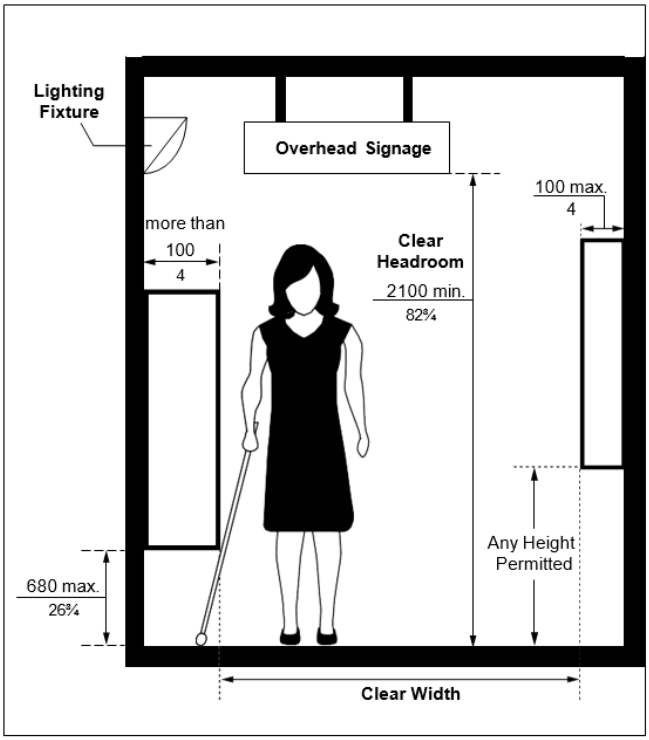


Figure 38 Protruding Objects and Headroom Clearance

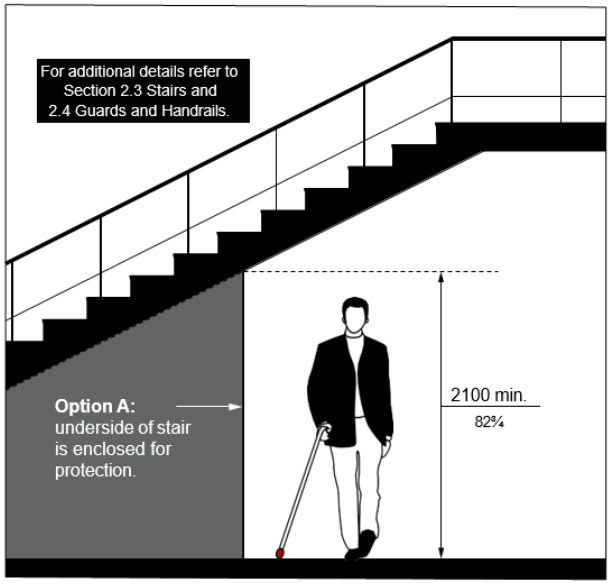


Figure 39 Option A - Enclosed Protection under Stairs

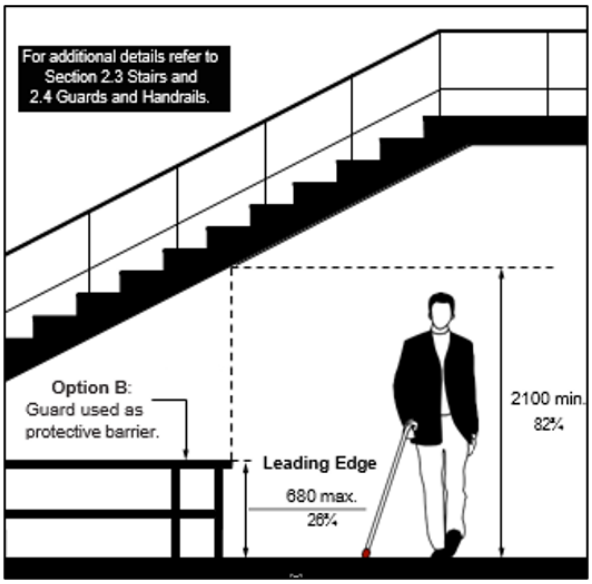


Figure 40 Option B - Guard / Protective Barrier

2.5.3 Cane Detectable Leading Edge

Where an accessible path of travel is obstructed by overhanging or protruding objects, either the objects themselves must be cane detectable, or a rail or other barrier with a leading edge that is cane detectable must be provided as follows: (**Figures 39 & 40**)

a. wall mounted barriers must have a horizontal element at 680 mm high, or lower, to be detectable by people who use white canes; and
b. floor mounted barriers such as curbs must be at least 75 mm high, unless they include a railing or other component that has a horizontal element at 680 mm high, or lower.

NOTE

To improve leading edge detection, replace the two-rail guard with a three-rail guard or select a guard with a leading-edge bar that is situated lower than the median of the guard post.

2.6 Tactile Walking Surface Indicators

Application

A tactile walking surface indicator (TWSI) refers to a standardized surface, detectable underfoot or by a long white cane, to assist people with vision loss by alerting or guiding them. There are typically two (2) types of TWSI used in both interior and exterior environments:

- **Tactile attention indicator (TAI)** surfaces call for caution at potential hazards (e.g., change in elevation, vehicular routes, and train tracks). They are composed of truncated domes. Typical locations where TAI surfaces are required include:
    - at curb ramps and depressed curbs;
    - where walking surfaces between pedestrian and vehicular areas are not separated by curbs; and at stairs.
- **Tactile direction indicator (TDI)** surfaces provide information about the direction of travel to facilitate wayfinding. They are composed of flat topped elongated bars, positioned parallel to the direction of travel. Typical locations where TDI surfaces are required include:
    - large expanses of open floor areas to indicate the primary route of travel; and
    - leading from the entrance of a facility to major features or destinations, such as a self-service kiosk or an information / customer service counter.

Both cast in place (e.g., embedded within concrete) and surface applied TWSI systems are available for new construction and retrofits depending on the mounting surface and application. Surface applied systems require beveled edges to prevent potential tripping hazards.

Reference

Sec. 2.3 Stairs
Sec. 3.3 Exterior Paths of Travel
Sec. 3.4 Curb Ramps and Depressed Curbs
Sec. 4.3 Interior Accessible Routes
Sec. 6.7 Recreational and Community Facilities
Sec. 6.12 Elevated Platforms or Stages

2.6.1 Design Features

Provide tactile walking surface indicators (TWSIs) with: **(Figures 41 & 42**)

a. raised tactile profile;
b. truncated domes (e.g., circular, and flat-topped domes) or elongated bars;
c. slip-resistant and non-glare surfaces;
d. edges beveled or level with surrounding surface to which it is applied or maximum height of 3 mm above or below; and
e. a high colour / tonal contrast between the TWSI and the adjacent surfaces (e.g., with a difference of 70% minimum in light reflectance value or LRV).

Note

Applying a high colour / tonal contrasted finish to a concrete surface does not provide an appropriate tactile profile for detection by foot or cane.

For more information on requirements for truncated domes, refer to: ISO 23599:2019 (or current edition) "Assistive products for blind and vision-impaired persons -- Tactile walking surface indicators."

2.6.2 Tactile Attention Indicator (TAI) Surfaces

Where provided and required, as identified in other sections of these standards, TAI specifications for flat-topped truncated domes include: (**Figure 41**)

a. height of 4 mm to 5 mm;
b. top diameter between 12 mm to 25 mm
c. lower base diameter 10 mm +/- 1 mm more than the diameter of the top (e.g., a base diameter of 21 mm to 36 mm is typical);
d. square grid layout / arrangement; and
e. center to center spacing between 40mm and 70mm

Refer

For details on the standards, refer to AS-**549** Truncated Dome Tactile Surface Indicators (August 2013) and **AS-402** Sidewalk - Wheelchair Ramp (May 2024).

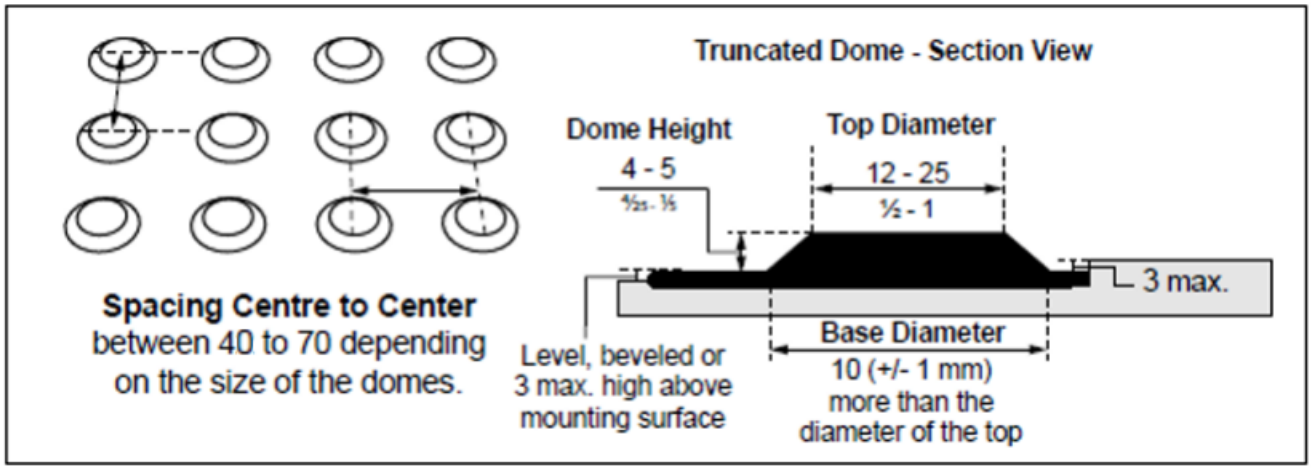


Figure 41 Truncated Dome Specifications

2.6.3 Tactile Direction Indicator (TDI) Surfaces

Where provided to facilitate wayfinding and to indicate a primary path of travel to a key element, feature, or destination (e.g., within a facility or throughout a site), TDI specifications for flat-topped elongated bars include: (**Figure 42**)

a. consistent use and placement, ensuring that the high colour / tonal contrast used is not yellow;
b. height of 4 mm to 5 mm high;
c. top width between 17 mm and 30 mm;
d. lower base width of 10 mm (+/- 1 mm) more than width of the top;
e. top length a maximum of 270 mm and a base length 10 mm (+/- 1 mm) greater than the top length;
f. maximum space of 30 mm between the ends of the parallel bars;
g. center to center spacing between adjacent bars is adjusted depending on their width, as identified in **Table 2**; and
h. provision of a drainage gap, with a width of 20 mm to 30 mm in between elongated bars, when used in exterior environments where there is a risk of water ponding.

Table 2 Truncated Dome Spacing Requirements

Width of Flat Topped Elongated Bars (mm)	Spacing Between the Centers of Adjacent Bars (mm)
17	57 to 78
20	60 to 80
25	65 to 83
30	70 to 85

Note

A tactile direction surface indicator layout that is as continuous as possible is easiest to follow.

Refer to the CSA Group's "Accessible Design for the Built Environment" (CSA B651- current edition) for additional recommendations and examples of tactile directional indicator configurations.

Provision of TDI surfaces to be determined on a case-by-case basis and is dependent upon the type of facility, size of spaces and overall relationship to other wayfinding strategies implemented.

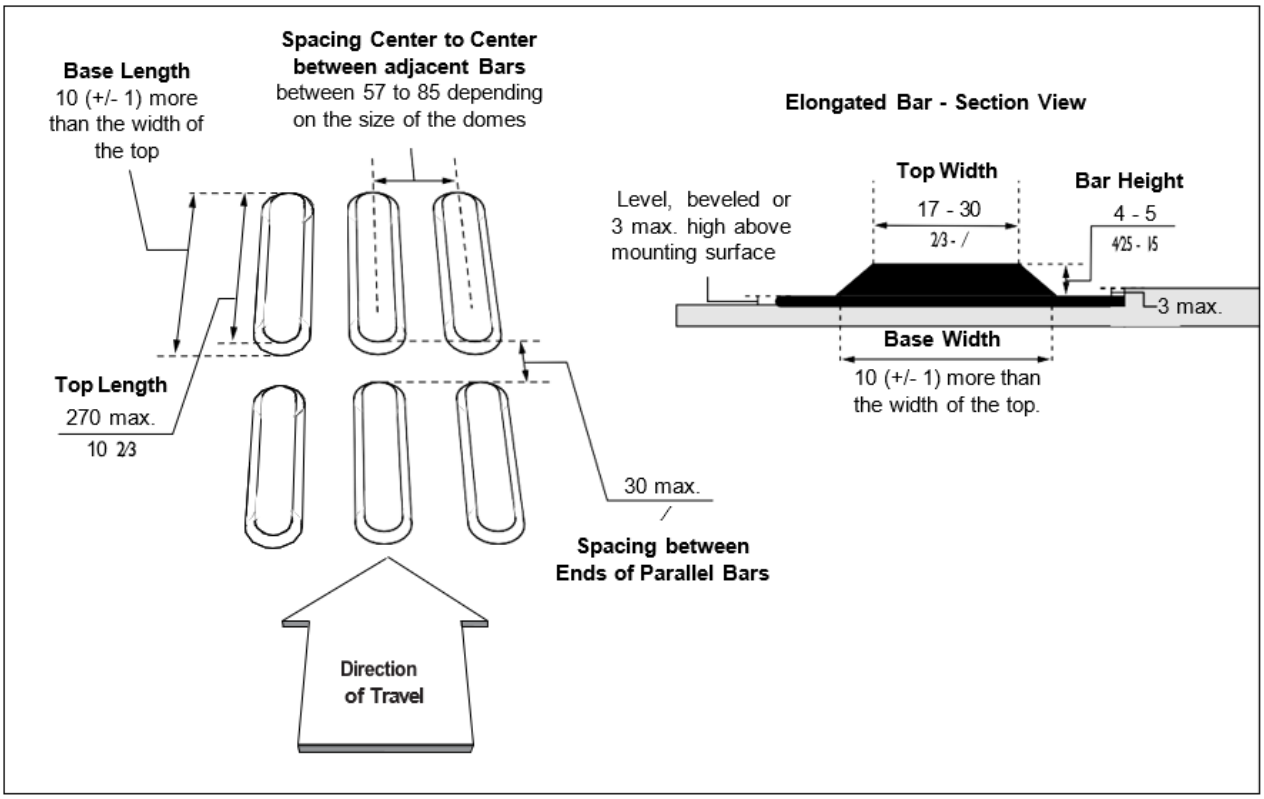


Figure 42 Elongated Bar Specifications

2.6.4 Additional Specifications

Provide a tactile attention indicator (TAI) for the following elements as follows:

2.6.4.1 Reflecting Pools / Water Features

a. install 920 mm from the leading edge of any drop-off; and
b. ensure it extends the full length around all unprotected edges that border the drop-off

.

2.7 Rest Areas

Application

This section applies to rest areas provided along accessible paths of travel within a facility or throughout exterior environments. Benches and seating are provided at rest areas and waiting areas for people who may have difficulty with standing or walking for extended periods or limited stamina.

Reference

Sec. 2.1 Ground and Floor Surfaces
Sec. 2.8 Seating, Tables and Work Surfaces
Sec. 3.3 Exterior Paths of Travel
Sec. 4.3 Interior Accessible Routes
Sec. 5.7 Lighting

2.7.1 Consultation Requirements

When constructing new or redeveloping existing exterior paths of travel that will be maintained, consultation on the design and placement of rest areas must occur with:

a. the public and persons with disabilities; and
b. the City of Windsor Accessibility Advisory Committee.

Note

Where rest areas are located in exterior environments, ensure surface has a slope no greater than 1:50 (2%) to allow suitable drainage, as well as maneuverability for users of mobility aids.

2.7.2 Design and Placement

To determine the provision and placement of rest areas, consider the input received through the consultation process and other factors such as available space, property requirements, and volume of pedestrian traffic, applicable to either exterior or interior environments. Rest Areas should be provided a distance no greater 100m apart to maximize the usability of the paths of travel for people with reduced stamina.

Where rest areas are provided: (**Figure 43**)

a. ensure ground and floor surfaces are firm, stable, and slip-resistant;
b. provide high colour / tonal contrast for seating compared to surroundings and through floor / ground finish and texture, to distinguish the rest area from the accessible path of travel;
c. provide clear ground / floor space a minimum of 920 mm wide by 1525 mm long to accommodate service animals, mobility aids or strollers;
d. where seating is provided, ensure seating is:
    i. stable or firmly mounted, and set back at a minimum of 600 mm from adjacent accessible path of travel;
    ii. designed with both backrests and armrests, with no arm rest required adjacent to the clear floor / ground space at transfer side;
    iii. between 450 mm and 500 mm high from the ground / floor surface;
    iv. designed based on other detailed requirements for benches (**Refer to Section 2.8, Seating, Tables and Work Surfaces**);
e. ensure they are located adjacent to an accessible route; and
f. provide a curb, a minimum 100 mm high or other protective barrier at rear of clear ground / floor space.
i. Ensure any curb is set back by a minimum of 300mm from the adjacent accessible path of travel to avoid tripping hazards.

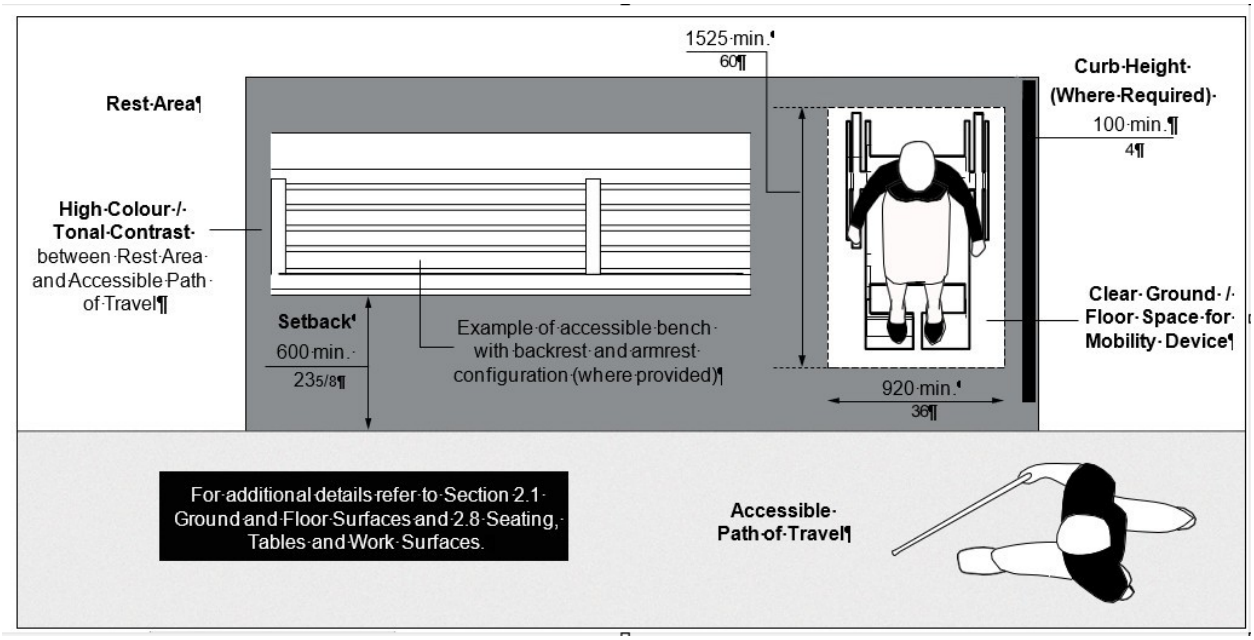


Figure 43 Rest Area - Plan View

2.8 Seating, Tables, and Work Surfaces

Application

This section applies to site and facility furniture, provided in exterior or interior environments which typically includes, but is not limited to seating (e.g., benches), tables, and work surfaces. Some common locations where site and facility furniture can be found are:

- rest areas and accessible routes.
- dining facilities
- waiting areas
- lobbies; and
- office environments

Reference

Sec. 6.2 Meeting and Multi-purpose Rooms

Sec. 6.4 Cafeteria and Dining Facilities

Sec. 6.5 Kitchens and Kitchenettes

Sec. 6.6 Libraries

Sec. 6.10 Service Counters

Sec. 6.11 Waiting and Queuing Areas

Sec. 6.13 Office Environments

Note

Furniture provisions should be reviewed on a case-by-case basis, specific to facility type and occupancy. Some locations may require more furnishings if high level of public traffic and use is expected.

2.8.1 Benches and Seats

Provision of benches and seats are typically recommended for people who may have difficulty with standing or walking for extended periods, limited stamina, or for users of mobility aids.

For accessible benches and seating: **Figure 44**

a. ensure seat height is between 450 mm and 500 mm above finished floor / ground;
b. ensure seat depth is between 330 mm and 510 mm;
c. provide back support, extending at a minimum of 320 mm above the seat surface, or affix the seat to a wall;
d. provide at least one (1) arm rest at a height between 220 mm and 300 mm from the seat for additional support with no arm rest required adjacent to the clear floor / ground space at transfer side;
e. ensure bench is always anchored and stable.
f. ensure seating surfaces provide high colour / tonal contrast with surroundings to enhance visibility.

Best Practice

Where multiple benches are provided, consider option of benches oriented to face each other. This arrangement allows people to see each other, which is beneficial for people with hearing and communication disabilities to facilitate interaction. Also consider different configurations for armrests and backrests.

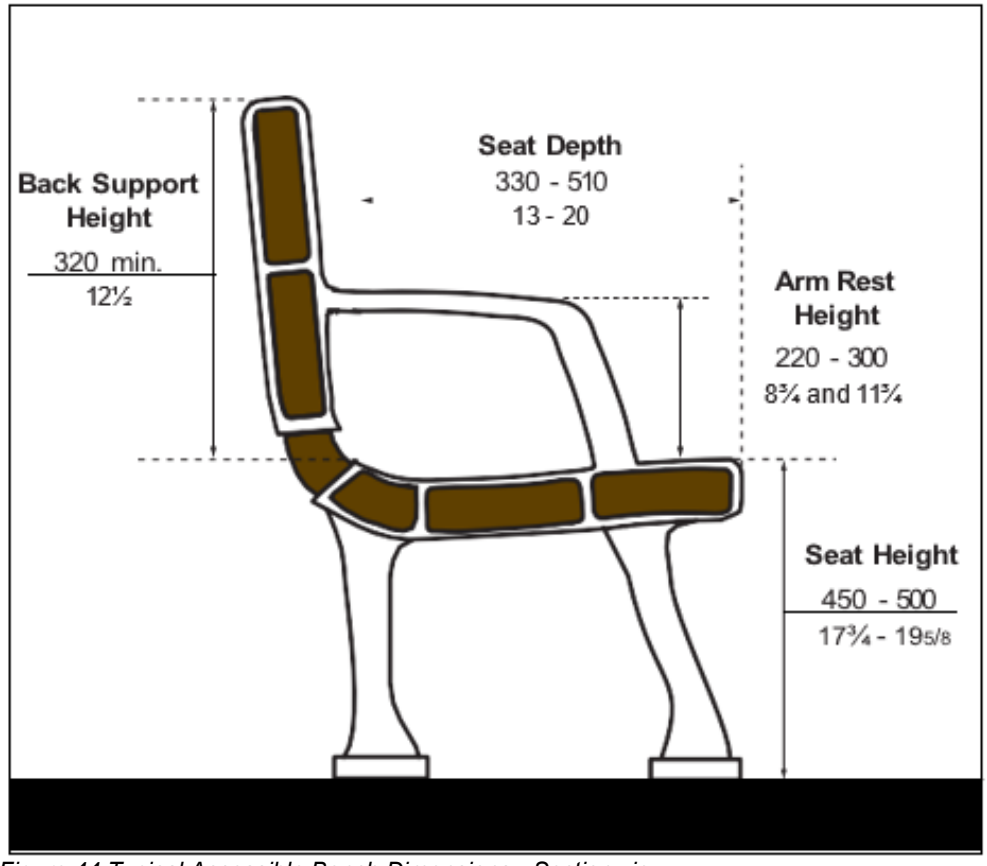


Figure 44 Typical Accessible Bench Dimensions - Section view.

2.8.2 Tables and Work Surfaces

For tables and work surfaces: (**Figures 45 & 46**)

a. ensure top surface is between 710 mm and 865 mm high;
b. provide clear knee space with a minimum of:
   i. 920 mm wide; and
   ii. 480 mm depth by 685 mm high;
c. where toe clearance is required based on table design, ensure toe space is a minimum of 350 mm high;
d. ensure top surface and edges provide a high colour / tonal contrast with adjacent surroundings to enhance visibility; and
e. ensure clear floor space provided at table and work surfaces for users of mobility aids is:
   i. a minimum of 920 mm wide by 1525 mm depth, with a maximum depth of 480 mm under the table, for a forward approach; or
   ii. a minimum of 1525 mm wide by 920 mm dept, for a side approach.

Note

Where one bench is provided, ensure it is accessible, with no arm rest provided adjacent to clear space and with a two-arm rest configuration: one provided at the other end and one in the middle. Where an arm rest is provided in middle of the bench, ensure it is located one seat- width from the transfer side of the bench with no arm rest. For example, a three-seat bench would have the middle arm at 1/3 of the width whereas a two-seat bench would have the middle arm at 1/2 of the width.

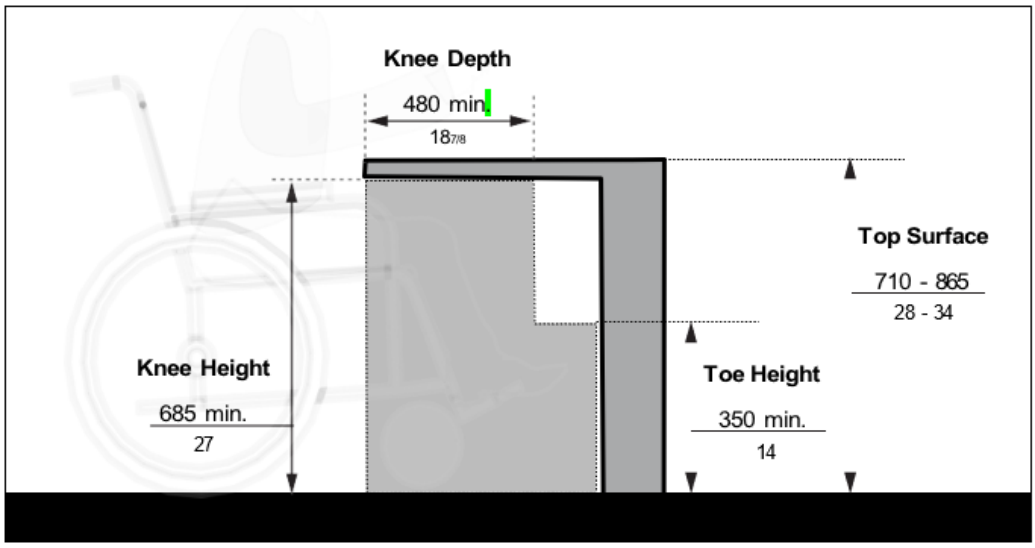


Figure 45 Knee and Toe Clearances - Elevation View

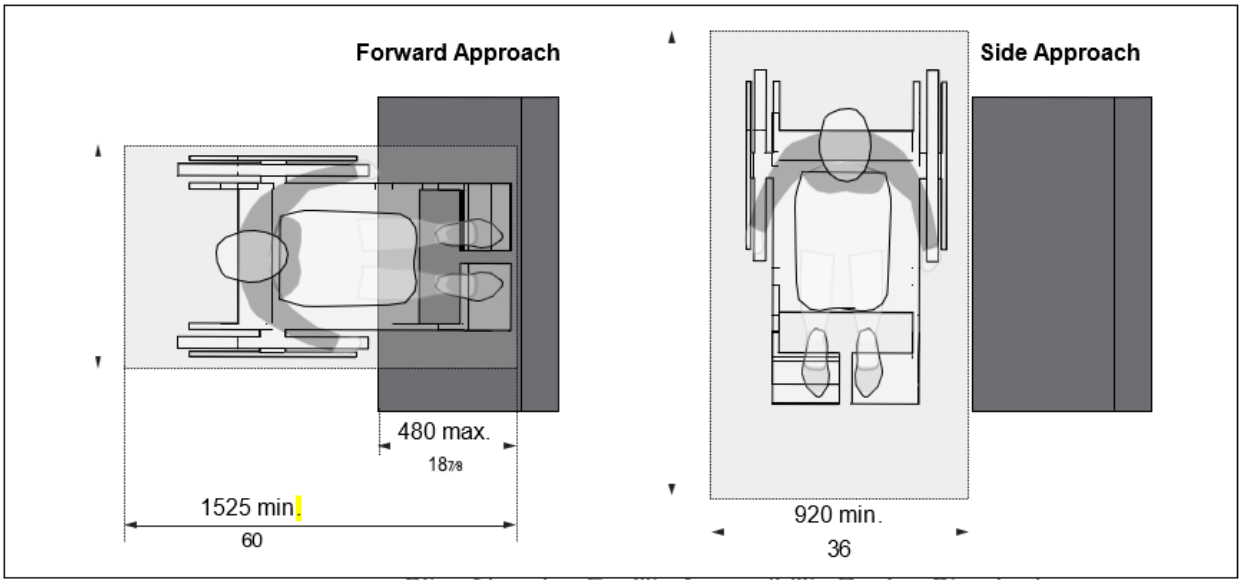


Figure 46 Clear Floor Space Requirements and Approach

2.8.3 Speaker Podiums

a. locate on an accessible route;
b. ensure they are height-adjustable for use from a seated or standing position, with automatic controls preferred;
c. provide clear floor space with a minimum of 920 mm wide by 1525 mm depth configured for forward approach;
d. provide clear knee space with a minimum of:
   i. 920 mm wide; and
   ii. 480 mm depth by 685 mm high;
e. ensure controls and operating mechanisms are mounted in compliance with **Section 5.1, Controls and Operating Mechanisms**.

Better Practice

To improve flexibility and comfort at tables and workspaces, where practical, provide adjustable tables and work surfaces that will allow persons with disabilities to change the height of a table to account for differing needs and mobility devices.

2.9 Drinking Fountains and Bottle Filling Stations

Application

This section applies to drinking fountains and bottle filling stations were provided throughout interior and exterior environments.

Reference

Sec. 3.3 Exterior Paths of Travel
Sec. 4.3 Interior Accessible Routes

2.9.1 Design and Layout

Where drinking fountain and bottle filling station fixtures are provided, ensure:

a. at least 50% are accessible on each floor level to all users, including lowered units for people using mobility aids, people of short stature, children, others who may have trouble bending and persons who have limited manual strength or dexterity, where there is more than one;
b. provision of an accessible, lowered unit, where only one is provided on a floor level;
c. they are located adjacent to an accessible route, recessed or with a leading edge that is cane detectable at a maximum of 680 mm high, if they protrude 100 mm or more into an accessible route; and
d. provision of high colour / tonal contrast, compared with background / surroundings for easy identification.

2.9.2 Clear Floor Space Requirements and Approach

Provide clear floor space as follows: (**Figure 47**)

a. a minimum of 920 mm wide by 1525 mm depth for forward approach;
b. a minimum of 1525 mm wide by 920 mm depth for side approach;
c. ensure one fully unobstructed side adjoins an accessible route or adjoins another clear floor area; and
d. ensure clear floor space does not overlap the minimum space of the accessible route used to access the drinking fountain.

Best Practice

The provision of two drinking fountains / bottle filling stations, one at lowered, accessible height and the other at standing height meets the needs of diverse users. Locating drinking fountains / bottle filling stations adjacent to the accessible route or recessing it in an alcove is preferred as it prevents potential bumping hazards.

Note

For standing use, spouts are located between 965 mm and 1090 mm above floor.

The space beneath the drinking fountain / bottle filling station may be included as part of the clear floor area or turning space, provided that appropriate toe and knee clearances are available for a forward or parallel approach to an unrecessed or partially recessed drinking fountain / bottle filling station.

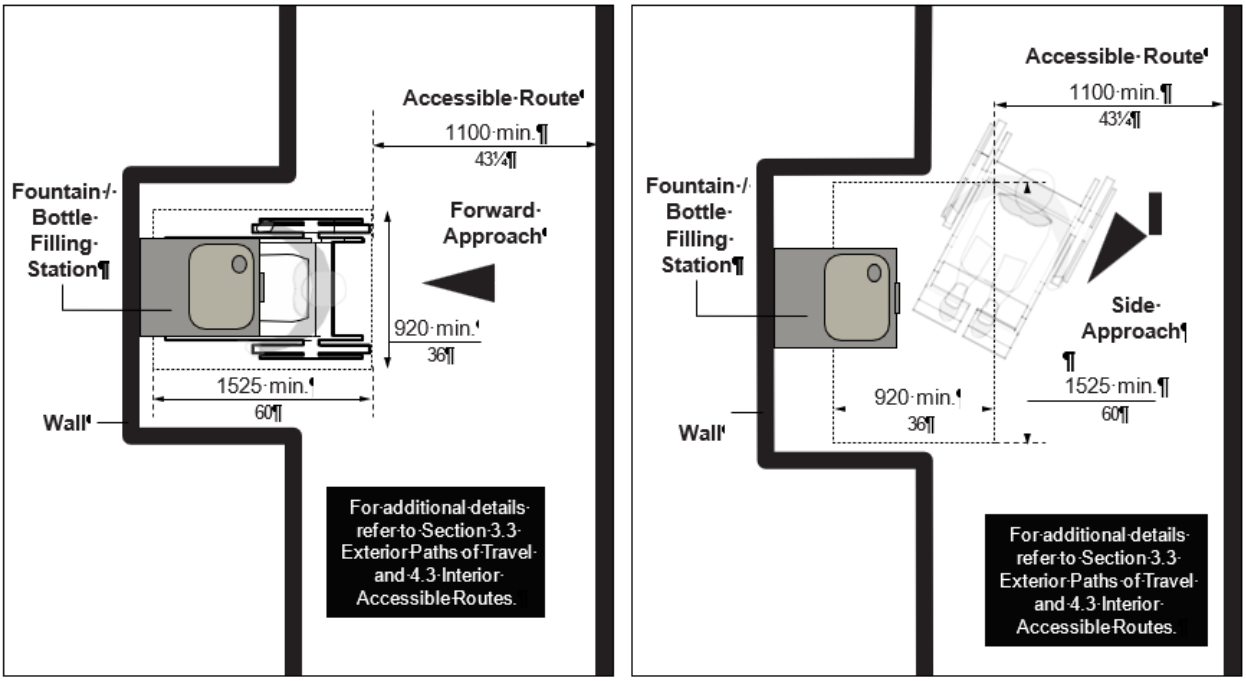


Figure 47 Knee and Toe Clearances - Elevation View

2.9.3 Knee and Toe Clearances

Where accessible, lowered drinking fountains and bottle filling stations are provided: (**Figure 48**)

a. ensure clear knee space under the fountain is 920 m wide by 200 mm depth at a minimum of 735 mm high above the floor;
b. ensure clear toe space under the fountain is a minimum of 350 mm high above finished floor to a depth a minimum of 300 mm measured from clear knee space; and
c. ensure the depth at the base of the fountain is a minimum of 700 mm.

2.9.4 Operating Controls

Ensure operating controls are: (**Figure 48**)

a. not foot-operated;
b. located at the front or on both sides of the drinking fountain; and
c. automatic or operable with one hand, requiring a force of no more than 22 Newtons (5.0 pounds) to operate without turning / twisting of the wrist or pinching of the fingers.

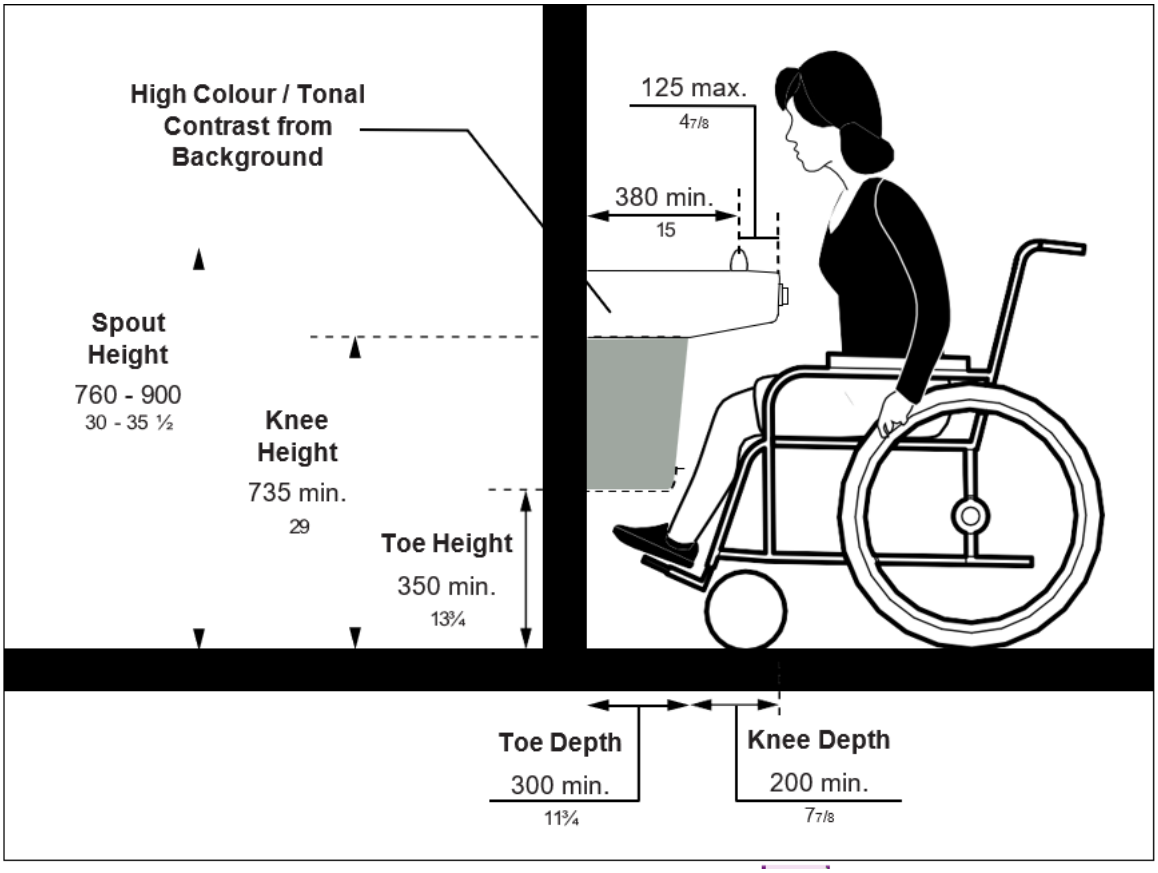


Figure 48 Drinking Fountain Design and Layout - Elevation View

2.9.5 Water Spout

For drinking fountain water spouts, ensure: (**Figure 48**)

a. a mounting height between 760 mm and 900 mm above the finished ground / floor for accessible units;
b. to locate at a maximum depth of 125 mm from the front edge of the drinking fountain, including bumpers, and 380 mm from the vertical support;
c. water flows / projects a minimum of 100 mm high; and
d. water flows / projects at a vertical angle of:
   i. 30 degrees maximum, where spouts are located less than 75 mm from the front of the unit; or
   ii. 15 degrees maximum, where waterspouts are located between 75 mm. and 125 mm from the front of the unit.

2.10 Materials and Finishes

Application

This section applies to key materials and finishes related to exterior ground and interior floor surfaces that address both accessibility and safety needs of diverse users, including users of mobility aids, and people with vision or hearing loss. Key strategies include:

- Preventing glare reflecting off surfaces.
- Providing smooth and non-abrasive surfaces where grasping is required;
- Ensuring no tripping due to uneven surfaces.
- Consistent application and strategic use of tactile features and high colour / tonal contrast, including for enhancing wayfinding as well as making elements of the built environment more prominent and easily identifiable; and
- Selecting materials and finishes that enhances overall mobility and accessibility for diverse users (e.g., firm, stable and slip resistant)

Note

Refer to other applicable sections of these standards, for detailed requirements related to the surfaces and finishes of tactile walking surface indicators (TWSI's), stairs, steps, ramps, and handrails. Preference should be given to concrete or asphalt for any accessible route unless otherwise specified.

2.10.1 Design Requirements

2.10.1.1 Exterior Finish Materials

Key accessible design requirements for exterior finish materials include:

a. surfaces for any accessible route to be firm, stable and slip-resistant, through the use and proper installation of:
   i. concrete;
   ii. asphalt;
   iii. precast paving / unit pavers;
   iv. interlocking brick / patio stones; and
   v. other decking (e.g., with level surface).
b. where wood decking is used, ensure:
   i. boards are laid perpendicular to the primary path of travel / accessible route;
   ii. joints are no greater than 6 mm wide, with variations in level of no more than 3 mm; and.
   iii. surface and spacing allows water to drain effectively and prevent any ponding / accumulation.
c. where gratings / grills are required as covers, ensure:
   i. to locate them off and away from the primary path of travel / accessible route;
   ii. spacing of bars are located perpendicular to the primary path of travel / accessible route; and
   iii. openings / spacing is a maximum of 13 mm.

Note

Refer to other applicable sections of these standards, for detailed requirements related to the surfaces and finishes of tactile walking surface indicators (TWSI's), stairs, steps, ramps, and handrails.

Preference should be given to concrete or asphalt for any accessible route unless otherwise specified.

2.10.1.2 Interior Finish Materials

Key accessible design requirements for interior finish materials include:

a. where carpeting is used, ensure it is:
   i. low-level loop construction;
   ii. 10 or 12-gauge non-static fibre; and
   iii. directly glued to sub-floor.
b. where hard, monolithic materials are used, ensure the surfaces are firm, glare-free and slip-resistant;
c. where floor tiles, bricks or pavers are used, ensure joints are flush (preferred) or a maximum of 6 mm; and
d. for all walls in corridors and key circulation spaces, or adjacent to key features such as stair or ramp handrails, ensure surfaces are non-abrasive from the floor level to a minimum of 2000 mm above the finished floor.

2.11 Texture and Colour

Application

This section applies to the effective use of texture and colour related to exterior ground and interior floor surfaces and finishes that address accessibility, wayfinding, and the safety needs of diverse users, including users of mobility aids, and people with vision or hearing loss. Key strategies include:

- Use of high colour / tonal contrast to assist with identifying elements or features from their mounting surfaces or surroundings, such as:
  i. tactile walking surface indicators compared to ground or floor;
  ii. a door handle compared to door surface / glazing; and
  iii. accessible signage background compared to mounting surface (e.g., wall);
- Avoiding the use of any extensive colors or colour patterns that can result in visual confusion, which is especially problematic for users with vision loss and people with cognitive disabilities. Color combinations should provide sufficient color contrast; and
- At the earliest phase of the design process, conduct a detailed review and study of how corridors are positioned as well as the overall exterior / interior layouts of spaces. This can then be coordinated with the later use of simple and consistent colour and texture patterns on floor and wall surfaces, which assists all users with navigating through spaces and areas, can support acoustical design for users with hearing loss, as well as overall wayfinding throughout an environment.

Reference

Sections 2, 3, 4, 5 and 6
Sec. 2.10 Materials and Finishes

Note

Other sections of these standards provide additional information related to the use of high colour / tonal contrast as well as textures and finishes where required and based on the specific design requirement or type of element / feature of the built environment.

2.11.1 Design Requirements

2.11.1.1 General Strategies

Key strategies related to effective use and provision of texture and colour for diverse settings include:

a. for exterior colour schemes, incorporating a high colour / tonal contrast, as a safety measure, to differentiate boundaries of objects, to distinguish objects from their background (e.g., accessible street furniture such as waste receptacles), and for enhancing overall spatial orientation;
b. provision of tactile walking surface indicators (TWSI's), either for attention or directional purposes, using either truncated domes or elongated directional bars, for suitable texture and identification by foot or by long- cane, as detailed in other applicable sections of these standards;
c. for exterior environments, use of stone texture for edging related to landscaping and pathways, which provide a distinct surface texture and contrast to the surroundings and that do not project, cause an obstruction or is a potential tripping hazard; and
d. applying carborundum or other textured surface that is non-slip and with a high colour / tonal contrast for either exterior or interior stair nosings and changes in elevation at ramp landings (e.g., to identify change in surface slope).

2.11.2 High Colour / Tonal Contrast

For both exterior and interior environments, the consistent and strategic use of high colour / tonal contrast is important for:

a. defining edges or boundaries of distinctive objects (e.g., stair nosings, doors, handrails, exit doors, curbing along exterior pathways, street furniture etc.), which also enhances safety and wayfinding, especially for users with vision loss;
b. visually defining the boundaries of open landscapes, accessible routes, interior corridors, rooms or spaces (i.e., where the wall meets the floor), including the use of baseboards in monochromatic interior environments that contrast with the adjacent wall and floor colour, to provide boundary definition, or raised edging and curbing for exterior environments;
c. enhancing wayfinding, exemplified when used:
i. as part of a signage band located on walls at eye level, a band can be easier to follow than monolithic wall coloring, and can be the visual cue for other essential signs;
ii. to visually identify end walls or return walls in long corridors, that also clearly identifies a change of direction or the end of the space;
iii. is part of supplementary textural cues (e.g., by using different but consistent floor textures, surfaces, or materials, in primary and secondary accessible routes);
iv. for spatial orientation and to clearly define edges or boundaries of materials, where they may change, such as carpeting or floor tiles where they define the junction between walls and floors, doorway recesses, and corridor intersections, for example; and
v. for exterior or interior signage systems (e.g., minimum 70% light reflectance value, or LRV is required). Refer to **Table 3** for examples of suitable high colour / tonal contrast.

Table 3 CNIB Recommendations on the Use of Colour / Tonal Contrast

Use noticeably different colour side by side to distinguish different key building elements. Examples of suitable combinations are:	
• Black/white • Yellow/black • Chocolate brown/white • Dark blue/white	• Dark red/white • Dark purple/white • Dark green/white • Orange/black
Avoid these colour combinations, which have limited / low contrast:	
• Yellow/grey • Yellow/white • Black/violet	• Red/black • Grey/white • Light blue/white
Avoid these colour combinations, which have limited / low contrast and are particularly difficult for people with colour blindness:	
• Red/green • Blue/green	

3.0 Exterior Elements

Table of Contents

3.1 Parking
3.2 Passenger Loading Zones
3.3 Exterior Paths of Travel
3.4 Curb Ramps and Depressed Curbs
3.5 Site Furniture
3.6 Landscaping, Materials, and Plantings

3.1 Parking

Application

This section applies to accessible parking spaces provided for the following types of exterior or interior parking facilities:

- parking garages or related structures (e.g., above or below grade);
- surface parking; and on street parking;

Reference

Sec. 2.1 Ground and Floor Surfaces
Sec. 3.3 Exterior Paths of Travel
Sec. 3.4 Curb Ramps and Depressed Curbs
Sec. 5.7 Lighting
Sec. 5.8 Signage and Wayfinding

Exception

Off-street parking facilities that are used exclusively to park the following types of vehicles:

- Buses
- Delivery vehicles
- Law enforcement vehicles
- Medical transportation vehicles, such as ambulances and impounded vehicles.

The requirements in respect of off-street parking facilities do not apply to off-street parking facilities if:

- the off-street parking facilities are not located on a barrier-free path of travel, regulated under Ontario's Building Code; and
- The facility is one of multiple off-street parking facilities on a single site that serves a building or facility, where appropriate accessible parking facilities are provided elsewhere on the same site.

3.1.1 Types of Parking

Two (2) types of designated accessible parking spaces are required were.
parking is provided: (**Figure 49**)

a. Type A spaces (minimum 3500 mm consist of wider parking spaces which accommodate larger vehicles such as vans that are equipped with transfer ramps and has signs that identifies the spaces as “VAN ACCESSIBLE”. An Accessible Permit is required to use these spaces;
b. Type B spaces (minimum 2500 mm) are standard accessible parking spaces. An Accessible Permit is required to use these spaces.

Best Practice

Four percent (4%) of the total number of parking spaces to be accessible. Ensure accessible parking spaces are **located as close as possible to any related site and facility** amenities (e.g., parking meters or payment / ticket machines, accessible routes, and entrances, etc.).

Where facilities may expect a higher proportion of people with disabilities using their services (e.g., Seniors’ Centers, Long Term Care and other medical facilities), the provision of additional accessible parking spaces is to be determined on a case-by-case basis. The appropriate number of spaces may be calculated based on the anticipated demand and a detailed review of the facility’s occupancy levels.

Recommendation

Consider additional non-permit spaces reserved for persons with limited mobility and caregivers that are equal in width and located near the entrance of a facility. These spaces are designed to accommodate people with limited mobility, expectant mothers, caregivers, and persons who use a Wheelchair, crutches, or stroller and may not be required at all facilities.

3.1.2 Provision

a. provide Type A and B spaces in accordance with requirements identified in **Table 4**. Note: Space dimensions are shown in brackets as (mm). This table is reproduced from section 24.24.1 of the City of Windsor Zoning By-Law.
b. where a parking facility serves multiple buildings or accessible entrances, distribute accessible parking spaces to enable users to park near as many accessible entrances as possible;
c. where more than one parking facility is provided at a site:
   i. ensure the number and type of accessible parking spaces provided is determined based on the total number of parking spaces required for each of the separate parking facilities; and
   ii. locate and distribute accessible parking spaces among the off-street parking facilities in a manner that provides equivalent or greater accessibility in terms of distance from an accessible entrance or user convenience (e.g., protection from weather, lighting, security, and comparative maintenance);
   e. where the parking facility is a multi-level parking facility, ensure the accessible parking spaces are easy to identify and have at least one accessible route leading to an entrance, exit, or elevator lobby.

Note

The values in **Table 4** are derived from formulas contained in the Windsor Zoning Bylaw.
The bylaw uses percentages to determine the number of accessible spaces and ratios to divide them between Type A or Type B.

Where an uneven number of accessible parking spaces are required, the extra Type B space may be changed to a Type A space.

Table 4 Parking Space Allocation

TOTAL NUMBER OF PARKING SPACES IN PARKING AREA	REQUIRED NUMBER OF ACCESSIBLE PARKING SPACES – MINIMUM	
	TYPE A	TYPE B
1 - 25	1 space	0
26 – 101	2% of parking spaces	2% of parking spaces
102 – 200	1.5% of parking spaces	0.5 space plus 1.5% of parking spaces
201 – 1000	0.5 space plus 1% of parking spaces	1 space plus 1% of parking spaces
1001 or more	5 spaces plus 0.5% of parking spaces	5.5 spaces plus 0.5% of parking spaces

3.1.3 On-Street Parking

3.1.3.2 Consultation Requirements

When constructing new or redeveloping existing on-street parking spaces, consultation on the need, location and design of accessible on-street parking spaces must occur with:

a. the public and persons with disabilities; and
b. the City of Windsor Accessibility Advisory Committee.

3.1.3.3 Additional Considerations

The City of Windsor provides special parking privileges in public parking areas and on public roadways to holders of a valid Accessible Parking Permit. Any person who holds an Accessible Parking Permit (APP) is eligible. Detailed information on the City's APP program, including on-street privileges, off-street privileges, and restrictions of the program can be found on the City of Windsor website.

3.1.4 Design and Layout

3.1.4.1 General Features

Note

Where two accessible parking spaces are provided adjacent to each other, they may share an access aisle **(Figure 49)**.

a. locate accessible parking spaces as close as possible to an accessible entrance and integrate with an accessible route;
b. maximum running slope of surface at 1.5%
c. maximum cross-slope of surface at 1%
d. ensure vertical height clearance of 2750 mm (exterior, minimum) or 2590 mm (interior, minimum) at designated parking spaces, along the vehicle access and egress routes, and at any vehicular entrance where required;
e. ensure ground surface is firm, stable and slip-resistant;
f. ensure spaces are clearly indicated by high colour / tonal contrasted and white colored line markings; and
g. for all types of spaces, provide consistent and minimum lighting level of 30 lux (3 foot candles) over designated parking spaces (all types). (**Refer to Section 5.7, Lighting**).

Best Practice

Ensure accessible parking spaces are located within a maximum of 30 m from accessible entrance(s). Accessible parking spaces and adjacent access aisles should be regularly maintained, kept clear of debris and snow, and have overhead protection for users from the elements. Avoid having the accessible route cross through a drive aisle. Pedestrians should not have to travel behind parked vehicles or move along roadways. Ensure any pedestrian crossing or travel area is clearly marked so it is visible to drivers and pedestrians. Where spaces are configured such that the front or rear of parked vehicles is immediately adjacent to a pedestrian walkway, consider a design that prevents vehicle overhangs which could reduce the width of the walkway.

3.1.4.2 Perpendicular Parking Space Layout

Where designated accessible parking spaces (e.g., perpendicular layout) are provided: (**Figure 49**)

a. ensure minimum width of:

i. 3400 mm for “Type A” van accessible spaces;
ii. 3400 mm for “Type B” standard parking spaces

b. provide an access aisle, for Type A and B spaces, adjacent and parallel to each accessible parking space that:
   i. is a minimum of 2000 mm wide, or 1500 mm wide where technically infeasible in a retrofit application;
   ii. extends the full length of the space and does not cross any vehicular route;
   iii. is clearly indicated by high color / tonal contrast diagonal pavement markings, and where protected by bollards (optional), with a minimum clear width of 1220 mm between bollards; and
   iv. connects with adjacent accessible path of travel, through level access, curb ramp (centered on access aisle) or depressed curb (with required tactile walking surface indicator (TWSI) / tactile attention indicator (TAI);
c. ensure length of 5500 mm; and
d. ensure provision of vertical signage, centered in front of the parking space and pavement signage, centered near the back of the parking space.

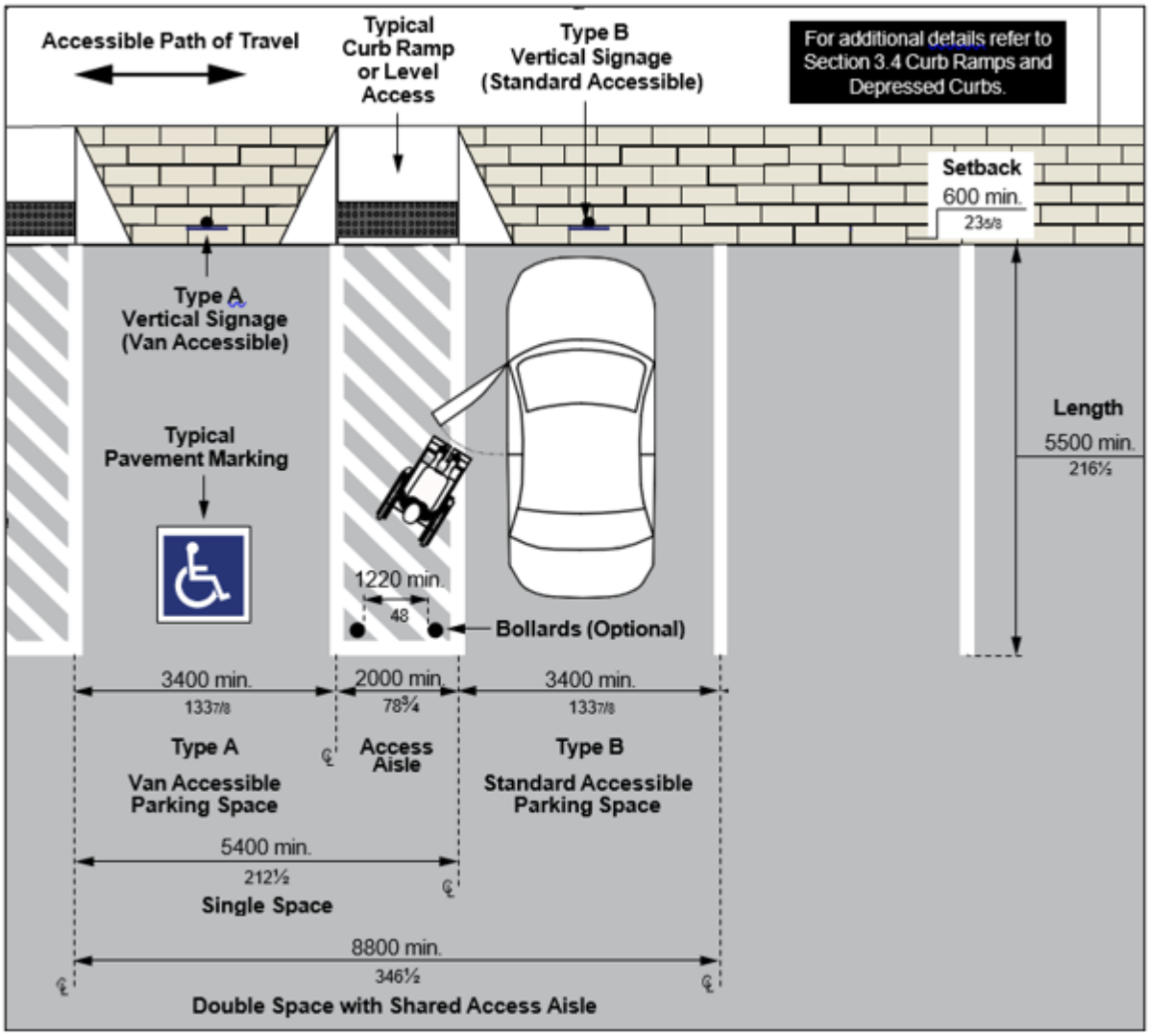


Figure 49 Perpendicular Accessible Parking Space Dimensions - Plan View

3.1.4.3 Parallel Parking Space Layout

Where parallel parking spaces are provided: (**Figures 26b, 27a, 27b & 28a**)

a. ensure minimum width of 3900 mm;
b. ensure minimum length of 5400 mm;
c. provide access aisle at rear of space or recessed into adjacent boulevard. that:
   i. extends full width or length of space;
   ii. is 2000 mm wide preferred, or a minimum of 1525 mm. wide, where technically infeasible due to roadway, boulevard and parking space layout constraints;
   iii. is clearly indicated by high tonal contrasted and white coloured diagonal. pavement markings; and
   iv. leads directly to an accessible curb ramp and path of travel;
d. provide a minimum clear space of 2500 mm by 2500 mm. at sidewalk level and adjacent to the passenger side or recessed access aisle; and
e. ensure provision of vertical signage, Type A, located at the front of space (on the sidewalk) and pavement signage, centered in the parking space.

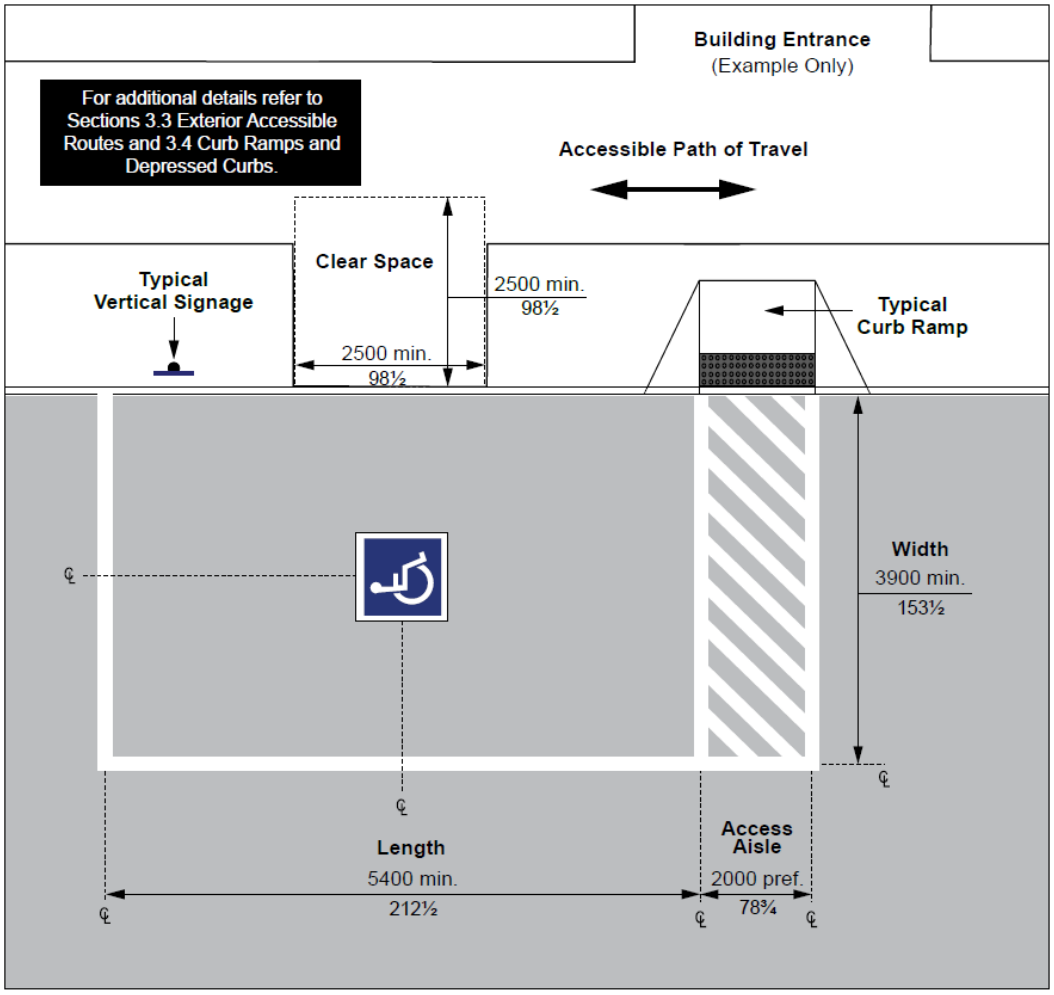


Figure 50 Parallel Parking Space Dimensions - Plan View

3.1.5 Signage and Pavement Markings

> **Note**
>
> Refer to the City of Windsor's Parking By-law for signage requirements.
> Wherever possible, locate parking signs away from pedestrian routes, as they may constitute an overhead and / or projection hazard.

For signage and pavement markings: (**Figures 50,51,52**)

a. ensure spaces are clearly designated with pavement markings and vertical signage, containing the International Symbol of Accessibility or symbol for limited mobility;
b. provide directional signage with appropriate directional arrows, marked with the International Symbol of Accessibility, to indicate the location of accessible parking spaces, and / or the location of the nearest accessible entrance if the spaces or entrance are not easy for users to locate when entering or using the site; and
c. for indoor parking facilities, incorporate a sign at the vehicle entrance indicating the minimum overhead clearance at the accessible parking spaces and along the vehicle access and egress routes.

3.1.5.1 Vertical Signage



Vertical signage is required as follows: (**Figures 50, 51, 52**)

a. mark with International Symbol of Accessibility or symbol for limited mobility, which must not be mounted on fences or building faces;
b. ensure a minimum size of 300 mm wide by 450 mm high;
c. mount at height of 1500 mm (59 in) to 2000 mm centered (e.g., wall or post-mounted), from ground / floor and in front of space, with a maximum set back 600 mm from the front edge of the parking space;
d. ensure a high colour / tonal contrast is provided between sign and background environment or mounting surface;
e. provide information text, compliant with City By-law requirements; and
f. provide signage that identifies Type A spaces as "VAN ACCESSIBLE."

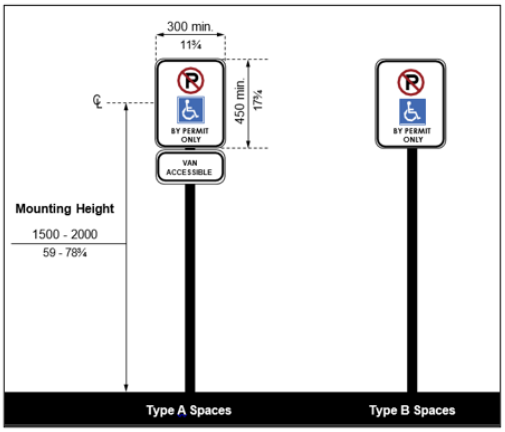


Figure 51 Designated Parking Spaces, Vertical Signage - Mounting Height and

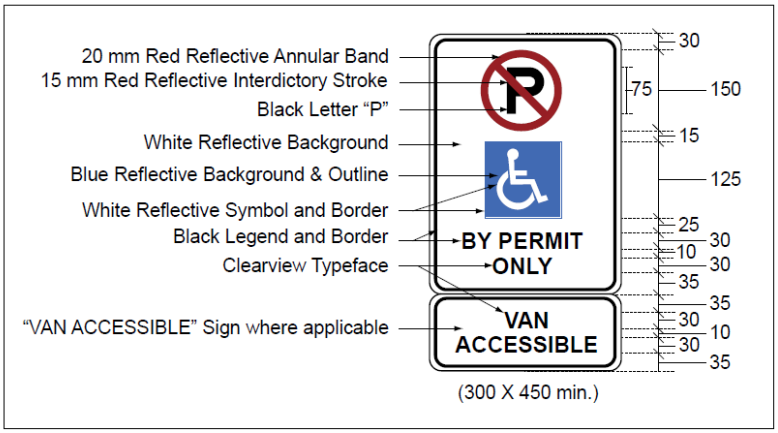


Figure 52 Type A Vertical Signage - Detailed Dimensions

3.1.5.2 Pavement Marking

a. mark with International Symbol of Accessibility (**Figure 52,53**)
   i. ensure 1525 mm wide by a minimum of 1525 mm depth;
   ii. provide a white or yellow border with a blue background field colour.
   iii. locate centered, near the back of the space for perpendicular (e.g., 90 degree) or angled parking spaces and centered for parallel parking spaces; and

b. ensure all pavement markings are slip resistant and clearly visible through use of high colour / tonal contrast compared to the surface of the parking space.

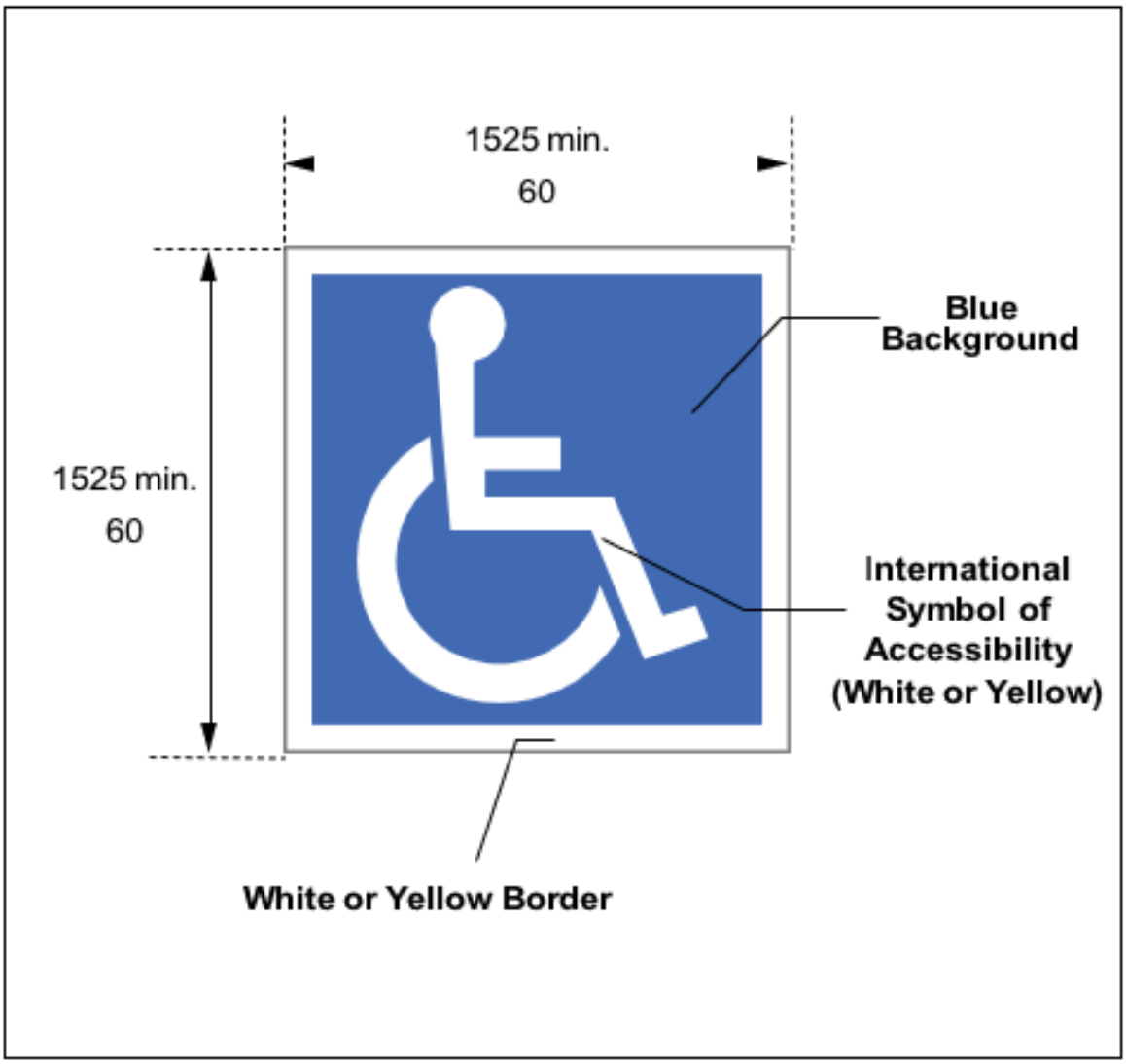


Figure 53 Accessible Parking Pavement Marking

3.2 Passenger Loading Zones

Application

This section applies to exterior passenger loading and drop-off zones where passengers transfer from vehicles to a pedestrian area which provides an accessible route to a facility.

Passenger loading and drop-off zones are important features for:

- people who have difficulty walking long distances or have limited stamina.
- users of Mobility devices
- people who travel with companions or caregivers (e.g., person with vision loss or cognitive disability, the very young, and seniors).

Reference

Sec. 2.6 Tactile Walking Surface Indicators
Sec. 3.3 Exterior Paths of Travel
Sec. 3.4 Curb Ramps and Depressed Curbs
Sec. 5.7 Lighting
Sec. 5.8 Signage and Wayfinding

Note

Transit stops; shelters and related amenities are not classified as part of passenger loading zones.

If the passenger loading zone is a designated mobility transit stop or zone, it shall comply with all relevant City by-laws.

3.2.1 Design and Layout

Where a passenger loading zone (PLZ) is provided: (**Figures 54 & 55**)

a. locate the Passenger Loading Zone (PLZ) as close as possible to the primary accessible entrance or a recommended to be within 30 m of an accessible entrance.
b. locate the PLZ away from any traffic flow and design so that users avoid entering any adjacent vehicular routes and drive aisles;
c. where practical, provide overhead protection (e.g., a canopy to protect users from weather conditions) with a minimum clearance (i.e., vertical dimension) of 3600 mm throughout vehicular pull-up space and passenger loading zone;
d. include a side access aisle that:
    i. is adjacent, parallel and at the same level as the vehicular pull-up space;
    ii. is a minimum of 2440 mm wide by 7400 mm long;
    iii. provides a minimum clearance height of 3600 mm at the vehicle pull-up space and along the vehicle access and egress routes, with signage indicating the clearance height; and
    iv. provides diagonal pavement markings (e.g., yellow, or white colour and are clearly visible through use of high colour tonal contrast compared to surface), extending the full length of the space;
e. provide at least one curb ramp, for users of mobility aids, where there is a change in level;
f. where the accessible route and the access aisle are not separated by a curb and level access is provided, install tactile walking surface indicators (TWSI's) that:
    i. are detectable by foot or cane;
    ii. are clearly visible using high colour / tonal contrast compared to adjacent mounting surface;
    iii. extend across the full length of the space; and
    iv. meet the requirements identified for tactile attention indicator (TAI) surfaces (Refer to Section 2.6, Tactile Walking Surface Indicators).

Recommendation

Consider adding additional curb ramps rather than a single extended curb ramp to better identify paths of travel and reduce accidental encroachment of vehicles onto surface ramp areas.

3.2.2 Vertical Signage

Vertical signage is required as follows: (**Figure 56**)

a. mark with the International Symbol of Accessibility to formally designate passenger loading and drop-off zones;
b. ensure a minimum size of 300 mm wide by 450 mm high;
c. mount at height of 1500 mm to 2000 mm centered (e.g., post-mounted), from ground / floor; and
d. provide information text, compliant with City By-law requirements (e.g., “ACCESSIBLE LOADING ZONE”).

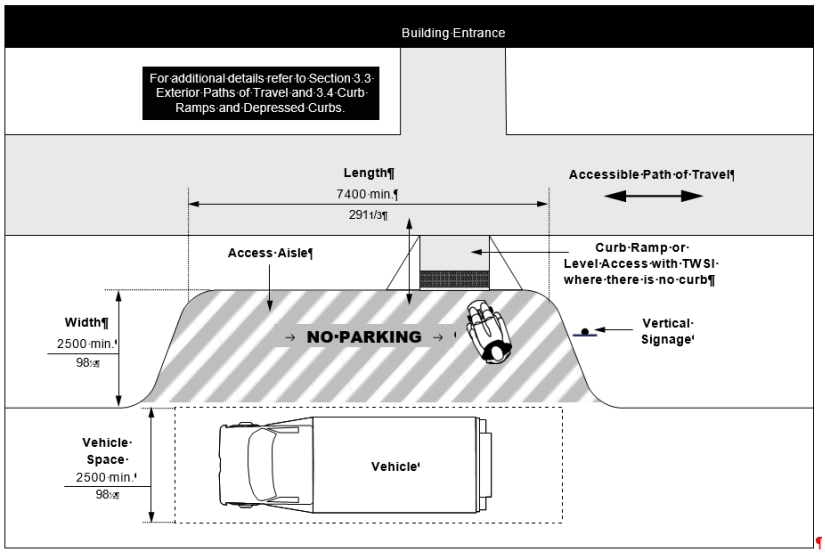


Figure 54 Passenger Loading Zone - Plan View

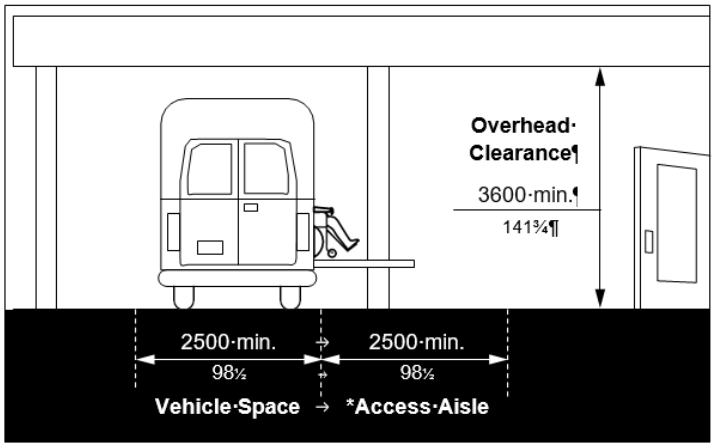


Figure 55 Clearances at Passenger Loading Zone (Refer to Note*

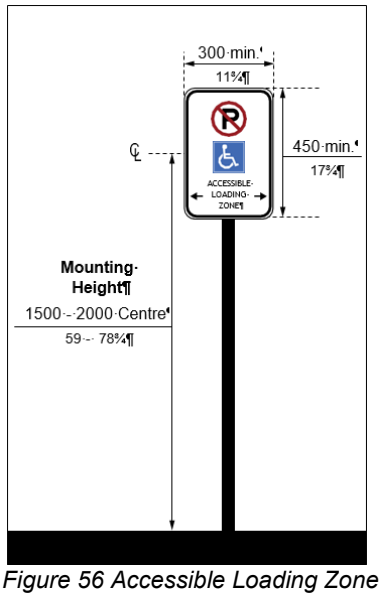


Figure 56 Accessible Loading Zone

3.3 Exterior Paths of Travel

Application

This section applies to exterior paths of travel, which typically include, but are not limited to • pedestrian circulation routes that serve as connections between the property line / site boundary of a facility, or at facility entrances, exits, elements or amenities;

• public rights-of-way (e.g., sidewalks and walkways);
• ramps; and
• curb ramps and depressed curbs.

This section applies to sidewalks or walkways used for pedestrian travel, intended to serve a functional purpose and that do not provide a recreational experience.

Reference

Sec. 2.1 Ground and Floor Surfaces

Sec. 2.2 Ramps

Sec. 2.4 Guards and Handrails

Sec. 2.5 Overhanging and Protruding Objects

Sec. 2.6 Tactile Walking Surface Indicators

Sec. 2.7 Rest Areas

Sec. 3.4 Curb Ramps and Depressed Curbs

Sec. 5.7 Lighting

Accessible Route

A continuous, unobstructed path (interior or exterior) connecting users to accessible elements, features, amenities, and spaces. Typically, accessible routes include parking access aisles, pedestrian sidewalks and curb ramps and interior corridors, floors, elevators and ramps.

Note

Shallower slopes for ramp surfaces are always preferred.
Walkways that are part of an exterior accessible route / path of travel having a slope steeper than 1 in 20 (5%), must be designed as ramps.

3.3.1 General Features

For exterior accessible routes or paths of travel: (**Figure 57**)

a. ensure ground surfaces are firm, stable and slip-resistant;
b. provide adequate drainage to prevent water accumulation;
c. ensure headroom clearance is not less than 2100 mm;
d. provide lighting levels consistently over frequently used pedestrian routes, including walkways and paths, at a minimum 50 lux (5 foot candles), measured at the ground (**Refer to Section 5.7, Lighting**);
e. provide a high colour / tonal or textural contrast on ground surfaces to help define primary accessible routes and assist with wayfinding;
f. where a pedestrian route crosses or joins a vehicular route and the walking surfaces are not separated by curbs, railings or other elements between the pedestrian and vehicular areas, provide tactile attention indicators (TAI), continuous along the full length of the crossing boundary (Refer to Section 2.6, Tactile Walking Surface Indicators); and
g. consider providing level rest areas and stopping places along the path of travel, especially sloped walkways, no greater than 100m apart, for users of mobility aids and people with reduced stamina and meet the requirements identified for rest areas and seating (**Refer to Section 2.7, Rest Areas**).

3.3.2 Clear Width

Provide required clear width as follows: (**Figures 57 & 58**)

a. provide a minimum clear width of 1500 mm or 1830 mm preferred for higher traffic areas and to allow two users of mobility aids to pass; where possible
b. where the clear width of exterior paths of travel is less than a minimum of 1830 mm, provide a minimum passing area, 1830 mm wide by 1830 mm long at intervals of 30 meters or less in high mobility areas
c. where passing areas are provided, ensure they are not considered to be part of any rest area that may also be provided; and
d. ensure the entrance to exterior paths of travel provide a clear opening a minimum of 950 mm, whether the entrance includes a gate, bollard, or other entrance design.

3.3.3 Running and Cross Slopes

For exterior accessible routes or paths of travel, provide required running and cross. slopes as follows: (**Figures 60 & 61**)

3.3.3.1 Running Slope

a. ensure maximum running slope is 1:20 (5%), excluding curb ramps, or design as a ramp if running slope exceeds 1:20 (5%); and
b. where the exterior path of travel is a sidewalk, a running slope greater than 1:20 (5%) is allowed but it cannot be steeper than the slope of the adjacent roadway.

3.3.3.2 Cross Slope

a. provide a maximum cross slope of 1:50 (2%), where the surface is asphalt, concrete or some other hard surface

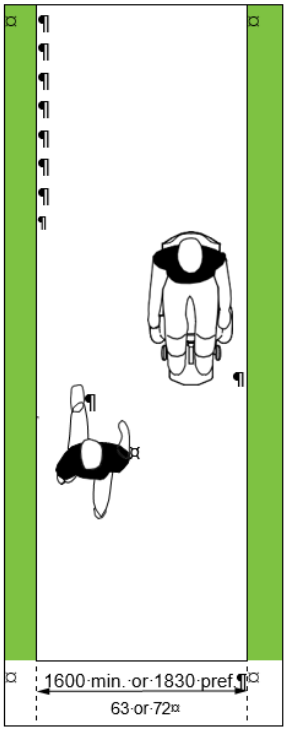


Figure 57 Minimum -Clear Width of Exterior Path of Travel

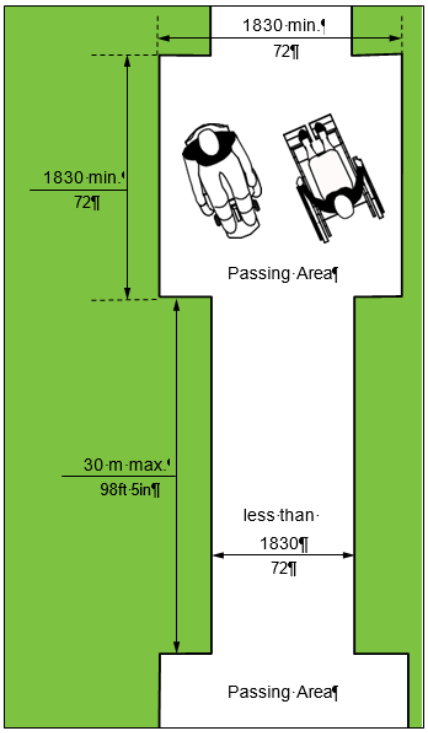


Figure 58 Reduced Clear Width and Required Passing Area

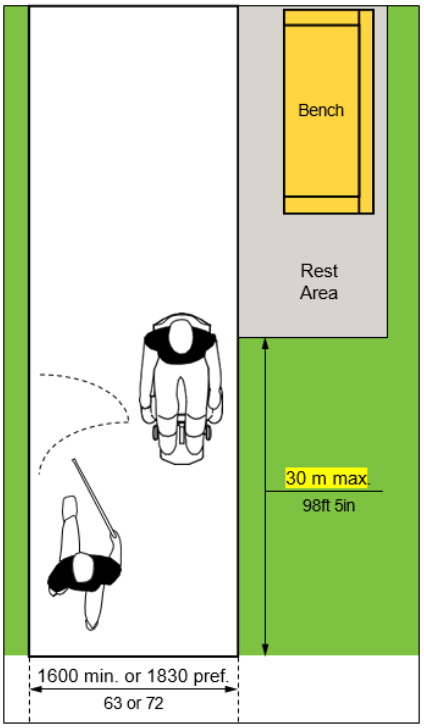


Figure 59 Rest Area

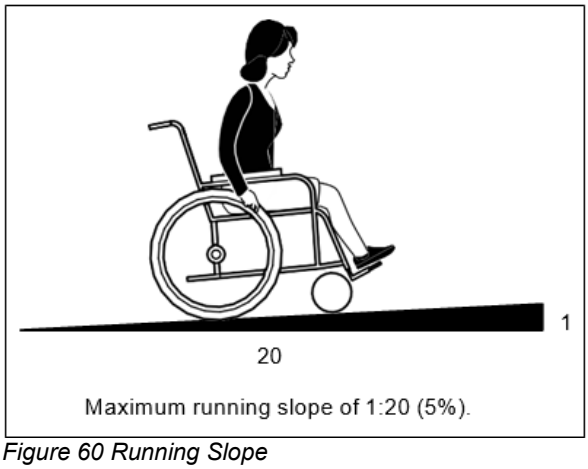


Figure 60 Running Slope

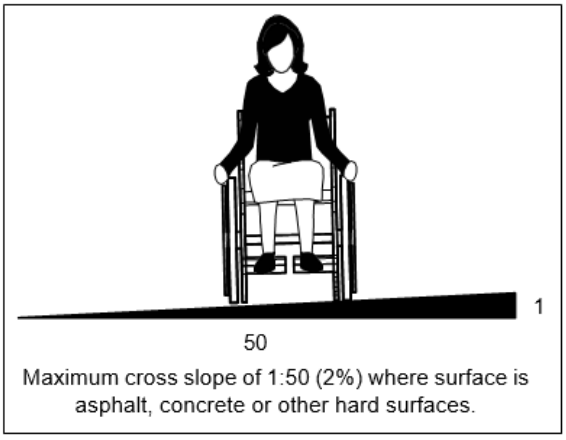


Figure 61 Cross Slope

3.3.4 Changes in Level

a. where there is a change in level or drop-off immediately adjacent to the accessible path of travel: **(Figures 62 & 64) (please note Figure 62 is not a preferred method)**

I. provide colour contrasted curb or other barrier protection, minimum of 100 mm high above path of travel, where change in level is between 200 mm and 600 mm; and
ii. provide guards mounted at a minimum height of 1070 mm, measured vertically to the top of the guard from the ground surface, where change in level is more than 600 mm or where the adjacent surface within 1200 mm from the acces2.11sible route has a slope of more than 1:2;

b. ensure slope requirements are provided, based on the height of the level change (**Refer to Section 2.1, Ground and Floor Surfaces**).

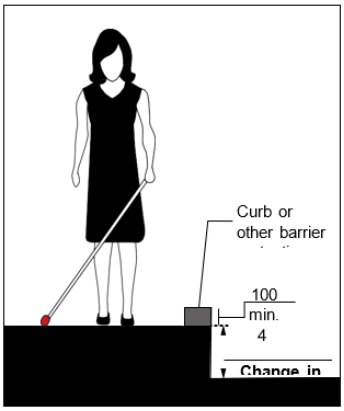


*Figure 62 Change in Level - Edge Protection Required **(not a preferred method)***

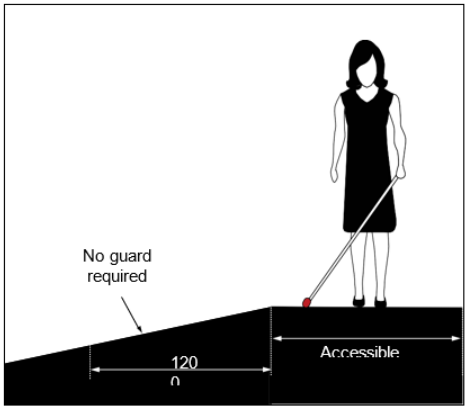


Figure 63 Exception - No Guard Required

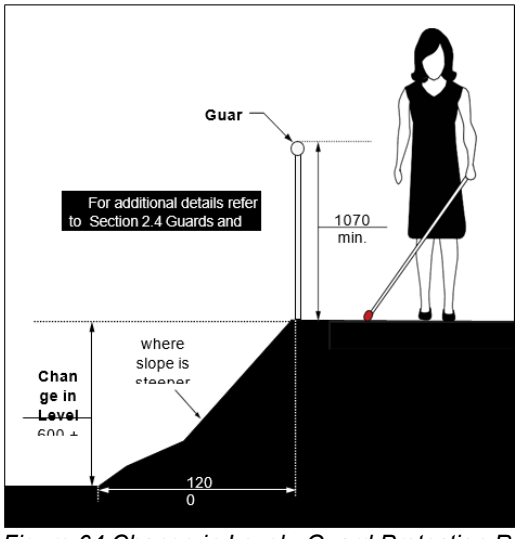


Figure 64 Change in Level - Guard Protection Required

3.3.5 Rest Areas

When constructing new or redeveloping existing exterior paths of travel intended to be maintained, **Refer to Section 2.7, Rest Areas**.

3.4 Curb Ramps and Depressed Curbs

Application

Curb ramps and depressed curbs help people with disabilities safely and independently negotiate level changes on public sidewalks and other pedestrian routes. They are required when there is a change in level between the exterior path of travel and adjacent vehicular route. The provision of curb ramps and depressed curbs ensures a continuous accessible path of travel between vehicular and pedestrian routes, for the following typical locations:

- pedestrian crossings at intersections;
- parking spaces, passenger loading zones and related access aisles; and
- any other exterior pedestrian route where there are elevation changes.

The choice between providing a curb ramp or a depressed curb depends on physical characteristics, volume of pedestrian traffic and space availability. The flared sides of the curb ramps provide additional directional assistance, however, having a raised curb between curb ramps may not be suitable for high pedestrian traffic locations, or possible due to intersection geometry, and therefore a depressed curb may be required.

Note

"Curb ramp" means a ramp that is cut through a curb at a roadway and slopes up to a sidewalk. Types are usually categorized by their structural design and how they are positioned relative to the sidewalk and roadway. Permitted curb ramp types include:

- perpendicular - one that is aligned so that the ramp is generally perpendicular to the centerline of the roadway, and users will generally be travelling perpendicular to traffic when they enter the street at the bottom;
    - parallel - one that has two ramps leading towards a center level landing at the bottom; and
- combination of perpendicular and
- parallel.

"Depressed curb" means a seamless gradual slope at transitions between sidewalks and walkways, typically used at intersections.

3.4.1 Design and Layout

Key design requirements for curb ramps and depressed curbs include:

a. a stable, firm, and slip-resistant surface with a smooth transition between curb ramp and adjacent surfaces (e.g., roadway, sidewalk, and top landing);
b. align the curb ramp or depressed curb with the direction of travel (e.g., crosswalks) and with the curb ramp or depressed curb on the opposite side of the roadway to help users orient themselves and to allow someone to maintain a straight line of travel, especially for users with vision loss;
c. design to provide suitable drainage, to prevent water, snow, and ice accumulation within the accessible path of travel; and
d. ensure gratings and other openings are not placed on curb ramps, depressed curbs or within pedestrian crossings.

Best Practice

Provide a landing of 1700 mm by 1700 mm or more where it is possible to accommodate larger wheeled mobility aids.

Note

It can be difficult for people with visual disabilities to orient themselves relative to the crosswalks at larger corners of intersections designed with depressed curb ramps.

Alternatively, consider providing a full height curb around the corner radius with appropriate transitions between the separate depressed curbs or curb ramps at each crosswalk.

RECOMMENDATION

Depressed curbs at large intersections can be difficult to navigate for people with visual disabilities. Consider providing full height curbs around the corner radius with appropriate transitions between depressed cubs or curb ramps where it is practical.

3.4.2 Width

Provide clear width as follows: (**Figures 67 & 68**)

a. a minimum clear width of 1500 mm, exclusive of flared sides;
b. where the width of the sidewalk is greater than 1500 mm, provide a curb ramp with the same width as the sidewalk, exclusive of flared sides; and
c. where the alternate curb ramp configuration is used, the width of the top of the depressed curb may be reduced to a minimum of 1220 mm.

3.4.3 Running and Cross Slopes

For the running and cross slopes, ensure: (**Figure 66**)

a. maximum running slope is between 1:50 and 1:20 (2% and 5%);
b. for retrofit applications (e.g., where it is technically infeasible to achieve these slopes), provide a maximum running slope of 8%;
c. maximum cross slope of 1:50 (2%); and

d. Where technically feasible and where the counter slope at a curb ramp or depressed curb is greater than 11%, provide a transition area that:
   i. extends the full width of the curb ramp;
   ii. begins at the base of the curb ramp and extends to a length of at least 600 mm on the street; and
   iii. has a maximum cross slope of 1:50 (2%).

3.4.4 Flared Sides

For flared sides, ensure: (**Figures 65 & 67**)

a. surface is stable, firm, slip-resistant and non-glare;
b. the sides are clearly demarcated with grooved edges;
c. a maximum cross slope between 8-10% provided, measured parallel to the curb line, where pedestrians are likely to walk across them; allow
d. a minimum clear width of 1500 mm.

Note

Flared sides are not considered part of the accessible path of travel. Landings are not required at depressed curb ramps since the associated shallow slope of the surface is suitable. Landings shall be permitted to overlap other landings and clear space.

Concrete border width around TAI may be increased and adjusted to suit corner geometry.

3.4.5 Landing

For landings, ensure: (**Figures 68 & 71**)

a. a level landing at a minimum length and width of 1220 mm is provided at the top of the curb ramp or a level rest area at a minimum length of 1400 mm for curb ramps at wide median sidewalk crossings;
b. an additional landing if users must change direction while using the curb ramp; and
c. running and cross slopes are a maximum of 2% (1:50).

3.4.6 Tactile Attention Indicators (TAI)

Where curb ramps or depressed curbs are provided on an exterior path of travel, provide tactile attention indicators (TAI), as follows: (**Figures 65, 67 & 68**)

a. at the bottom portion of the curb ramp or depressed curb, set back 150 mm to 200 mm from the back edge of the curb, and follow any curvature in the curb;
b. are installed in concrete and with a minimum 150 mm concrete border around the TAI for locations within a non-concrete sidewalk or walkway;
c. are installed with the tops of the domes level with the adjacent concrete surface;
d. have drainage cuts from the lower corners and other low points of the TAI to the curb;
e. have a minimum depth of 610 mm
f. ensure the TAI extends along the full width of the curb ramp;
g. for depressed curb ramps, ensure TAI extends along the bottom portion of the depressed curb that is flush with the roadway, and to a minimum width of 1525 mm; and
h. for detailed requirements related to TAI surfaces, Refer to Section 2.6, Tactile Walking Surface Indicators.

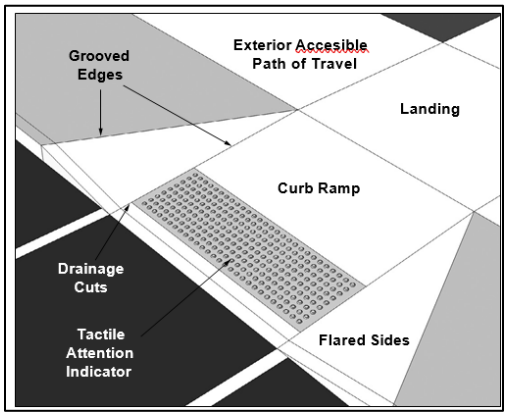


Figure 65 Typical Curb Ramp Features

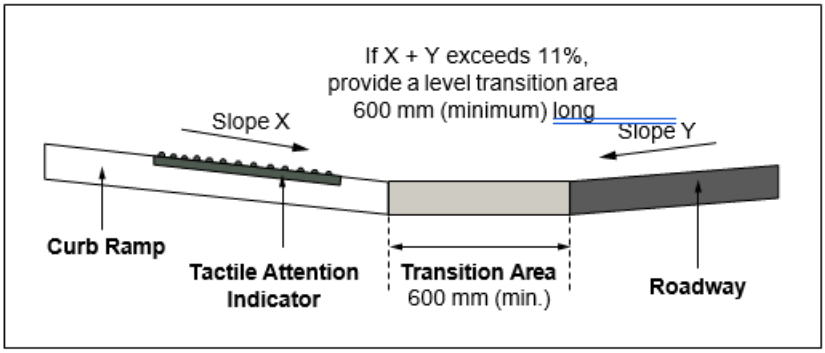


Figure 66 Transition Area - Counter Slope

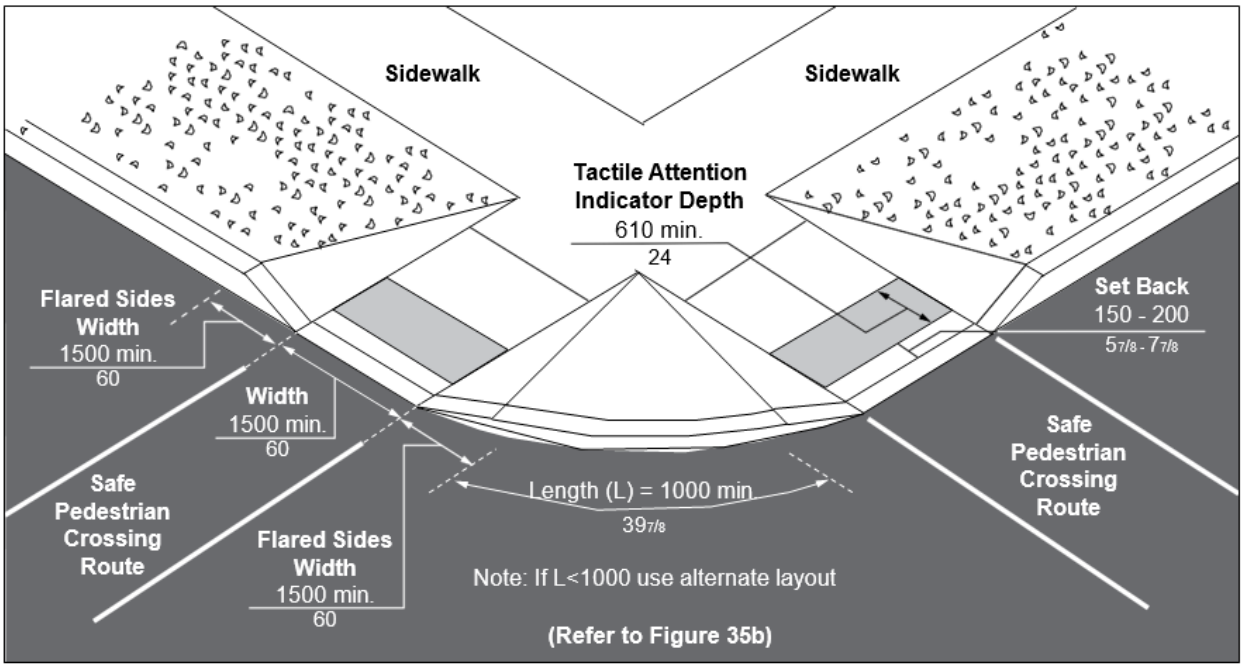


Figure 67 Standard Curb Ramp

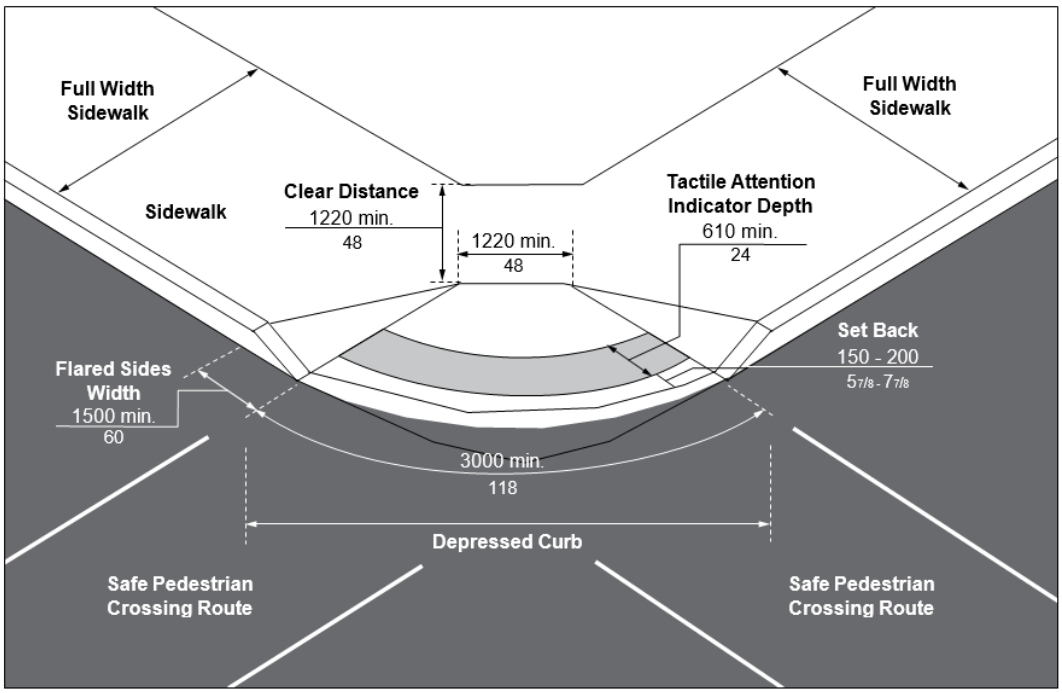


Figure 68 Alternate Curb Ramp: Depressed Curb

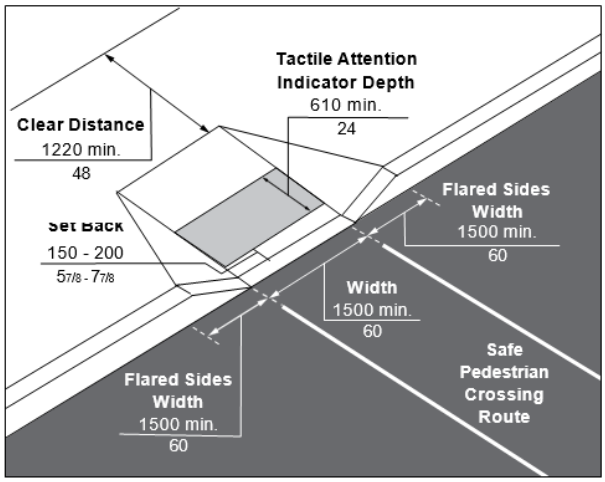


Figure 69 Curb Ramp at Mid-Block Crossing

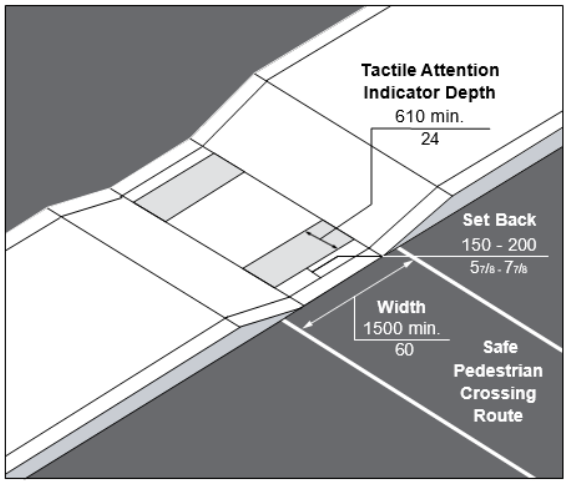


Figure 70 Curb Ramp at Narrow Median Crossing

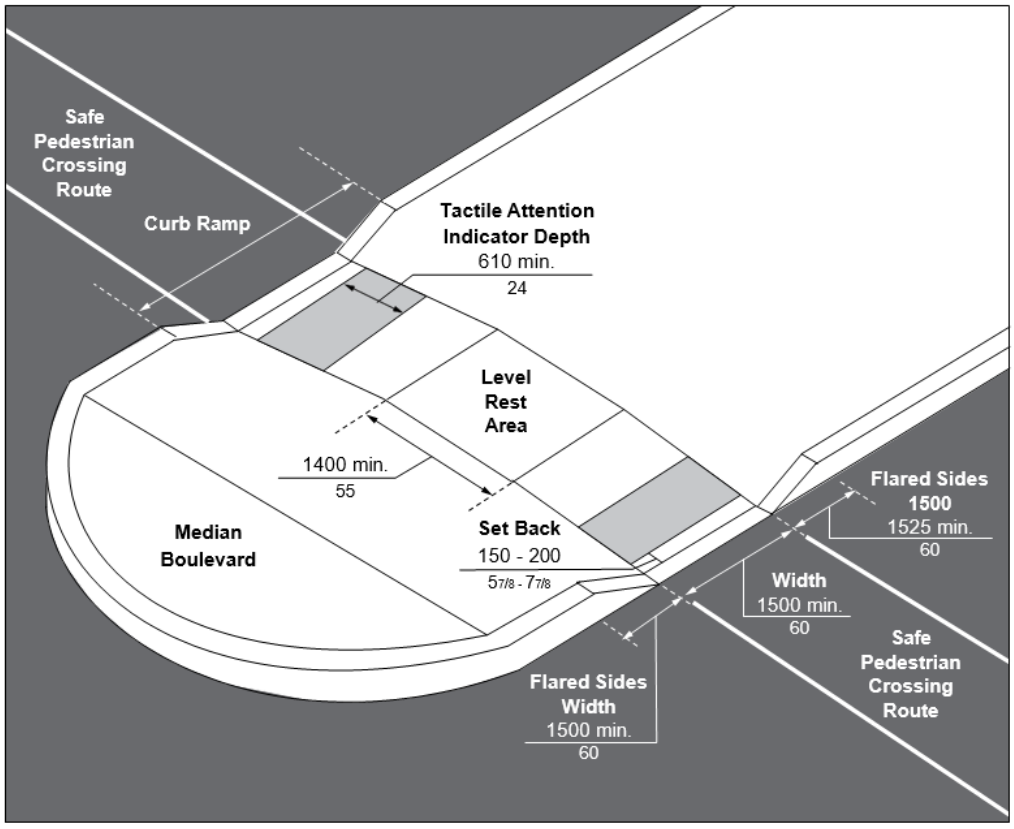


Figure 71 Curb Ramp at Wide Median Sidewalk Crossing

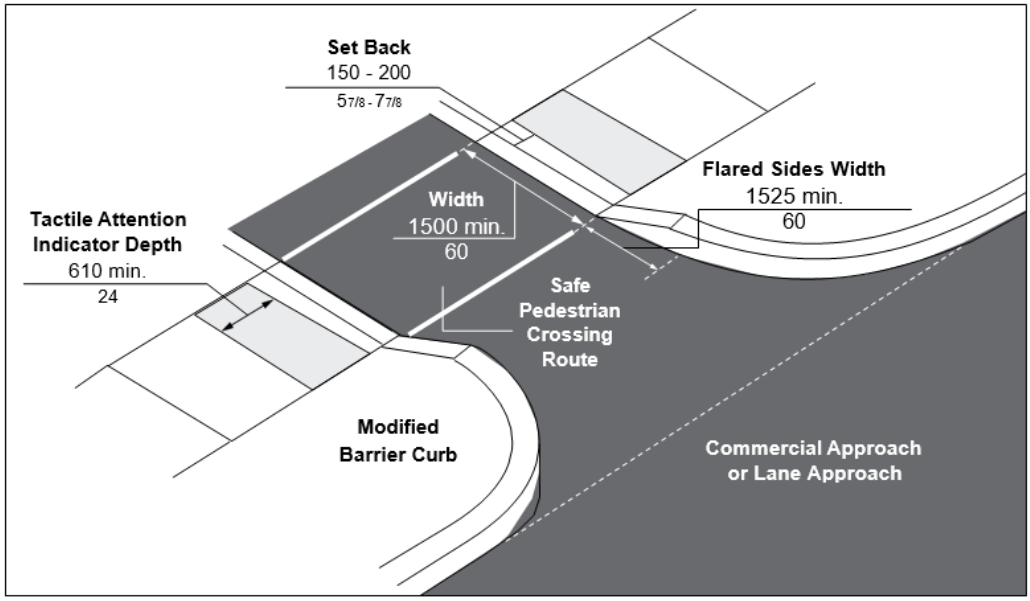


Figure 72 Curb Ramp at Commercial or Lane Approach

3.5 Site Furniture

Application

Pedestrian clearways that are part of the public right-of-way, may include the following elements and / or site furniture, which can vary depending on location:

- waste and recycling receptacles;
- rest areas with seating and space for mobility aids;
- protective bollards;
- signage and mapping (e.g., informational and directional, used for exterior wayfinding);
- bicycle stands / storage; and
- mail / letter boxes.

References

All other relevant sections of these standards apply to exterior design features and sight amenities, as part of the detailed planning, design and review process for new construction or retrofit projects.

Sec. 2.7 Rest Areas

Sec. 6.9 Balconies and Terraces

3.5.1 Design Requirements

3.5.1.1 General

Elements, features and amenities, including the provision of site furniture vary depending on the site context. Typical requirements include: (**Figure 72**)

a. provision of an amenity strip with a firm and level surface, a minimum of 600 mm wide, and a minimum of 300 mm wide;
b. provision, design, and placement of site furniture is required to address the following:
   i. incorporating high colour / tonal contrast if possible
   ii. where applicable, have a base or lowered surface that is cane-detectable and securely mounted / fixed;
   iii. ensure placement is consistent and does not reduce the required minimum pedestrian clearway / accessible route width of 1800 mm.
   iv. locate off to one side of the required pedestrian clearway and accessible route, to minimize any potential obstruction to pedestrians (e.g., preference is to locate site furniture as part of an amenity strip); and
   v. clear ground area or space of 920 mm wide by 1525 mm length is provided, where applicable or feasible, for either side or front approach and use, pedestrian clearway / accessible route;
c. where waste and recycling receptacles are provided, ensure:
   i. size is large enough to contain the anticipated amount of waste, so that overflows do not cause a tripping or slipping hazard;
   ii. they are securely mounted on a firm and level surface or pad and conveniently located (e.g., at main publicly accessible entrances);
   iii. any optional operating control, lid or opening for use, are mounted between 900 to 1100 mm high, above the adjacent ground surface; if applicable
   iv. lettering provided to identify provision and type of disposal, meets all requirements for accessible signage (Refer to Section 5.8, Signage & Wayfinding);
   v. Type and location of unit considers methods and logistics required for the emptying of the units so as not to create a hazard during this operation.
d. ensure the efficient and thorough removal of snow and ice during winter conditions, which is essential for any related pedestrian clearway, accessible route, amenity strip, and curb ramps at intersections that may be part of a site.

Note

The pedestrian clearway refers to the portion of the sidewalk that is free of obstructions and intended for pedestrian through movement.
In many cases, such as most Neighborhood Streets, the entire sidewalk is a pedestrian clearway. In other cases, the sidewalk may include space along building frontages, patios, site furniture, and snow storage areas in addition to the pedestrian clearway. (Source: City of London, Complete Streets Design Manual, CSDM, August 2018).

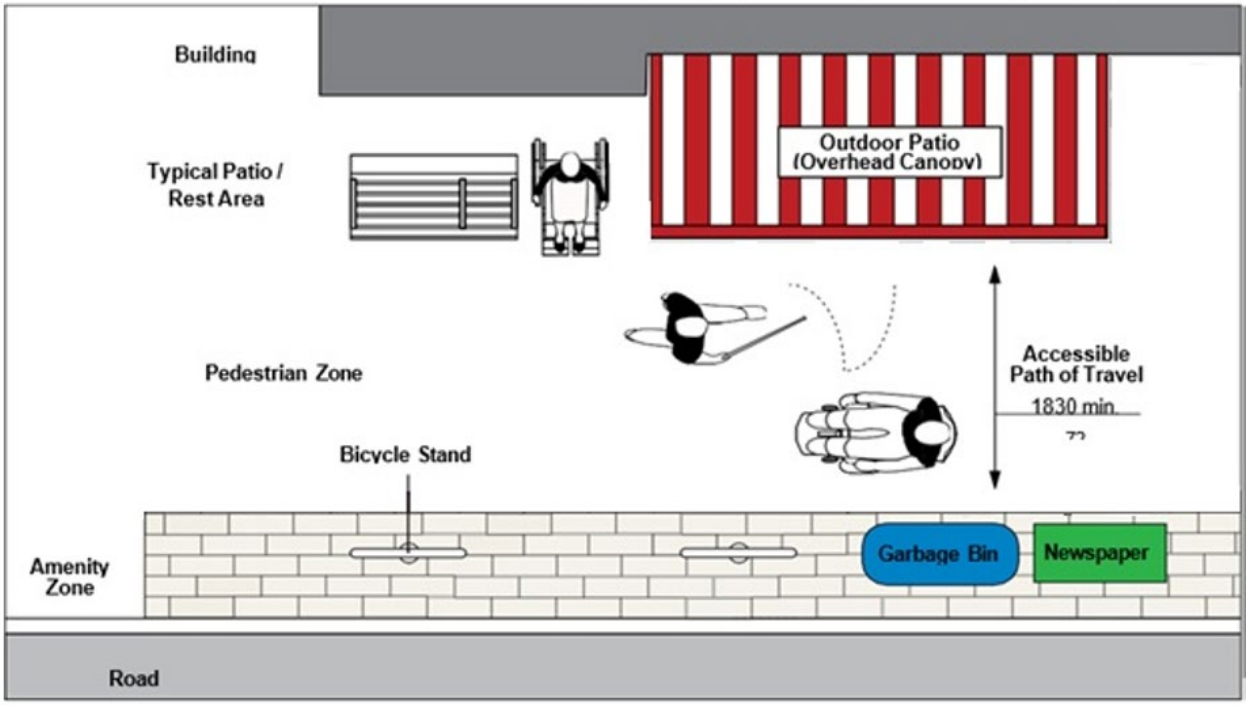


Figure 73 Streetscapes - Plan View

3.6 Landscaping, Materials, and, Plantings

Application

This section applies to typical materials and vegetation. (e.g., trees, shrubs, and plantings etc.) that are part of the design of exterior environments related to facilities.

Key considerations include:

- plants and shrubs with a variety of fragrances can provide an interesting orientation cue for persons with vision loss;
- using contrasting flowers near walkways can also be helpful
  as a guide; and
- raised planters can accommodate persons using mobility aids and others that may have difficulty bending, to enjoy or tend to plantings.

Note

Plants with thorns may constitute a hazard to pedestrians and service animals if located too close to walkways / pathways and ensure all vegetation is not poisonous.

Plants that drop large seed pods may result in potential slipping hazards, as well as difficulties for users of mobility aids.

Plantings and tree limbs that overhang accessible routes and pathways are a bumping hazard for all users, especially for users with vision loss.

Reference

Sec. 1.3 Space and Reach Requirements

Sec. 2.1 Ground and Floor Surfaces

Sec. 2.4 Guards and Handrails

Sec. 2.5 Overhanging and Protruding Objects

Sec. 2.7 Rest Areas

Sec. 2.10 Materials and Finishes

Sec. 2.1 Texture and Colour
Sec. 3.4 Exterior Paths of Travel

Sec. 3.6 Street Furniture
Sec. 6.16 Service Animal Relief Areas

Best Practice

Use landscaping techniques (e.g., low vegetation) that can function as a buffer between pedestrians and elements that are potential projections or bumping hazards (e.g., fire hydrants, gas meters, and fire hose standpipes), while still allowing maintenance and safety personnel required access.

3.6.1 Plant Beds and Planters

3.6.1.1 General

Where plant beds or planters are provided for gardening and use by the public, clients, customers or employees, assure:

a. all are designed to be accessible (preferred), as identified by the requirements in this section; or
b. 10% minimum, but no less than one, are designed to be accessible, as identified by the requirements in this section.

Best Practice

The use of table planters is another option, where suitable. Users of mobility aids can position at the side or at the front, where suitable knee space is provided below, allowing for a wider range of motion and overall flexibility.

3.6.1.2 Accessible –

The design of typical accessible plant beds or planters includes the following features and considerations:

a. locate as part of an accessible route, with consistent placement that does not reduce the required minimum accessible route width of 1500 min. or 1800 preferred, if possible, positioned in areas where there are no major grade or elevation changes;
b. provide as part of a raised base, mounted 400 mm to 460 mm high above the adjacent ground surface; and
c. ensure any base or lowered edges that are located immediately adjacent to accessible routes, incorporate with
    i. high colour / tonal contrast for clear visibility by all users if possible
    ii. are defined with a cane-detectable curb or edge protection at a minimum height of 100 mm
d. place and locate any shrubs with thorns and sharp edges a minimum of 920 mm away from accessible routes / pathways, as well as any rest or seating areas;
e. ensure any tree branches along an accessible route are maintained regularly to provide a minimum overhead clearance height of 2100 mm from the ground; and
f. ensure trees / plants that drop large seed pods do not overhang or are positioned near accessible paths or walkways.

3.6.2 Guide Wires & Tree Guards

Where either permanent or temporary guide wires or tree guards are used, ensure:

a. permanent guide wires are not located in any area used by the general public, clients, customers or employees;
b. temporary guide wires, such as those used when planting new trees, are clearly identified using high colour / tonal contrast and are suitably placed (e.g., angled away from any adjacent accessible route or pathway to ensure they are not a projection or obstruction hazard); and
c. tree guards are cane detectable, with high colour / tonal contrast.

4.0 Interior Elements

Table of Contents

4.1 Entrances
4.2 Doors and Doorways
4.3 Interior Accessible Routes
4.4 Elevating Devices
4.5 Washrooms
4.6 Showers
4.7 Bathtubs

4.1 Entrances

Application

This section applies to pedestrian entrances into facilities. Entrances include all access and entry points into a facility. An entrance typically consists of several elements and includes the approach and route leading to a facility, the components of the entrance itself and the transition area between exterior and interior environments (e.g., vestibule). It may also include an interior lobby or waiting area, where applicable.

Reference

Sec. 2.1 Ground and Floor Surfaces
Sec. 2.2 Ramps
Sec. 2.3 Stairs
Sec. 2.4 Guards and Handrails
Sec. 2.6 Tactile Walking Surface Indicators
Sec. 2.7 Rest Areas
Sec. 2.8 Seating, Tables and Work Surfaces
Sec. 4.2 Doors and Doorways
Sec. 5.7 Lighting
Sec. 5.8 Signage and Wayfinding
Sec. 6.10 Service Counters
Sec. 6.11 Waiting and Queuing Areas

Note

Where several doors are provided adjacent to each other (e.g., a bank of doors), these doors are considered a single entrance.

4.1.1 Provision

a. all entrances used by staff and / or public are required to be accessible (e.g., via level, sloped or ramped accessible routes); and

b. locate entrance 30 m or less from designated accessible parking or passenger loading / drop-off zones.

Note

Provide accessible features as required for building entrances from parking garages, including related elevator lobbies.

Ensure power door operators are provided on both doors, where a vestibule is provided.

4.1.2 Entrance Retrofit Situations

In a retrofit situation where it is technically infeasible to make all staff and public entrances accessible, ensure:

a. at least 50% of all staff and public entrances are accessible and comply with this section

b. the primary entrances used by staff and the public are accessible; and

c. the number of accessible entrances provided equals the number required by the Ontario Building Code.

4.1.3 Main or Primary Entrance Features

Where an entrance is designated as a main or primary accessible entrance into a facility: (**Figures 74 & 75**)

a. locate as part of an accessible path of travel, including exterior level landing area of 2440 mm by 2440 mm or in a retrofit situation 1700 mm by 1700 mm

b. provide power door operator and mark door with the International Symbol of Accessibility

c. provide directional signage at strategic points to guide users from accessible parking areas, drop-off and loading zones, and site access points to the accessible entrance;

d. ensure minimum clear door width of 950 mm

e. at entrance vestibules, provide clear floor space a minimum of 1525 mm plus the width of any door swinging into the space (e.g., whether two doors are in series or where doors do not align); and

f. where overhead protection (e.g., canopy) at pedestrian entrance and passenger loading or drop-off zones adjacent to the entrance is provided, ensure the minimum height clearance is 2750 mm or preferred 3600 mm

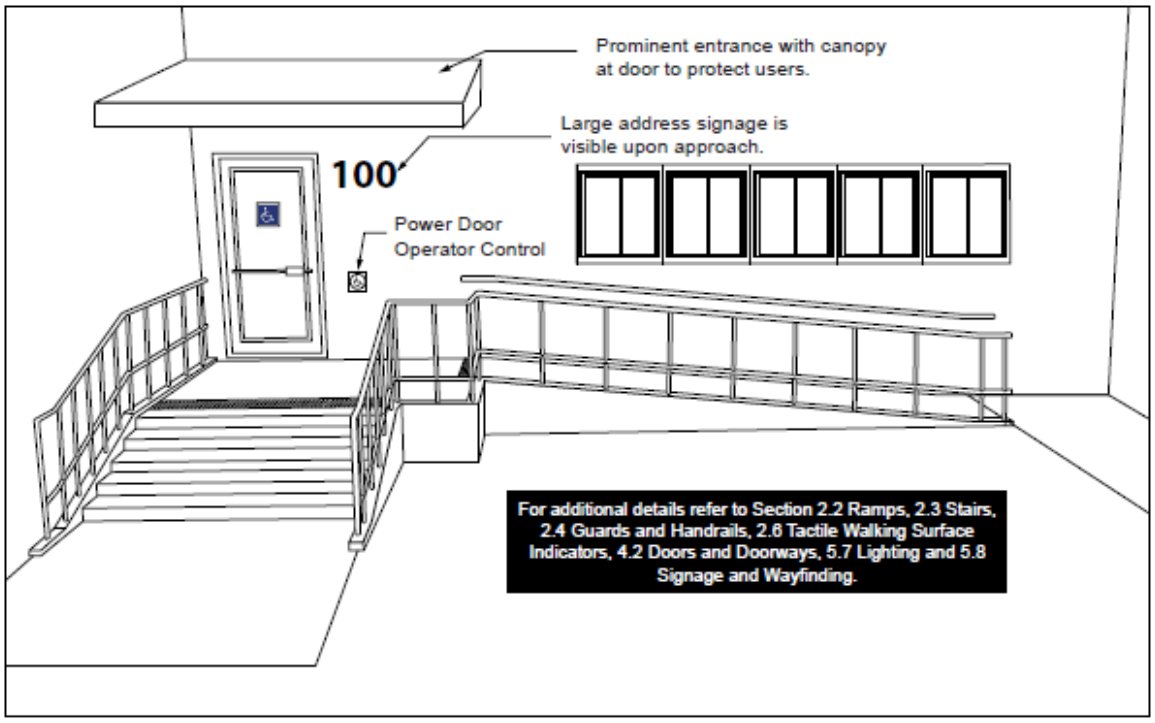


Figure 74 Main or Primary Entrance Features

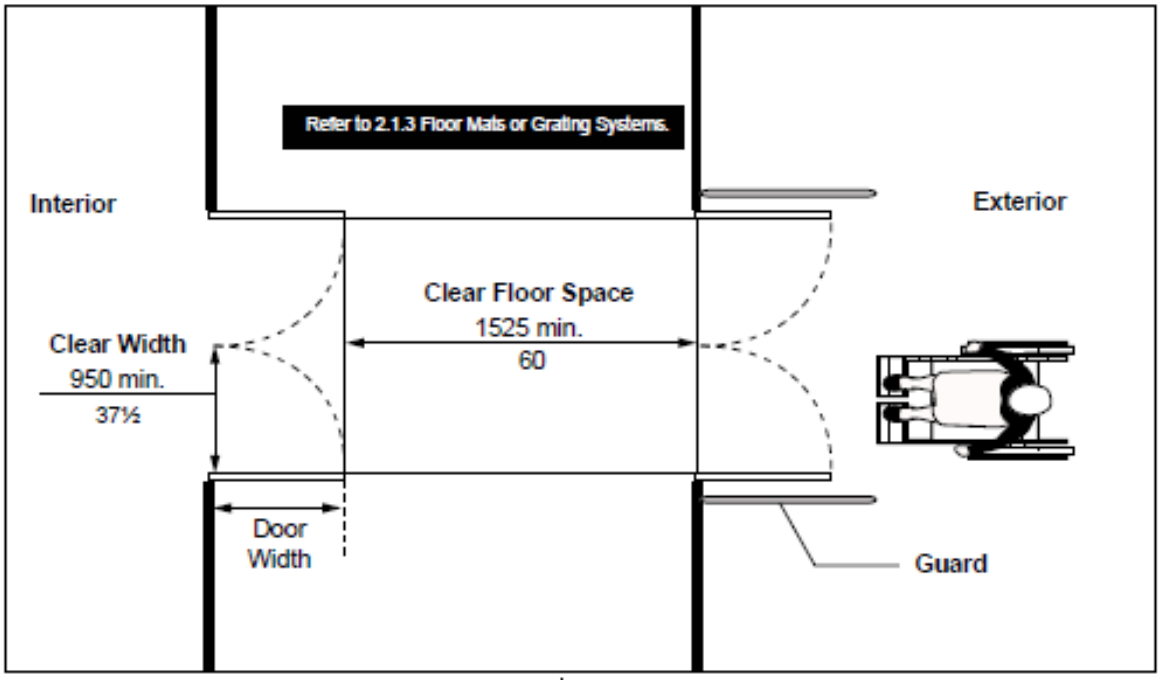


Figure 75 Entrance Vestibule - Plan View

4.2 Doors and Doorways

Application

This section applies to all interior doors along an accessible route, intended for staff and public use, which lead into, out of and through a facility (e.g., also includes doors that are entered from or lead to exterior areas). The provision of accessible doors as part of an accessible route is an important consideration for all users of a facility.

Where doors have more than one independently operated leaf (e.g., at a bank of doors), at least one of the door leaves is required to be accessible, meeting the criteria identified in this section.

Reference

Sec. 2.1 Ground and Floor Surfaces

Sec. 2.4 Guards and Handrails

Sec. 5.1 Controls and Operating Mechanisms

Sec. 5.8 Signage and Wayfinding

Note

Additional considerations are required to address issues related to doors used for fire and life safety (e.g., use of electro-magnetic 'hold-open' devices and door closer adjustments).

4.2.1 Clear Width

For doorways used for circulation along an accessible route, including swing and sliding doors: (**Figure 76 and 77**)

a. provide a minimum door clear width of 950 mm measured when the door is open 90 degrees from the face of door (and / or exit door hardware that projects into the path of travel) and the opposite doorstop;

b. where there is a projection into clear opening width, ensure it is 100 mm (maximum), no lower than 865 mm high above floor; and

c. required clear width may be reduced to 860 mm (minimum), only in retrofit situations where it is technically infeasible.

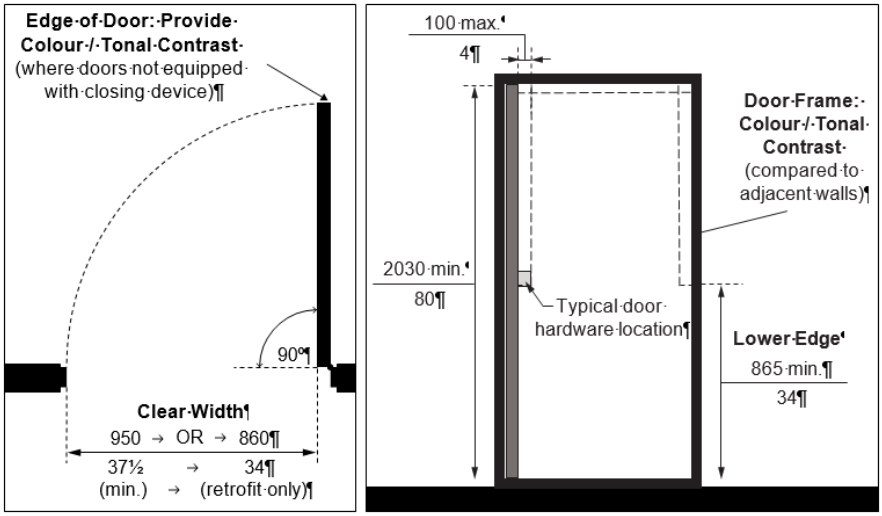


Figure 76 Clear width of typical swing door.

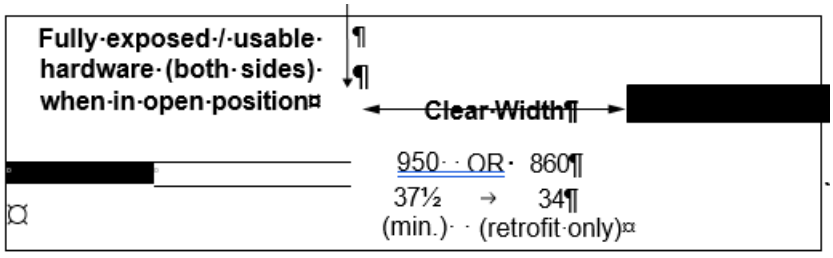


Figure 77 Sliding Door Width

Exception

Doors not requiring full user passage, such as shallow closets, may have the clear opening width reduced to 510 mm (minimum).

Best Practice

Where permitted and where visual or acoustic privacy is not a design requirement, entrances without doors are preferred. (e.g., public washrooms in large, assembly type facilities).

Note

Using off-set door hinges to provide the required cle5ar width for some existing doors may be an option for consideration.

Exception

High colour / tonal contrast is not required at service doors. (e.g., electrical room, maintenance room, janitor room).

4.2.2 Opening Force and Closers

4.2.2.1 Opening Force

The maximum opening force required for push / pull is:

a. 38 Newtons (8.5 pounds) for exterior hinged doors;
b. 22 Newtons (5.0 pounds) for interior hinged doors; and
c. 22 Newtons (5.0 pounds) for sliding or folding doors.

4.2.2.2 Closers

Adjust door closers to ensure:

a. the least pressure possible is available and never greater than the opening force identified in Subsection 4.2.2.1; and

b. a minimum sweep / closing period of 3 seconds, measured from when the door is in an open position of 70 degrees to the doorway, to when the door reaches a point 75 mm from the closed position, measured from the leading edge of the latch side of the door.

Best Practice

Install door kick plates 300 mm high, measured from bottom edge of door, covering the entire width of the door, especially for high traffic areas.

4.2.3 Contrast of Doors and Frames

a. provide high color / tonal contrast, as follows: (**Figure 76**)

   i. to differentiate doors and / or door frames from the surrounding environment; and

   ii. on the edge of door compared to the face of the door, where doors are not equipped with a closing device (e.g., to prevent any potential bumping hazard when door remains in the open position, especially for users with vision loss).

4.2.4 Thresholds

a. provide bevel at maximum slope of 1:2 (50%), where transition is between 6 mm and 13 mm high; and
b. ensure threshold at door is not more than 13 mm high.

4.2.5 Door Hardware

Door hardware includes, but is not limited to, handles, pulls, latches, and locks, with the following features:

Note

Knob door hardware and thumb-latch handles are not appropriate because they require tight grasping and fine finger control.

Where sliding doors are provided, ensure operating hardware is fully exposed and usable on both sides when the door is in an open position such as large D-pull hardware **(Figure 38b)**.

Typical revolving door systems are not considered accessible. entrances, recognizing the floor space within a system is limited and the speed of use is typically fast.

a. mount between 900 mm and 1100 mm high from finished floor or ground surface;
b. hardware must be usable with closed fist and operable with one hand;
c. ensure tight grasping of hands, pinching of fingers or twisting of wrists are not required to operate hardware; and
d. ensure high colour / tonal contrast hardware finishes are provided when compared to mounting surface.

4.2.6 Control Gates

Where gates are used to control pedestrian traffic for entry / exit: (**Figure 78**)

a. provide accessible gate or door with a minimum clear width of 950 mm and lower edge that is cane detectable at a maximum of 680 mm high, where bottom area may be open

b. ensure accessible gate or door is clearly marked with the International Symbol of Accessibility; and

c. ensure all accessible gates or doors have high colour / tonal contrast compared to surrounding environment including any post at either side of a gate, where gates are incorporated into a chain-link fencing system (e.g., compared to the fence).

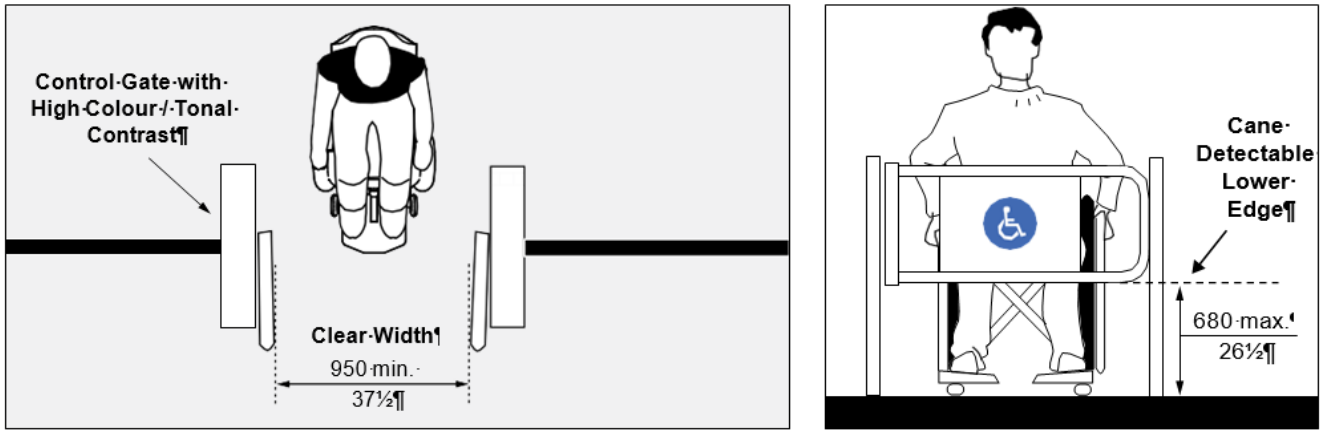


Figure 78 Accessible Control Gate - Plan and Elevation Views

4.2.7 Automatic Doors

Where automatic doors are provided, with sliding or swinging doors activated by infrared sensors:

a. ensure sensors are suitable to detect users approaching; and
b. ensure timing allows safe passage through doors.

4.2.8 Power-Assisted Doors

Power-assisted doors have two different types of operation:

- automatically activated by a motion detector / proximity scanner that scans at a lower height to allow users of mobility aids to trigger opening of the door when approaching; and
- manually activated by pushing a control.

Doors that open automatically are considered a preferred option where possible, since they do not require manual activation and address the needs of a wide range of users. This recognizes that manual power-assist controls may be difficult to locate and activate for people with limited vision, strength, manual dexterity, reach or users that may have multiple types of disabilities.

Power-assisted swing doors that are activated by pushing a control are required at the main entrance(s) and accessible washrooms of a facility.

Based on the overall design, the level of use of interior spaces and where swing doors are provided throughout a facility, power-assisted swing doors that are activated by pushing a control are also commonly provided at:

- interior doors along accessible routes and / or connecting accessible routes;
- doors into reception areas;
- doors into highly used functional spaces (e.g., accessible, and universal washrooms / change rooms, larger multi-purpose rooms, meeting, or board rooms); and
- doors leading to accessible exits and designated “Areas of Refuge.” Where power-assisted swing doors activated by pushing a control are provided: Refuge.” Where power-assisted swing doors activated by pushing a control are provided: (**Figures 80, 81 & 82**)
-

Exception

Power door operators are not required.
for doors that are held-open using electromagnetic hold- open devices.

Note

Rectangular shaped power door operator control with dimensions of 50 mm by 100 mm may only be used for retrofit situations, where standard control sizes will not fit.

Where wireless door operator controls are used (e.g., typically mounted on glass mullion systems if adjacent to a door), ensure batteries are maintained regularly as required.



Photo 6 Example of rectangular shaped power door operator control to be used for retrofit situations only, where infeasible to provide larger controls



Figure 79 Example of Control for Power Door Operator Promoting Universal Use

a. mark accessible doors with the International Symbol of Accessibility and other signage (e.g., “Caution” decals to warn of door swing);

b. ensure a force of no more than 66 Newtons (14 pounds) is required to stop door movement;

c. ensure door remains fully open for 5 seconds (minimum);

d. ensure doors take 3 seconds (minimum) to move from a closed to fully open position, when activated; and

e. provide power door operator controls on both sides of doors, for use when entering or leaving, located to allow activation of the door from either direction of travel or without obstructing the path of travel, as follows:

   i. mount in a clearly visible location for easy identification upon approach on the latch side of door (e.g., push / pull side);

   ii. ensure the dimension of the power door operator control is a minimum of 150 mm in diameter where it is circular or a minimum of150 mm wide by 915 mm long where it is a vertical extended power door operator;

   iii. ensure high color / tonal contrast is provided between power door operator control and mounting surface;

   iv. ensure they project less than 100 mm from mounting surfaces;

   v. mark with the International Symbol of Accessibility;

   vi. ensure controls are operable with a closed fist;

   vii. mount center at height of 900 mm to 1100 mm from ground or floor surface;

   viii. where rectangular extended power door operator controls are provided, mount so that they extend from not more than 200 mm and not less than 900 mm high above the floor;

   ix. mount between a minimum of 600 mm and a maximum of 1500 mm, on a level wall surface or separate post, beyond the door swing where the door opens towards the control; and

   x. provide clear floor space, centered at power door operating controls at:

      i. 920 mm wide by 1525 mm depth for a forward approach; and
      i. 1525 mm wide by 920 depth for a side approach

   (Refer to Section 5.1, Controls and Operating Mechanisms)

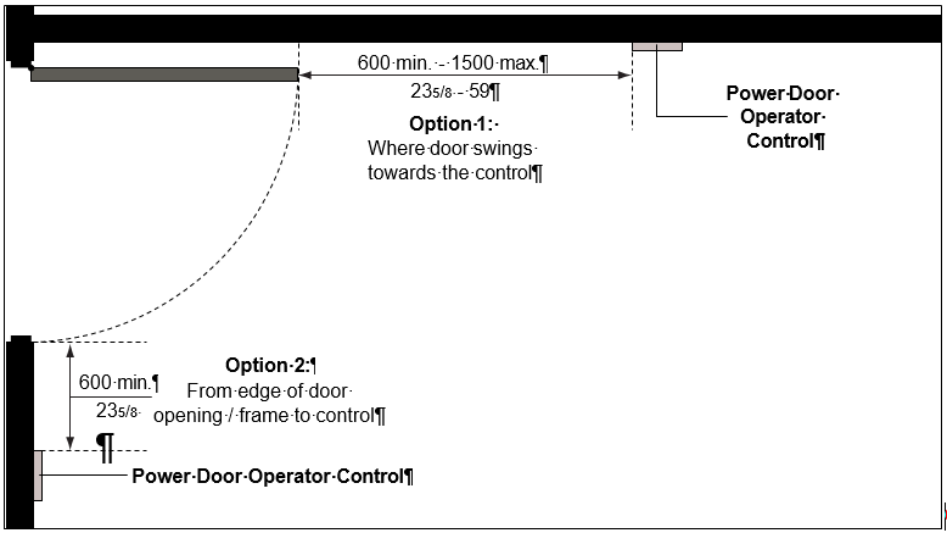


Figure 80 Power Door Operator Control Mounting Location



Photo 7 Example of large vertical extended power door operator control

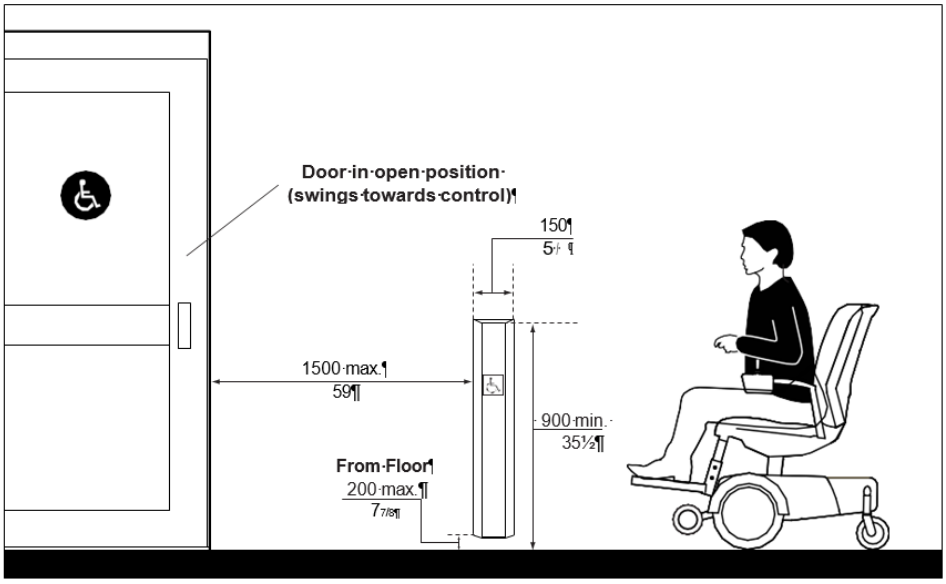


Figure 81 Vertical Extended Power Door Operator Control - Elevation View



Photo 8 Example of circular power door operator control

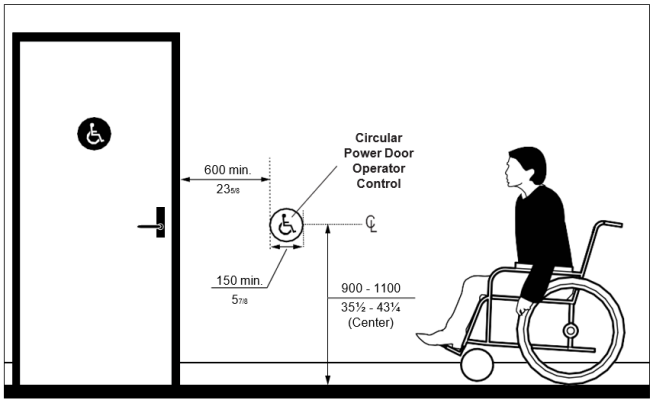


Figure 82 Circular Power Door Operator Control - Elevation View

4.2.9 Doors Swinging into Accessible Routes

Where automatic or power-assisted doors, whether activated by control manually or automatically by a motion sensor (e.g., typically used at higher traffic doors), swing into an accessible path of travel: (**Figures 83 & 84**)

a. the provision of recessed doors is preferred; or
b. for swinging doors opening into passing pedestrian traffic, provide cane detectable guards or other devices at right angles to the wall containing the door, with the lower rail surface mounted at a maximum 680 mm high from ground or floor surface, extending a minimum of 300 mm beyond the door swing, on both sides of doors.

Best Practice

Swinging doors equipped with power door operators which are activated automatically and open into passing pedestrian traffic should also have a device (mat or other sensor) on the swing side to prevent the door from opening if someone is standing in the swing area.

Note

Provision of guards is typically required for exterior out-swinging power-assisted doors, where the door is automatically activated by a motion sensor and where the door may swing into high traffic areas.

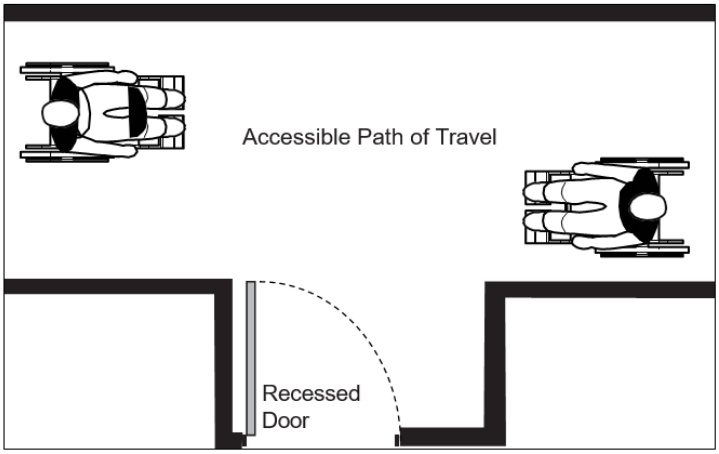


Figure 83 Recessed Door - Plan View

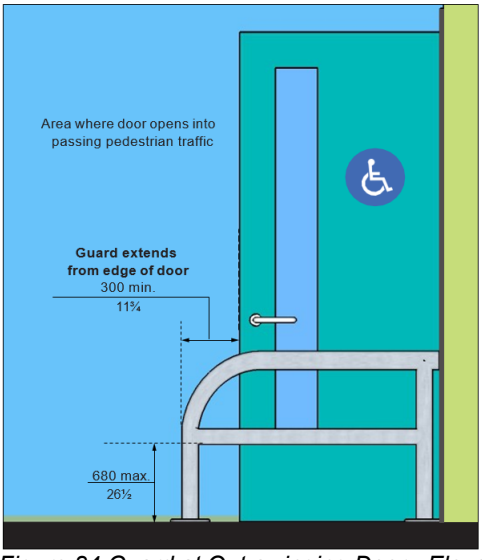


Figure 84 Guard at Out-swinging Door - Elevation View

4.2.10 Approach Clearances at Doors

> **Note**
> Ensure that there are no obstructions at the required clear and level floor space beside the latch, for the full height of the door.

The floor space requirements at swing and sliding doors are dependent on how doors are approached (e.g., side or front) and on which side an individual approaches a door (push or pull sides).

Unless door is automatic or equipped with a power door operator, clear and level floor space requirements for approach at different types of doors, are based on the size of door and on door swing (e.g., push / pull space on both sides of latch). Clear and level floor space requirements for approach at different types of doors (both sides) are summarized in **Table 5** with corresponding diagrams referenced.

Context	Floor Space Required in mm (in)		
	Depth (min.)	Width (min.)	Space Beside Latch
Swing Door - Front Approach **(Figure 44c)**			
Pull side	1525 (60)	1700 / 1600	600 (235/8)
Push side	1370 (54)	1250 (49¼)	300 (11¾)
Sliding Door **(Figure 44d)**			
Front approach	1370 (54)	1550 / 1060	300 / 50mm
Side approach	1370 (54)	2150 / 1550	600 /540mm
Swing Door - Hinge Side Approach **(Figure 44e)**			
Pull side	2500 / 2440	2500 / 2440	600
Push side	1370 (54)	1830 / 1525	600
Swing Door - Latch Side Approach **(Figure 44f)**			
Pull side	1370 (54)	1600 (63)	600
Push side	1370 (54)	1525 (60)	600 / 45
Folding Door (new)			
Front approach	1220 (48)	n/a	n/a
Side approach	1220 (48)	n/a	n/a
Swing Door, Recessed - Front Approach **(Figure 44a and b) - new**			
Pull side	1525 (60)	n/a	600 (235/8)
Push side	1220 (48)	n/a	300 (11¾)
Doorways Without Doors (new)			
Front approach	1220 (48)	n/a	n/a
Side approach	1065 (42)	n/a	n/a

Table 5 Minimum Clearance Spaces at Doors

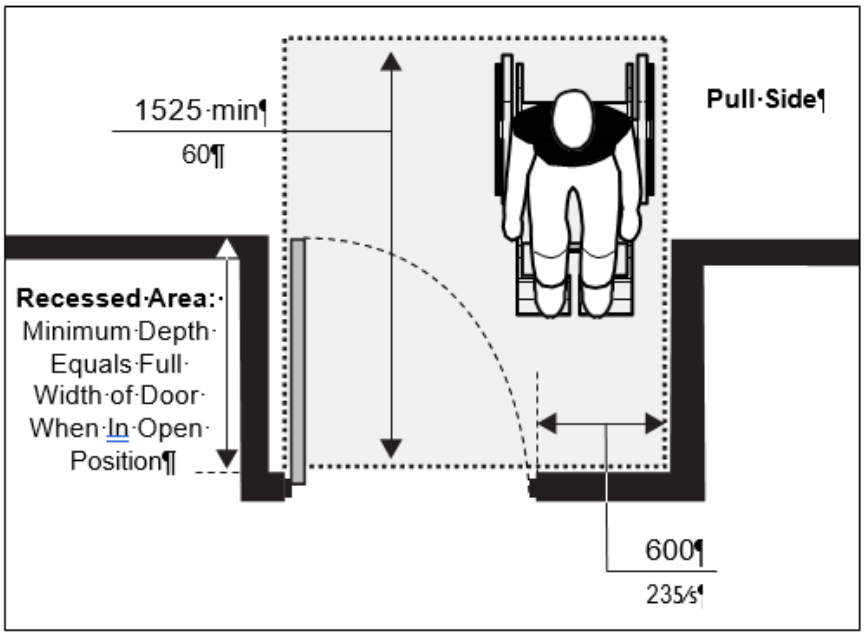


Figure 85 Pull Side Approach at Recessed

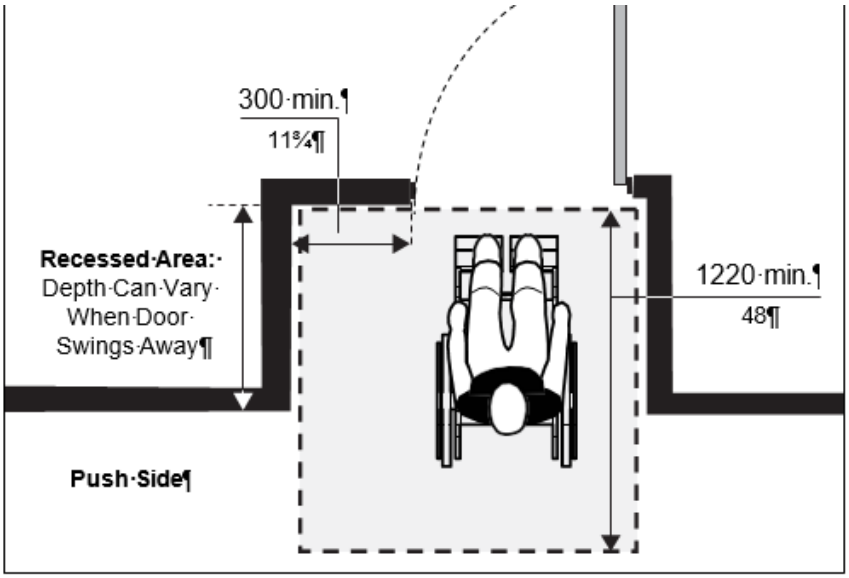


Figure 86 Push Side Approach at Recessed

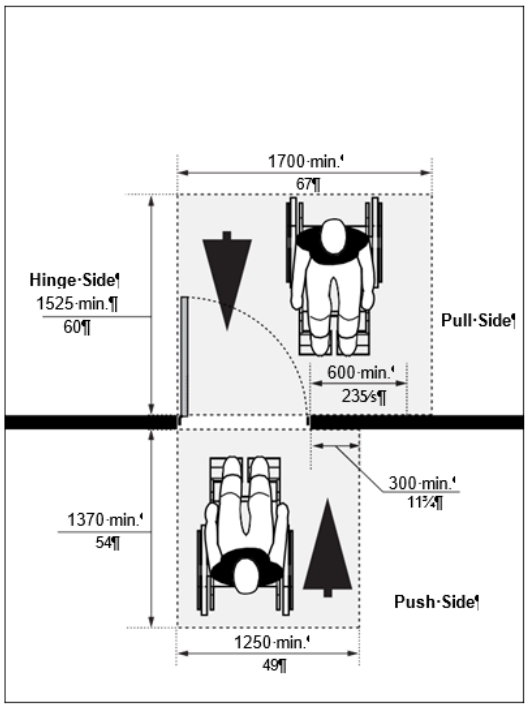


Figure 87 Front Approach at Swing Door (Hinge Side)

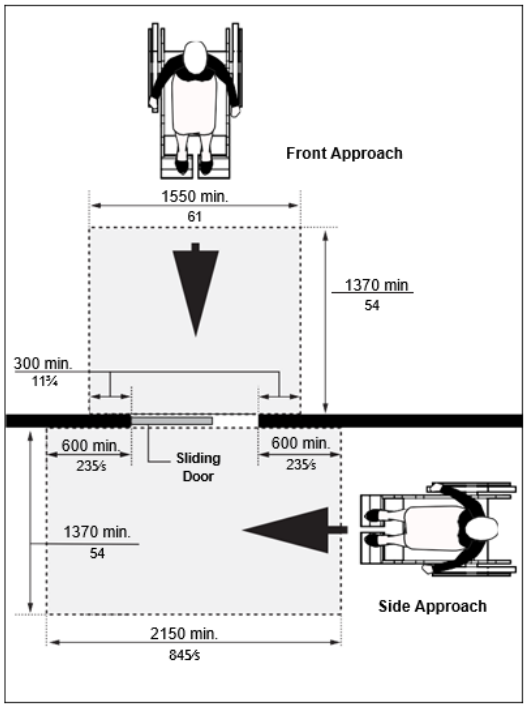


Figure 88 and Side Approach at Sliding Door -

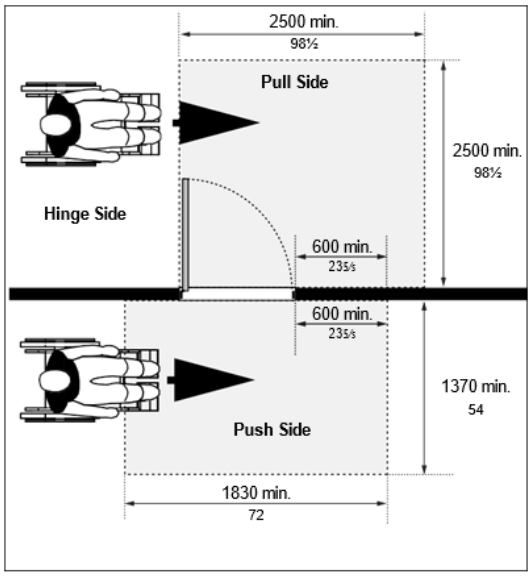


Figure 89 Side Approach at Swing Door (Hinge Side)

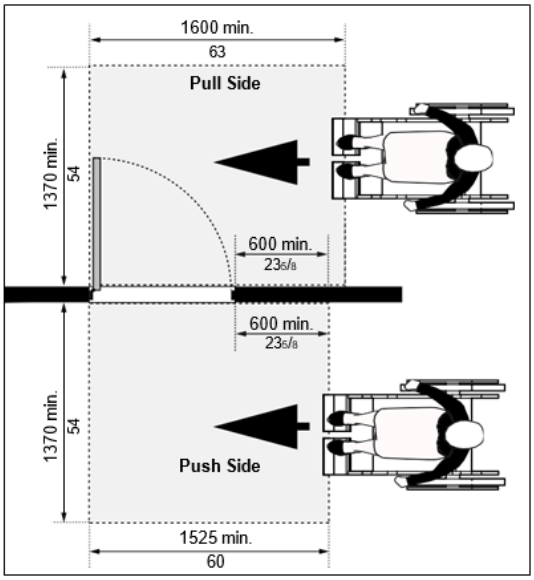


Figure 90 Side Approach at Swing Door (Latch Side)

4.2.11 Doors in Series

Where doors in series form a vestibule: (**Figures 91 & 92**)

a. provide a distance between two doors in series a minimum of 1525 mm, plus the width of any door swinging into space;

b. where the doors into the vestibule are not aligned, provide a clear turning diameter a minimum of 1525 mm within the vestibule clear of any door swing; and

c. arrange vestibule to allow the movement of users of mobility aids between doors.

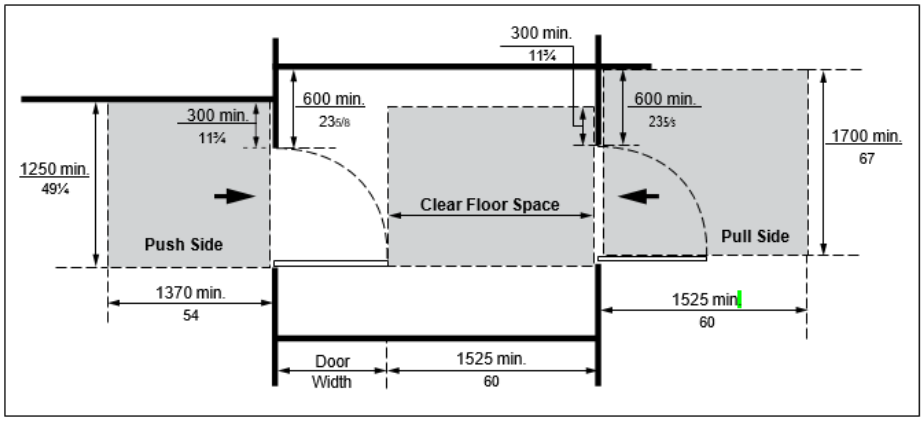


Figure 91 Doors in Series Where Doors are Aligned - Plan View

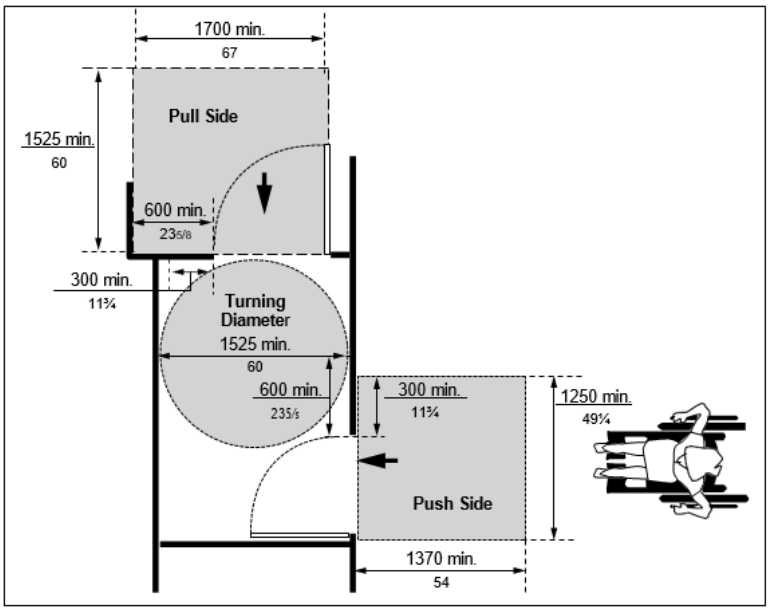


Figure 92 Doors in Series Where Doors are not Aligned - Plan View

Best Practice

Provide additional space for doors in series with doors operating independently in order to avoid a “wind tunnel effect.”

Ensure the design of vestibules provides enhanced clear floor space and a minimum clear turning space of 2500 mm (98 1/2 in) for users of mobility aids where the vestibule may be used as a waiting area at main entrances, for example.

Note

Users of mobility aids must be able to move forward through a vestibule without the risk of being stuck between the two doors. Ensure power door operators are provided on both sides of both doors.

4.2.12 Glazed Doors or Doors with Sidelights

Glazed doors can present unique challenges for seniors and persons with visual impairments. For glazed doors or doors with sidelights: (**Figures 93 & 94**)

a. provide a high color / tonal contrast between door frame and mounting surface or wall to ensure that when door is in the open position, persons with vision loss can identify edges upon approach;

b. mark the edges of fully glazed doors (e.g., tempered glass without a frame) with a high color / tonal contrast (e.g., exposed edges to be identified with a vertical safety strip, applied to cap the ends of any exposed glass panel); and

c. provide a continuous opaque and high colour strip, decal, or logo on fully glazed doors:

   i. a minimum of 50 mm (2 in) wide;

   ii. mount at eye level, centered between 1350 mm (54 in) and 1525 mm (60 in) high from floor level; and

   iii. where decals are used (e.g., square, round or other specialized design such as a logo), ensure minimum spacing of 150 mm from center to center of each decal, with solid component of decals having high colour / tonal contrast for enhanced visibility, especially for users with a vision loss.

Best Practice

Frameless and fully glazed doors should not be used.

Where there is extensive glazing, provide a strip at a lower level, centered **between 850 mm to 1000 mm**) high above finished floor level.

Note

Special designs can be used (e.g., logo or symbol) as long as They do not reduce the opacity, width and high colour / tonal contrast of the strip when compared with the background.

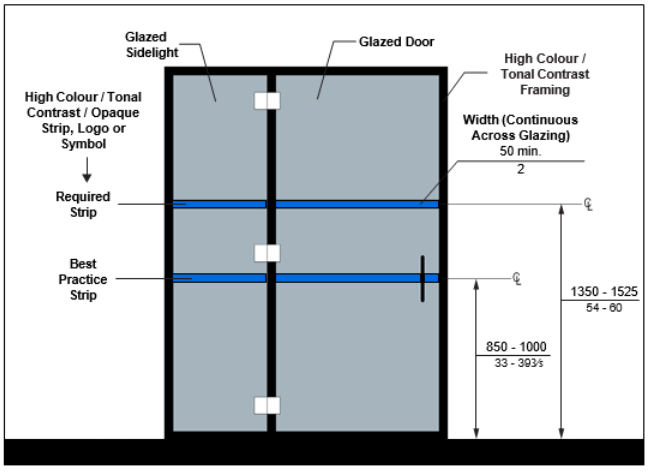


Figure 93 Glazed Doors and Sidelights - Elevation View

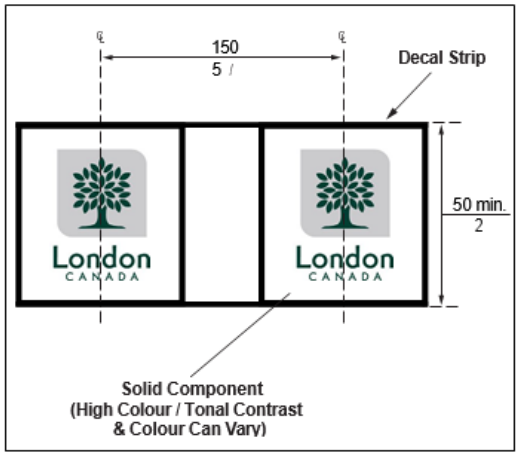


Figure 94 Spacing for Decal Strip

4.2.13 Vision Panels

Where provided, ensure: (**Figure 95**)

a. a minimum width of 75 mm and

b. lower edge is mounted at a maximum height of 760 mm with side edge a maximum of 250 mm from latch side of the door.

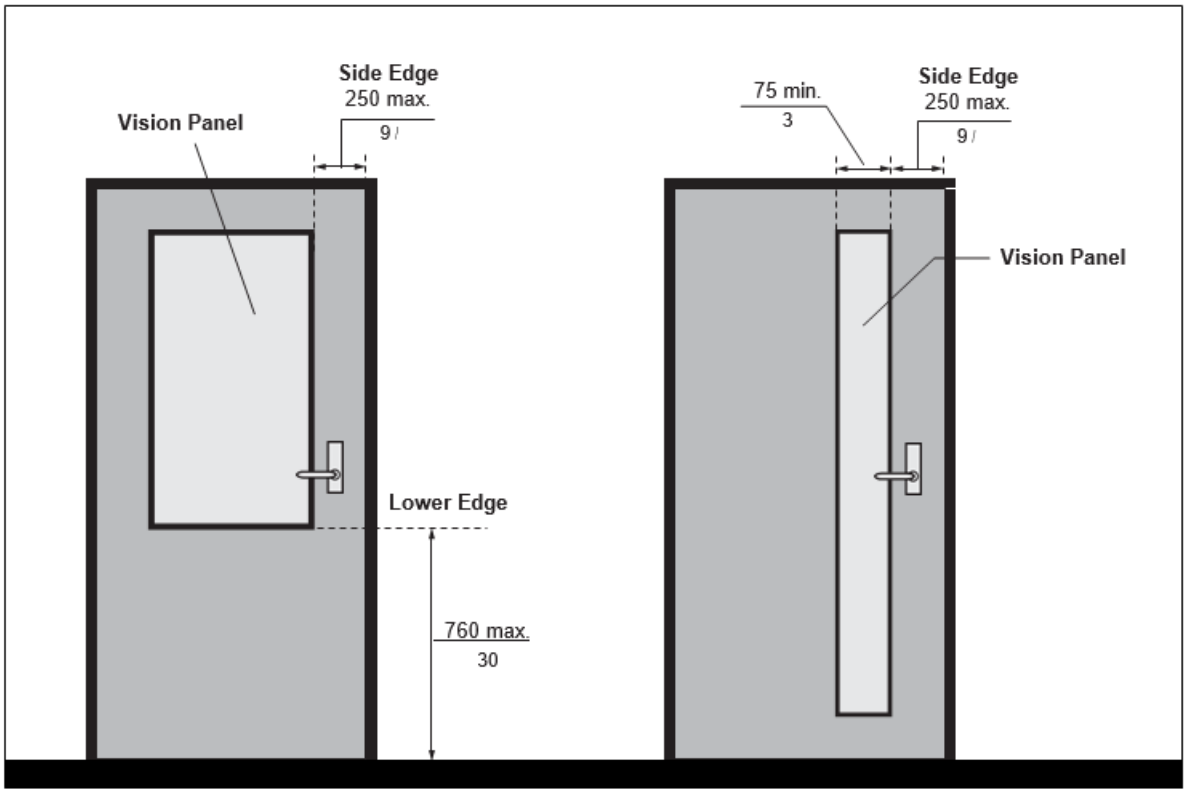


Figure 95 Vision Panels - Elevation View

4.3 Interior Accessible Routes

Application

This section applies to accessible routes or paths of travel for pedestrians *within* a facility to provide access to elements, rooms, or other occupiable spaces. Typical accessible routes are identified as corridors, hallways, and other pedestrian circulation paths. These include connections between buildings, unless identified as exceptions.

All access to occupiable spaces to be accessible and conform to this section.

Where there is an elevation change within a path of travel, accessible routes may include ramps, sloped walkways and independently operated elevating devices as permitted (e.g., passenger elevators or lifts).

Reference

Sec. 2.1 Ground and Floor Surfaces
Sec. 2.2 Ramps
Sec. 2.4 Guards and Handrails
Sec. 2.5 Overhanging and Protruding Objects
Sec. 2.7 Rest Areas
Sec. 2.10 Materials and Finishes
Sec. 2.11 Texture and Colour
Sec. 5.4 Acoustics
Sec. 5.7 Lighting
Sec. 5.8 Signage and Wayfinding

Exception

An accessible route or path of travel is not required in the following areas:

- Service rooms;
- Elevator machine rooms or other equipment, including service corridors to these rooms;
- Service spaces;
- Janitors' rooms;
- Crawl spaces and attics or roof spaces;
- Into high-hazard industrial occupancies;
- To portions of a floor area with fixed seats in an assembly occupancy, where these portions are not part of the accessible path of travel to spaces designated for wheelchair use, seats designated for adaptable seating, or spaces for the storage of wheelchairs and mobility assistive devices;
- To suites of residential occupancy that are in stories other than the entrance storey and that have all entrance doors at floor levels that are not required to have an accessible path of travel;
- On the inside of a suite of residential occupancy; and
- To portions of a floor area that are not at the same level as the entry level, provided amenities and uses provided

4.3.1 General Features

a. ensure floor surfaces are stable, firm and slip-resistant;

b. provide signage and wayfinding cues along interior accessible routes, including entrances and exits, to provide information and guidance for all users based on the type of facility (Refer to Section 5.8, Signage & Wayfinding);

c. provide headroom clearance throughout interior accessible routes at:

   i. a minimum of 2100 mm; or

   ii. provide a guardrail or other protective barrier with its leading edge at or below 680 mm from the finished floor surface, where headroom clearance is less 2100 mm.

d. design public corridors to facilitate wayfinding by using architectural treatments and elements that can be used to differentiate main corridors from secondary corridors (e.g., use of different floor materials, colour schemes, etc.); and

e. ensure lighting level is evenly distributed throughout, at a minimum of 50 lux (5 ft. candles) (**Refer to Section 5.7, Lighting**).

Best Practice

Consider using texture and architectural treatments to enhance wayfinding.

Install convex mirrors at hallway intersections along an accessible route where the line of sight is obstructed.

Note

Architectural treatments may include the selection of products or materials, and other design techniques to improve aural experience in a space. The sound transmission depends on the reflection characteristics of finished material.



Photo 9 Example of tactile floor surface to guide visitors with vision loss (Best Practice)

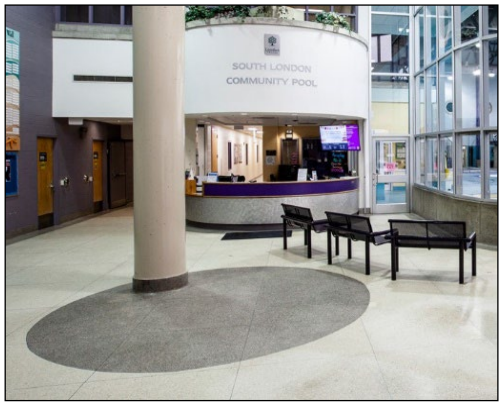


Photo 10 Where a structural column / support may be within an accessible route, a colour contrasted floor surface at the base helps identify its location to prevent a potential

4.3.2 Clear Width

Where a structural column / support may be within an accessible route, a colour contrasted floor surface at the base helps identify its location to prevent a potential bumping hazard.

For interior accessible routes, excluding where additional maneuvering space and clear width is required (e.g., between fixed or freestanding objects such as furnishings, doorways or other fixtures that project into the accessible route and that are cane detectable), provide: (**Figures 96, 97, 98 & 99, 100**)

a. minimum clear width of 1800 mm for primary accessible routes or higher pedestrian traffic areas and to allow two users of mobility aids to pass each other;

b. in lower pedestrian traffic areas, minimum clear width of:

   i. 1370 mm for single mobility aid and single person to pass each other; and

   ii. 1100 mm for single mobility aid (e.g., low level of pedestrian traffic is expected);

c. where an accessible route has a clear width less than 1830 mm provide an unobstructed passing space of not less than 1830 mm width and 1830 mm long, located not more than 30 m apart;

d. where clear width is reduced to a minimum of 950 mm for short indentations up to a maximum of 610 mm provide a minimum clear width of 1100 mm beyond indentation and ensure indentations or reduced clear width is not repeated in a series;

Best Practice

Avoid any projections (e.g., structural columns and furnishings) along clear width of circulation corridors.

Exception

Minimum clear width of an accessible route can be reduced as described in other sections of this document:

- at doors / doorways;
- at stairs; and
- entry to elevating.
- devices.

Note

Where an obstacle is greater than 1220 mm (48 in) wide, cutting the corners of the obstacle will provide additional maneuvering space **(Figure 49b)**.

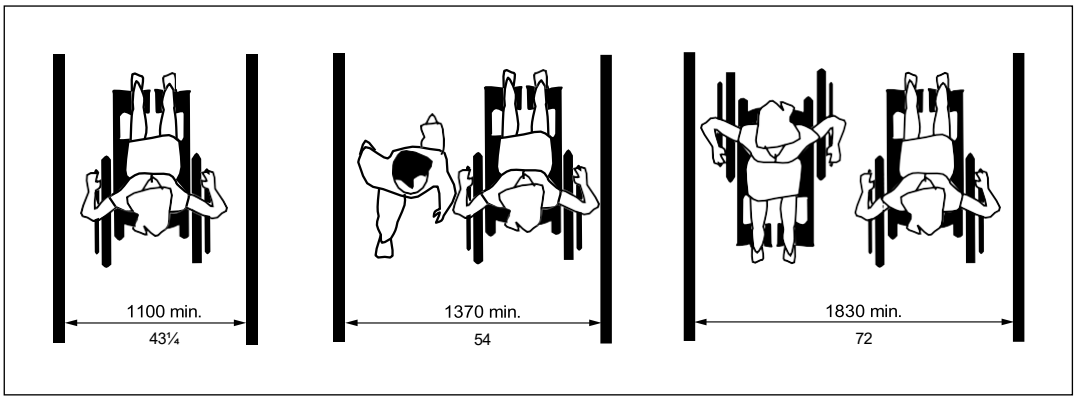


Figure 96 Clear Width (Typical)

e. where an accessible route makes an 180 degree turn around an obstacle that is less than 1220 mm wide, ensure clear width a minimum of 1100 mm is provided, when approaching and leaving the turn, and a minimum of 1220 mm at the turn; and

f. where an accessible route makes a 180 degree turn around an obstacle that is greater than 1220 mm (48 in) wide, ensure clear width a minimum of 1100 mm is provided, when approaching, entering, and leaving the turn.

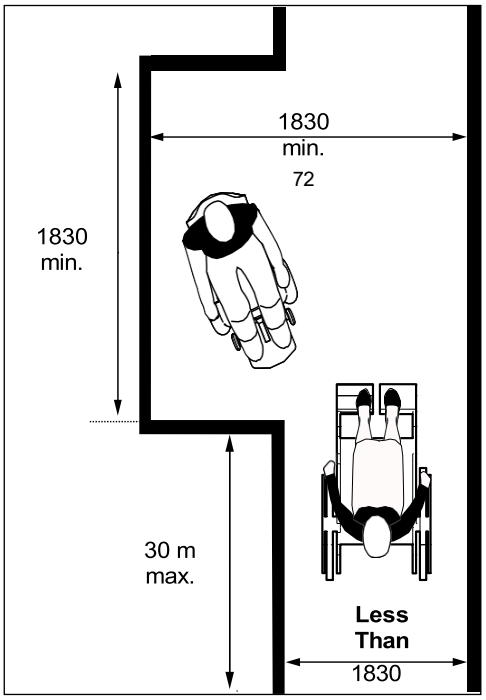


Figure 97 Required Passing Area for Routes Greater than 30 m

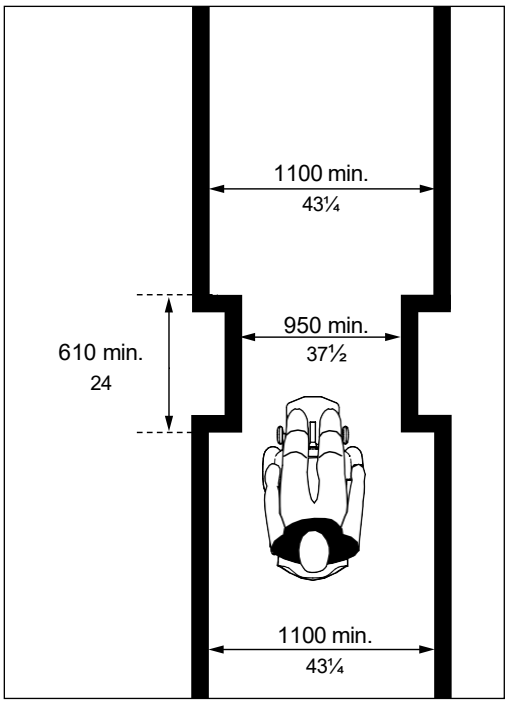


Figure 98 Permitted Reduced Clear

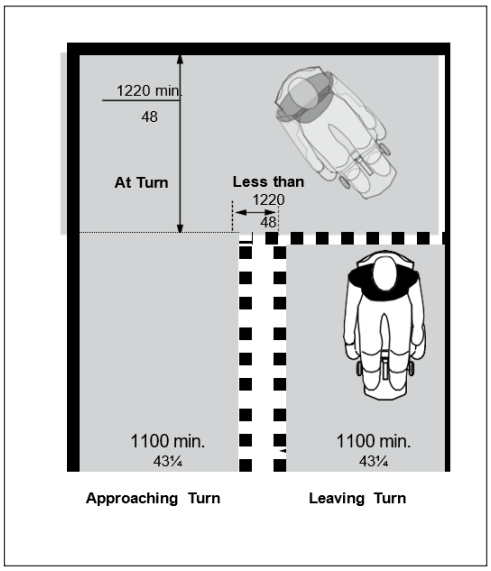


Figure 99 180 Degree Turn (Typical)

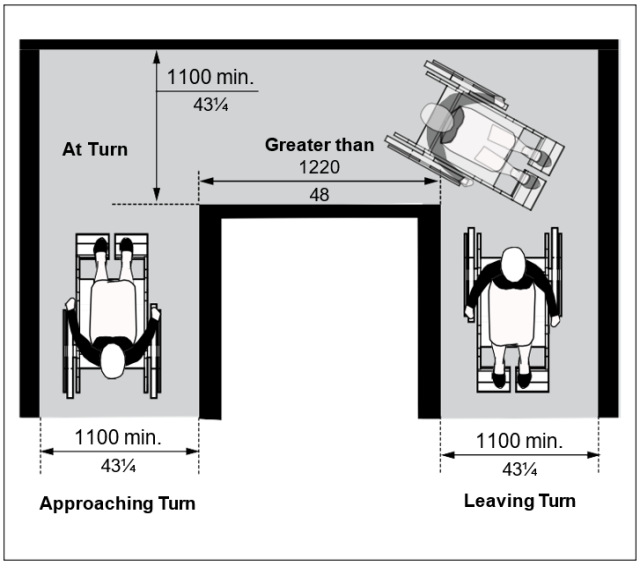


Figure 100 180 Degree Turn Around Obstacle Greater than

4.3.3 Running and Cross Slopes

For running and cross slopes: (**Figures 101 & 102**)

4.3.3.1 Running Slope

a. provide a maximum gradient of 1:20 (5%); and
b. where cross slope exceeds 1:20 (5%), ensure route is designed as a ramp.

4.3.3.2 Cross Slope

a. provide a maximum cross slope of 1:50 (2%)

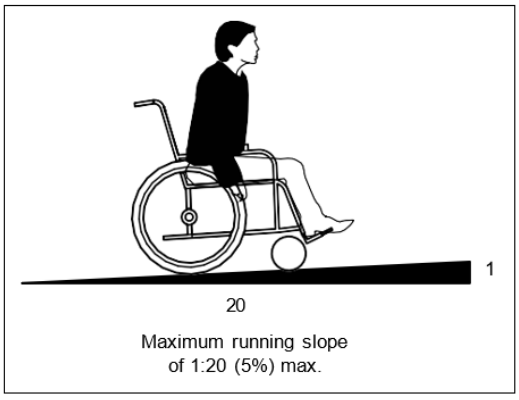


Figure 101 Running Slope

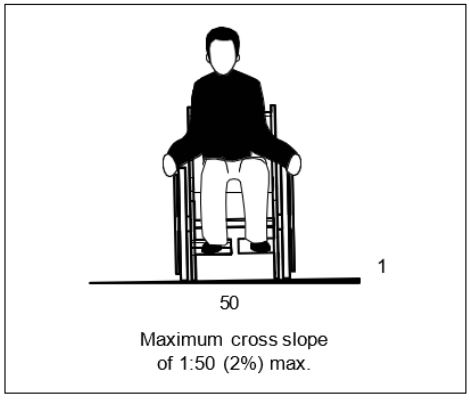


Figure 102 Cross Slope

4.3.4 Changes in Level

Where edges of an accessible route are not level with any adjacent surface, except at stairs, elevated platforms / performance areas, or loading docks:

a. provide a high colour / tonal contrast marking on the edge where the change in level is less than 200 mm

b. where the change in level is between 200 mm and 600 mm provide a high colour / tonal contrast curb or other barrier protection, a minimum of 100 mm high; and

c. where the change in level is greater than 600 mm provide guards (Refer to Section 2.4, Guards and Handrails).

4.4 Elevating Devices

Application

This section applies to elevating devices used to provide access between levels within a facility. Elevating devices include, but are not limited to:

- elevators;
- platform lifts;
- inclined lifts;
- moving walkways; and
- escalators.

All new passenger elevators, lifts, moving walkways, and escalators provided in multi-storey facilities must comply with the current Ontario Building Code and other applicable requirements identified in the most up-to-date versions of:

- CAN / CSA B44: Safety Code for Elevators and Escalators (Appendix E);
- CAN / CSA B355: Lifts for Persons with Physical Disabilities; and
- CAN / CSA B651: Accessible Design for the Built Environment.

Best Practice

Limited use / limited application (LU/LA) elevators are also not recommended for new construction due to the limited size of interior platform and other operating features. For existing facilities where LU/LA elevators are being upgraded, refer to applicable CSA standards.

Note

Freight elevators are not required to comply with this section unless the only elevators provided are used as combination passenger and freight elevators for use by the public and employees.

When retrofitting elevating devices at existing facilities, the city will review options in detail, on a case by case basis, recognizing there may be other factors to consider, including physical or structural constraints.

4.4.1 Elevators

One accessible passenger elevator, provided on an accessible route and complying with this section, is required to serve each level, including mezzanines, in all multi-storey facilities, unless exempted. If more than one elevator is provided, each passenger elevator is required to comply with this section.

Best Practice

Provide clear floor space of 2500 mm by 2500 mm.
in front of hall buttons at elevator lobbies.

Key design features for passenger elevators are summarized as follows:

Note

Refer to current edition of CSA standards for detailed criteria.

4.4.1.1 Elevator Lobby

As part of the design of elevator lobbies, provide the following: (**Figure 103**)

a. hall buttons, with visual indicators to identify when car call has been registered (e.g., light on) and answered (e.g., light off), mounted between 895 mm to 945 mm from floor, measured to centerline of button;

b. clear floor space in front of hall buttons a minimum of 920 mm wide by 1525 mm depth;

c. hall lanterns with the centerline of the fixture at a minimum of 1830 mm above the floor;

d. floor designation signage, with colour / tonal contrast from mounting surface on both sides of elevator door jamb, mounted at 1500 mm center, above finished floor, with character height at 50 mm, Refer to 5.8 for character attributes; and

e. visual and audible signals at each hoistway entrance to indicate which car is answering a call and its direction of travel. Audible signals to sound once for the “up” direction and twice for the “down” direction.



Photo 11 Elevator Door Jamb: Example of Tactile / braille floor designation signage.

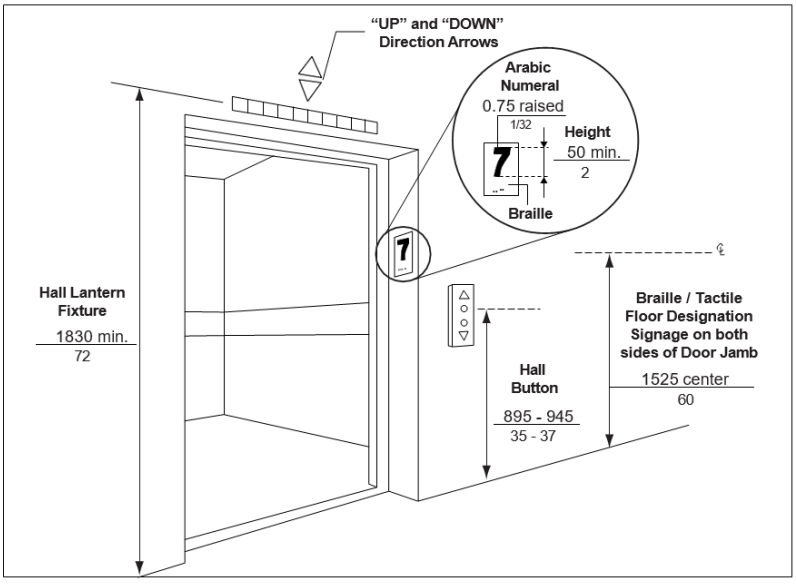


Figure 103 Elevator Lobby - Key Features

4.4.1.2 Door Features

Best Practice

In high-use public facilities, increase minimum elevator cab width to 2030 mm and minimum door clear width at 1067 mm.

a. ensure power-operated, horizontally sliding car and landing doors open and closed by automatic means are provided;

b. provide minimum door clear width at 950 mm

c. equip doors with a door re-opening device that automatically stops and reopens the car door and landing door if the door becomes obstructed by an object or person;

d. ensure reopening device is capable of sensing an object or person in the path of a closing door at 125 mm +/- 25 mm and 735 mm +/- 25 mm above the floor without requiring contact for activation and door reopening devices to remain effective for a period of 20 seconds (minimum);

e. ensure doors remain fully open for 8 seconds (minimum), unless timing is reduced by activating the car door “close” push button;

f. equip cars with leveling system that automatically stops and maintains position at floor landings within a tolerance of 13 mm under rated loading to zero loading conditions; and

g. ensure high colour / tonal contrast is provided between elevator door and surrounding environment, especially between the car sill and adjacent floor surfaces.

4.4.1.3 Interior Car Dimensions

For interior elevator car: (**Figure 104**)

a. provide minimum elevator cab dimensions of 1525 mm depth by 1725 mm width; and
b. alternatively, provide minimum elevator cab dimension and door clear width as identified in **Table 6** below.

Door Location	Door Clear Width	Inside Car (Side to Side)	Inside Car (Back Wall to Front Return)	Inside Car (Back Wall to Inside Face of Door)
Centered	1065 (42)	2030 (80)	1295 (51)	1370 (54)
Side (Off-Center)	915 (36)	1725 (68)	1295 (51)	1370 (54)
Any	915 (36)	1370 (54)	2030 (80)	2030 (80)
Any	915 (36)	1525 (60)	1525 (60)	1525 (60)
Minimum Dimension of LU / LA (limited use / limited application) elevators				
Any	815 (32)	1065 (42)	1370 (54)	Not Specified

Table 6 Minimum Dimensions for Elevator Car and Door Clear Width

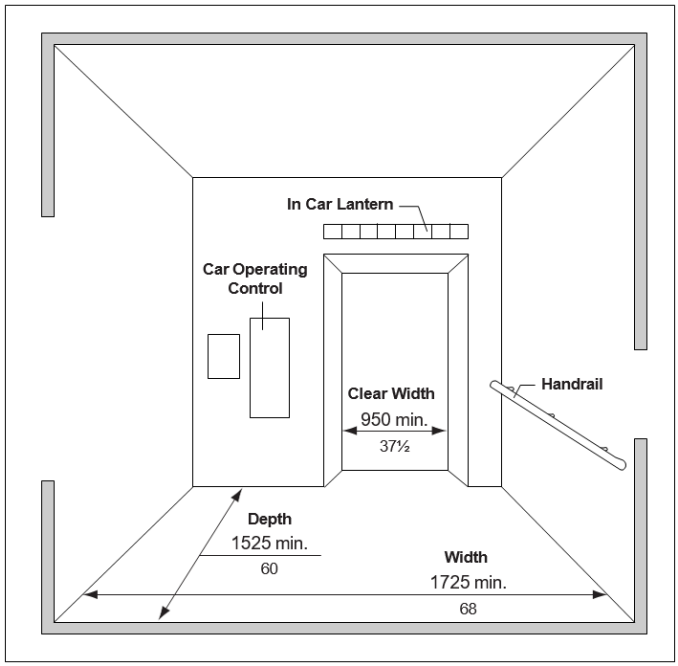


Figure 104 Elevator Car Features

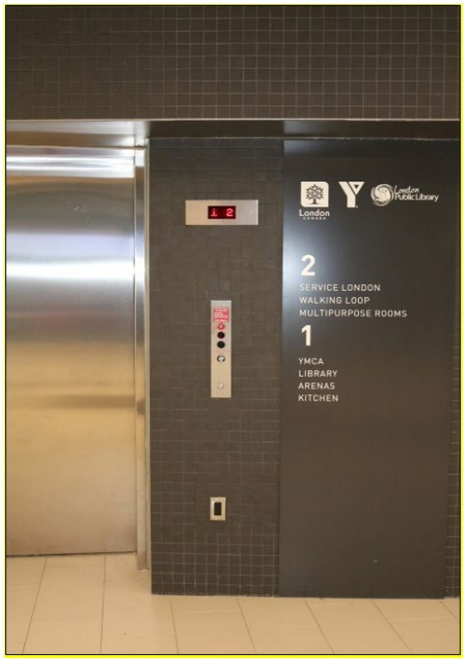


Photo 12 Replace with caption and image from Windsor.

4.4.1.4 Car Controls

For elevator car controls, provide: (**Figures 105 & 106**)

a. car operating control push buttons 19 mm (¾ in) in size, raised, flush or recessed, with car control panel readily accessible for users of mobility aids upon entering elevator;

b. controls are mounted at:

   i. a minimum of 890 mm high to the centerline of the lowest controls;

   ii. a maximum of 1200 mm high, to centerline of the highest controls; and

   iii. a maximum of 1370 mm high, to centerline of the highest controls for cars with more than 16 openings only, where parallel approach to controls is also provided for users of mobility aids;

c. visual and momentary audible indicators to show when each call is registered, with visual indicators extinguishing when each call is answered;

d. Grade 2 Braille characters and raised characters, numbers, and symbols, placed immediately to the left of the buttons that they apply to; and

e. Arabic numbers and standard tactile symbols that are 16 mm high and raised 0.75 mm from surface.

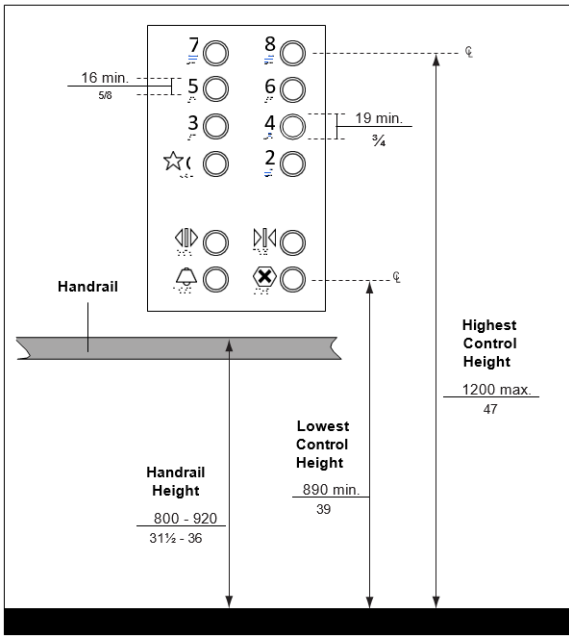


Figure 105 Elevator Car Control Panel and Handrail

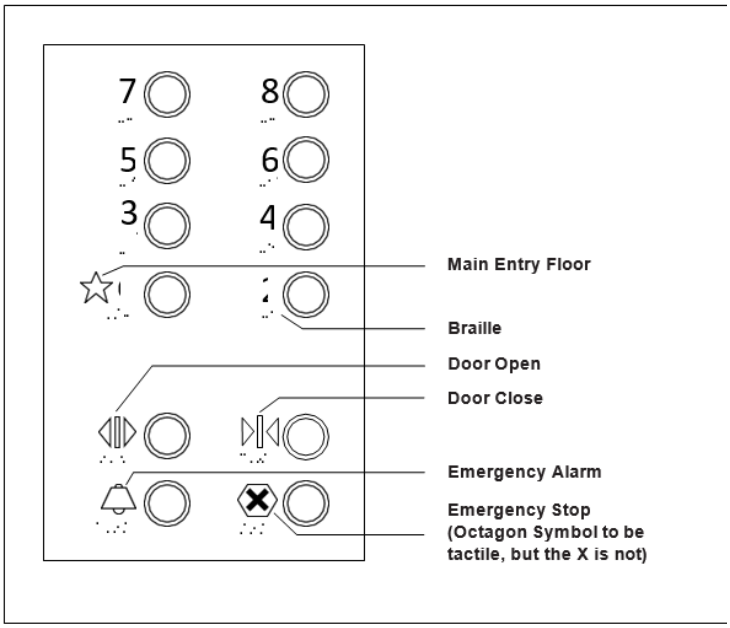


Figure 106 Standard Tactile Symbols

4.4.1.5 Emergency Car Controls

For elevator emergency car controls: (**Figure 105**)

a. provide a two-way communication system for emergencies, with operating controls mounted and grouped together at the bottom of the control panel, with the centerline of the emergency alarm and stop buttons mounted at a minimum of 890 mm high and a maximum of 1200 mm high above floor;

b. ensure communication system includes accessible features (e.g., push button operation), with visual indicator identifying when the system has been activated and the emergency call has been received (e.g., to identify “help is on the way” for users with hearing loss); and

c. ensure operating instructions are provided with braille and tactile features and if communication system is located in a closed compartment, provide accessible door opening and hardware features.

4.4.1.6 Handrails

For elevator car handrails: (**Figure 105**)

a. provide continuous handrails on all non-access walls, mounted with top grasping surfaces at 800 mm to 920 mm high above floor; and

b. ensure a clearance of 35 mm and 45 mm (13/8 in and 1¾ in) is provided between handrails and wall.

4.4.1.7 Car Position Indicators

> **Exception**
>
> Mirrors are not. required for flow-through type elevator design.

a. provide audible and visual car floor location indicators to identify the floor location of the car;

b. locate visible indicators above the car control panel or above the door, with numerals a maximum height of 16 mm

c. ensure corresponding character illuminates, to indicate a car passing a floor and when a car stops at a floor, served by the elevator; and

d. provide audible indicator, with signal between 10 to 80 decibels above ambient (dBA), measured at the annunciator, with automatic verbal announcement of the floor at which the car is about to stop, completed prior to the initiation of the door opening and with a frequency between 300 to 3,000 hertz (Hz).

4.4.1.8 Mirrors

a. mount mirror with the bottom edge at a minimum height of 2000 mm, within elevator cab as a finish material, on the wall opposite the door; and

b. where the dimension of the elevator cab is less than 1500 mm in any direction, install an angled mirror with the bottom edge at a minimum height of 2000 mm on the wall opposite the door, to assist users of mobility aids (e.g., who may need to back out).

4.4.1.9 Additional Considerations

a. ensure floor surfaces are stable, firm, and slip-resistant for users of mobility aids, with both floor and car panel surfaces designed to minimize glare;

b. provide matting or carpet pile height of 13 mm maximum, where used; and

c. ensure lighting level in elevator cars and at controls is 100 lux (minimum), measured at the floor level, and that it is at least equivalent to the lighting level as the adjacent elevator lobbies (Refer to Section 5.7, Lighting for additional requirements).

4.4.2 Platform Lifts

For retrofitting existing environments, platform lifts that facilitate unassisted entry, operation, and exit from the lift to be provided, with the following additional requirements: (**Figures 107 & 108**)

a. ensure they are located along an accessible route;

b. provide signage to clearly identify platform lift; and

c. ensure compliance with CSA standard CAN / CSA B355 (latest edition) and other applicable sections of these standards, including doors to platform and all related controls and operating mechanisms.

4.4.2.1 Platform Size and Design Features

a. ensure surface is non-slip, with dimension of 890 mm by 1525 mm

b. incorporate safety wheel guards or other protection along all exposed edges;

c. provide an emergency call system, linked to a monitored location within the facility, with two-way communication ability and ensure that the highest operable portion is mounted at a maximum of 1200 mm from the floor of the platform; and

d. ensure operating instructions are provided with braille and tactile features and if communication system is located in a closed compartment, provide accessible door opening and hardware features.

Best Practice

Platform lifts are not recommended in new construction due to limited size of platforms and weight restriction which typically does not accommodate larger mobility aids.

Whenever possible, grading, or integrated elevator access to be incorporated in order to avoid the provision and use of platform lifts.

Additionally, if there are no suitable alternatives, platform lift design to be selected that allows the spatial requirement of larger mobility devices such as scooters and power wheelchairs.

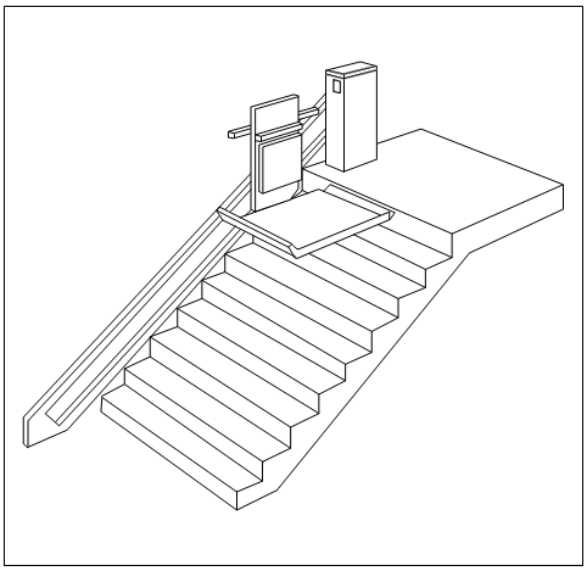


Figure 107 Inclined Platform Stair-Lift

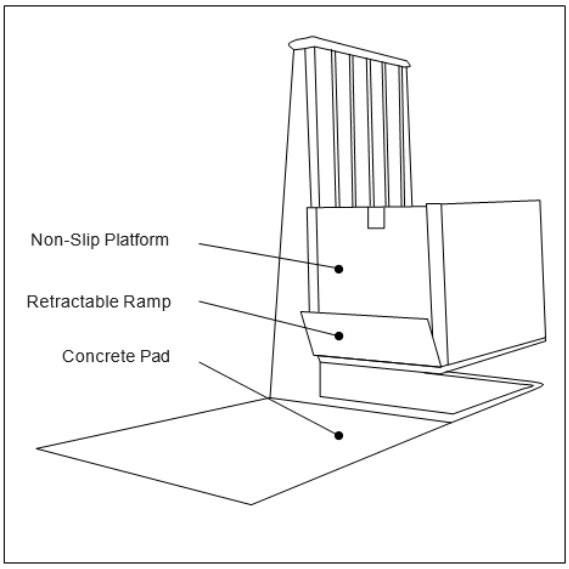


Figure 108 Vertical Platform Lift

4.4.3 Escalators and Moving Walkways

a. ensure that where escalators are provided, an alternate accessible route (e.g., ramp or elevator) is also provided in the same vicinity as the escalator;

b. in a building in which an escalator or inclined moving walkway provides access to any floor level above or below the entrance floor level provide an interior accessible path of travel to that floor level;

c. ensure the route from the escalator or inclined moving walkway to the accessible path of travel is clearly indicated by appropriate signs; and

d. in a building in which a moving walkway provides access between areas on the same floor level, provide an accessible path of travel between the areas served by the walkway.

4.4.3.1 Design Features

4.4.3.1.1 Surfaces, Treads & Risers

Ensure the surfaces, treads and risers of escalators and moving walkways:

a. are non-slip, non-reflective material (e.g., matte finish to minimize reflected glare);

b. have top nosings and edges (both horizontal and vertical edges) of escalator steps with high tonal / colour contrasted markings that runs the full width of the step / surface, 50 mm depth (maximum); and

c. have the comb plate (e.g., surface closest to the escalator or the moving walkway, both as you step on and step off) marked with a high colour / tonal contrasted marking that runs the full width of the step / surface, 50 mm depth (maximum).

4.4.3.1.2 Lighting

a. ensure lighting level over escalators and moving walkways is a minimum of 200 lux (20 foot candles), and evenly distributed, from a low-glare light source and especially at the beginning and end of escalators and moving walkways (Refer to Section 5.7, Lighting for additional requirements).

4.4.3.1.3 Additional Considerations

a. consideration for provision of a low-level audible warning indicator, marking both ends of a moving walkway. The intent is to provide an audible cue for users with vision loss, to hear the warning from 920mm before the transition between the moving walkway and the floor. Any audible warning indicators should be adjustable for environmental noise such as crowds;

b. where there is an accessible route of travel adjacent to or underneath escalators or moving walkways that are on an incline, ensure protective barriers are in place (e.g., architectural detailing / millwork, planting or seating walls, guardrails or other fixed furniture) that can be detected by people who use long canes or guide dogs to prevent potential bumping hazards, especially for users with vision loss; and

c. when out of service or during maintenance / repair work, ensure suitable barricades or other protective measures are in place at the beginning and end of escalators or moving walkways, detectable by long cane users. Accessible and suitably placed signage is required to indicate that the escalator or moving walkway is out of service.

4.5 Washrooms

Application

This section applies to washroom facilities and elements within a site and facility including, but not limited to:

- multiple-occupancy washrooms;
- universal washrooms; and
- change rooms with washroom features.

Refer to Table 8 and Table 9 in sub-section 4.5.1, Provision and Locations for minimum number of Universal Washrooms and Accessible Water Closet Stalls or Enclosures to be provided in a building in which washrooms are required as per subsection 3.7.4 of the Ontario Building Code.

Reference

Sec. 2.1 Ground and Floor Surfaces

Sec. 2.5 Overhanging and Protruding Objects

Sec. 4.2 Doors and Doorways

Sec. 4.3 Interior Accessible Routes

Sec. 5.1 Controls and Operating Mechanisms

Sec. 5.6 Fire and Life Safety Systems Sec. 5.7 Lighting

Sec. 5.8 Signage and Wayfinding

Note

If retrofitting multiple occupancy washrooms with accessible water closet stalls or enclosures is not possible, identifying additional space for providing a universal washroom is recommended.

Universal washrooms allow the greatest flexibility, including larger floor space for people who require assistance and may be accompanied by a caregiver or companion, as well as to accommodate larger mobility aids such as power wheelchairs and scooters.

4.5.1 Provision and Locations

a. provide universal washrooms, as identified in **Table 7**;

b. provide the minimum number of accessible water closet stalls or enclosures, as identified in **Table 8**;

c. locate centrally within a facility along an accessible route, within a maximum of 45 m of regular washrooms; and

d. where washrooms are not accessible, provide directional signage to indicate the location of the nearest accessible washroom on the same floor.

Best Practice

Provide at least one universal washroom on every occupied floor of a facility.

Note

Where one water closet is required for males and one water closet is required for females, the following may be provided:

(1) one universal washroom; and

(2) one washroom containing one water closet to be used by both sexes provided the door to the room can be locked from the inside.

Table 7 Minimum Number of Universal Washrooms per Building

Number of Storey in Building	Minimum number of Universal Washrooms per Building
1-3	1
4 - 6	2
Over 6	3, plus 1 for each additional increment of 3 stores in excess of 6 stores

Table 8 Minimum Number of Water Closet Stalls or Enclosures Required to

Number of Water Closets per Washroom	Minimum Number of Accessible Water Closet Stalls or Enclosures per Washroom
1-3	0, where a universal washroom is provided on the same floor level within 45 m (147 ft 8 in) of the washroom, or 1, where a universal washroom is not provided on the same floor level within 45 m (147 ft 8 in) of the washroom
4 - 9	1
10 - 16	2
17 - 20	3
21 -30	4
Over 30	5, plus 1 for each additional increment of 10 water closets per washroom in excess of 30 water closets per washroom

4.5.2 Multiple Occupancy Washrooms

For multiple occupancy washrooms with accessible water closet stalls or enclosures: (**Figure 109**)

a. identify clearly with signage, indicating male or female where applicable, with other accessibility features (e.g., braille, tactile, International Symbol of Accessibility);

b. where doors are provided at washroom entrance, provide a minimum clear width of 950 mm, when the door is in an open position and equipped with power door operators;

c. ensure lighting level is evenly distributed, at a minimum of 200 lux (20 ft. candles) (**Refer to Section 5.7, Lighting**);

d. ensure minimum clearance of 1700 mm between the inside face of an in-swinging entrance door and the outside face of an adjacent water closet stall;

e. ensure minimum clearance of 1525 mm between outside wall of stall and any wall-mounted fixtures or other obstructions;

f. provide a minimum clear floor space 1600 mm wide by 1525 mm depth, in front of the accessible water closet stall, which can be reduced to a minimum of 1525 mm by 1525 mm in a retrofit condition;

g. ensure a minimum clear turning diameter of 1525 mm is provided inside washroom circulation area, with a maximum of 500 mm permitted under the lavatory to allow users of mobility aids to make a 180° turn;

h. ensure floor surfaces are firm, stable and slip-resistant, with a maximum slope of 1:50 (2%);

i. provide accessible lavatories with washroom amenities, as identified in this section;

j. provide accessible water closet stalls with suitable clear floor space, as identified in this section; and

k. install audible and visual fire alarm system.

Best Practice

Wherever possible, consider the use of privacy walls or specialized configuration of entrance vestibules to avoid the need for doors and power door operators. Where entrances are door-less, provide identification signage on both sides of the entrance openings.

Where provided, ensure any drains are installed away from any accessible route / path of travel.

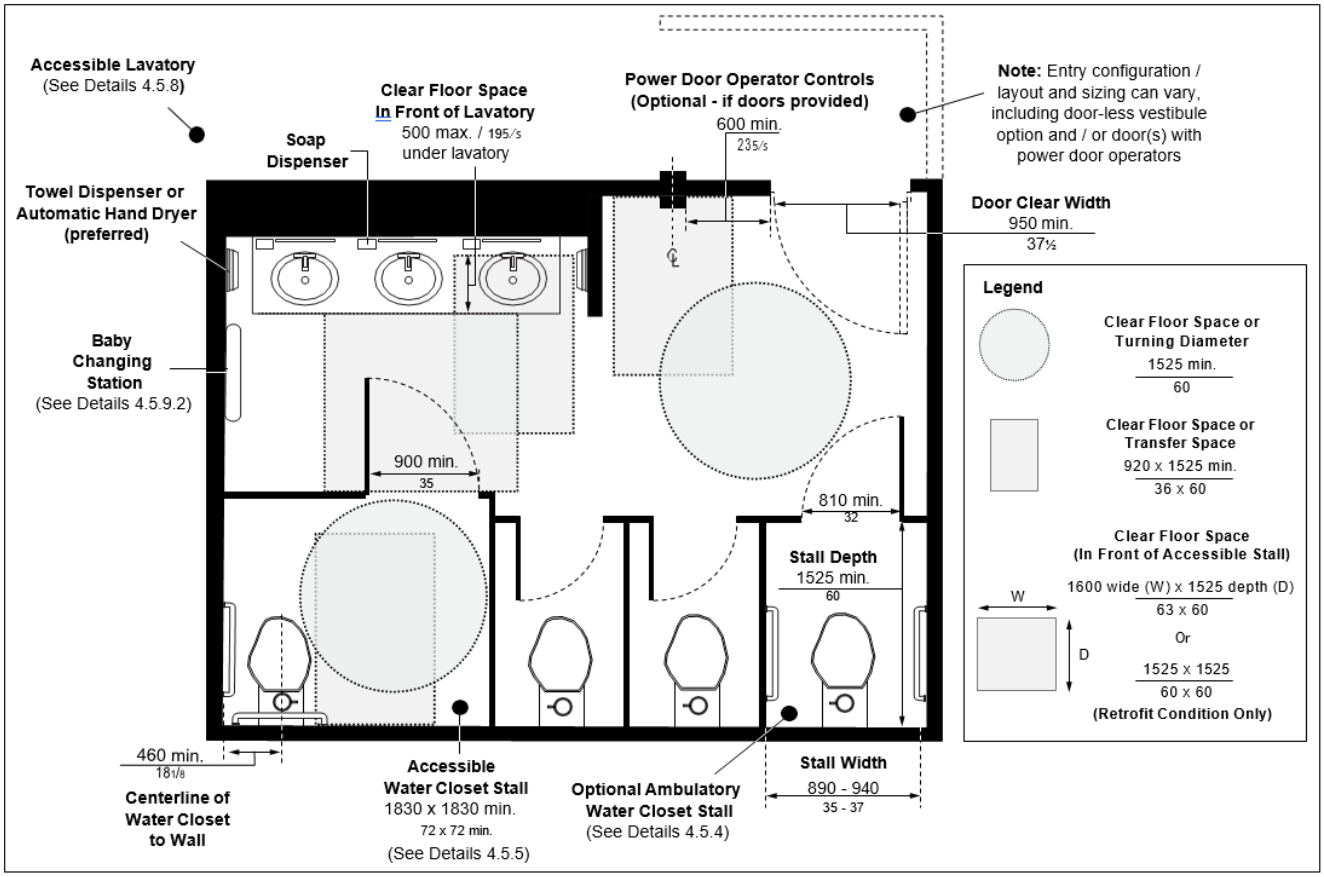


Figure 109 Example of Multiple Occupancy Washroom Layout and Typical Amenities

4.5.3 Universal Washrooms

Best Practice

Consider providing a larger clear turning diameter of 1700 mm (67 in) or greater inside washroom circulation area.

Where universal washrooms are provided: (**Figure 110**)

a. locate in the same vicinity as other washrooms (e.g., Male & Female multiple occupancy washrooms) along the shortest accessible route;

b. identify clearly with signage, including unisex pictogram (e.g., Male & Female) and the International Symbol of Accessibility;

c. provide accessible entrance door:

   i. with minimum clear width of 950 mm, when the door is in an open position;

   ii. equip with power door operator, coordinated with an automatic locking system (e.g., “push to lock” control), with visual indicator on exterior side that identifies occupied or unoccupied;

iii. provide locking mechanism that can be locked from the inside and released from the outside, in case of emergency; and

iv. mount accessible latch operating and locking mechanisms 900 mm to 1000 mm above floor, which are operable using a closed fist and does not require fine finger control, tight grasping, pinching or twisting of the wrist, with a maximum force of 22.2 Newtons (5 pounds);4.5.3

d. ensure internal dimension between walls is no less than 1700 mm and provide a minimum clear turning diameter of 2440 mm clear of all fixtures inside the universal washroom;

f. provide one accessible lavatory with other washroom amenities including but not limited to mirror, soap dispenser, paper towel dispenser, automatic hand dryer (preferred), and toilet paper dispenser as identified in this section;

t is not required to have an accessible path of travel, ensure at least one ambulatory water closet is provided.

Note

An emergency call system with a cancellation feature to turn off the alarm when it is accidentally activated is preferred.

In a retrofit situation were providing the required turning space is technically infeasible, the turning space may be reduced to not less than 2130 mm.

ii. includes an emergency sign that contains the words “IN THE EVENT OF

AN EMERGENCY PUSH EMERGENCY BUTTON AND AUDIBLE AND VISUAL SIGNAL WILL ACTIVATE”

letters at least 25 mm high with a 5 mm stroke and that is posted above the emergency button; and

iii. where facilities have the capacity and where staff is available, ensure the call system is linked to a display panel at a reception / information counter or to a centrally monitored station (e.g., security desk);

q. install at least one coat hook mounted at 1200 mm (maximum) high from floor, on a side wall and projecting 50 mm (maximum) from mounting surface.

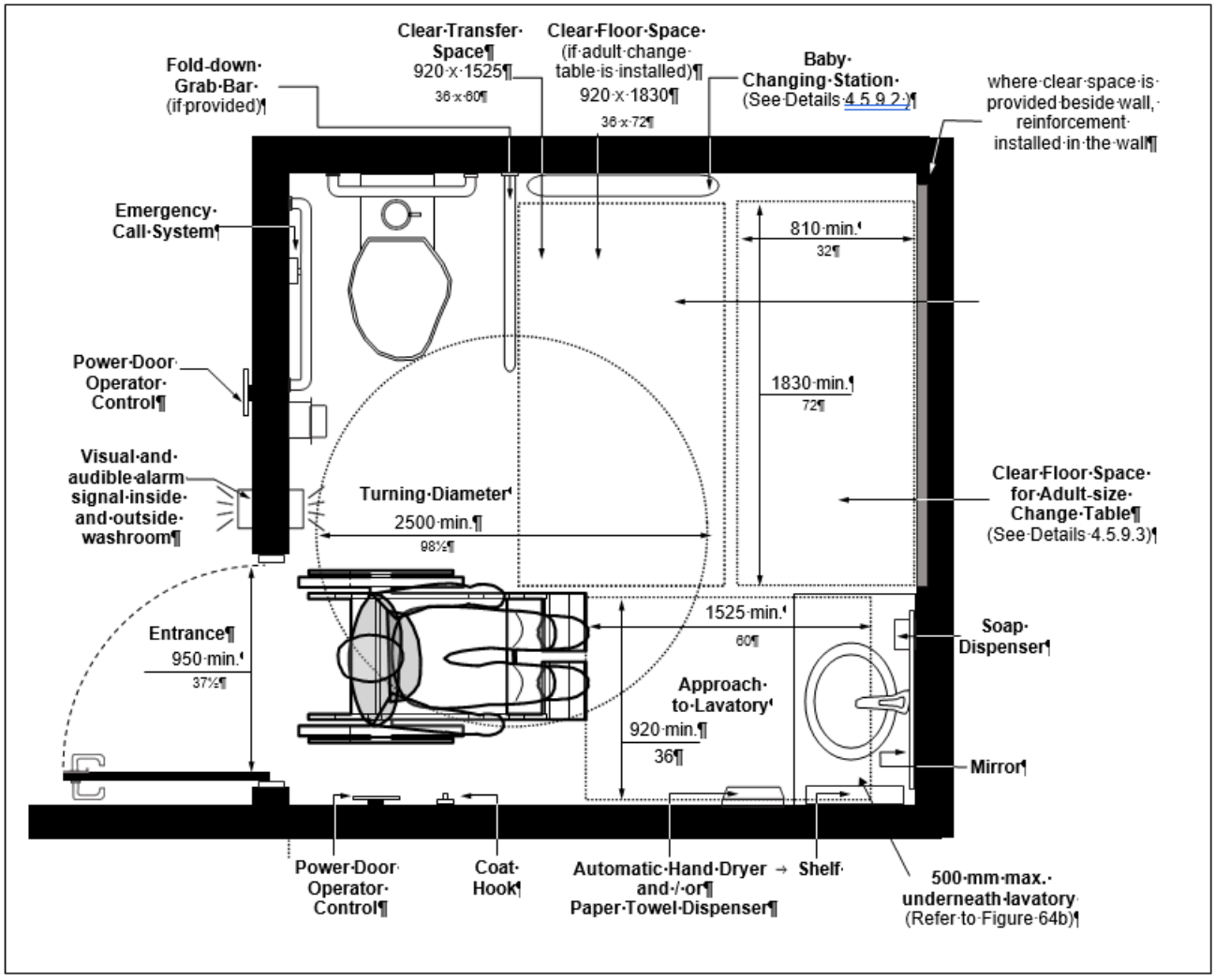


Figure 110 Example of Universal Washroom Layout and Typical Amenities

4.5.4 Ambulatory Water Closet Stalls or Enclosures

Where ambulatory water closet stalls or enclosures are provided for users with limited mobility who do not use wheeled mobility aids (e.g., canes or crutches): (**Figure 109**)

Note

Ambulatory water closet stalls can be identified with a sign that includes a pictogram or symbol of a person with a cane.

a. ensure minimum depth of 1525 mm, with a width between 890 mm to 940 mm;

b. provide a door:

   i. with minimum clear width of 810 mm;

   ii. that swings outward, unless the minimum dimensions of the stall identified above are not located within the door swing;

   iii. with spring-type or gravity hinges so that the door closes automatically;

   iv. capable of being latched from the inside and released from the outside in case of an emergency;

   v. with a door pull on both sides of the door, near the latch side of the door, located at a height not less than 900 m and not more than 1000 mm above the finished floor; and

   vi. with all accessible hardware and latching mechanisms operable with a closed fist and without tight grasping, pinching of fingers or twisting of wrist, with a maximum force of 22.2 Newtons (5 pounds);

c. equip with a water closet centered between the partition walls;

d. install L-shaped grab bars, as identified in this section, on each side of the water closet;

e. provide a sign on the door that indicates that the stall is suitable for users who may require grab bar assistance; and

f. install at least one coat hook mounted at a maximum of 1200 mm high from floor, on a side wall and projecting a maximum 50 mm from mounting surface.

4.5.5 Accessible Water Closet Stalls or Enclosures

Where accessible water closet stalls or enclosures are provided in multiple occupancy washrooms: (**Figures 111 & 112**)

a. mark with the International Symbol of Accessibility and ensure doors and partitions have a high colour / tonal contrast from surroundings;

b. provide a minimum clear turning diameter of 1525 mm, with overall stall size at a minimum of 1830 mm by 1830 mm; and

c. install at least one coat hook mounted at a maximum of 1200 mm high from floor, on a side wall and projecting a maximum of 50 mm from mounting surface.

Best Practice

Provide a larger accessible stall that includes a lavatory inside with required amenities and floor space clearances.

Provide clear turning diameter of 1830 mm (72 in) or larger.

Note

In a retrofit situation where it is technically infeasible to provide the required clear width opening for the accessible stall door, the clear width opening may be reduced to a minimum of 860 mm (34 in).

4.5.5.1 Stall Doors

For accessible stall doors, ensure: (**Figures 111 & 112**)

a. when door is in an open position, minimum clear width of 900 mm is provided;

b. the door is aligned with water closet transfer space (e.g., door is positioned on opposite side of water closet);

c. door swings outward, unless a minimum clear floor space of 920 mm door swing, to permit the door to be closed inside without interfering with the mobility device;

d. door is self-closing with spring-type or gravity hinges, so that when at rest, the door remains open a maximum 50 mm beyond the jamb;

e. accessible door hardware is provided, including locking mechanisms, with stall capable of being locked from the inside by a control that is operable with a closed fist and does not require fine finger control, tight grasping, pinching or twisting of the wrist with a maximum force of 22.2 Newtons (5 pounds);

f. door can be released from the outside in case of emergency; and

g. provide D-type door pulls on both sides of the door as follows:

   i. ensure high colour / tonal contrast with mounting surface;

   ii. provide minimum length of 140 mm, with grasping depth between 30 mm to 50 mm; and

Best Practice

Wall hung water closets are preferred because they provide additional space at toe level.

Automatic flush controls are recommended for accessible water closets (e.g., sensor activated).

iii. mount on the vertical centerline of the door, located at a height between 800 mm and 1000 mm above the finished floor.

4.5.6 Water Closets

For accessible / ambulatory water closets: (**Figures 109,110,111,112**)

a. mount seat between 430 mm and 485 mm high from floor;

b. install water closet as follows: (Note: Not applicable to 4.5.4 Ambulatory Water Closet Stalls or Enclosures)

   i. the centerline of water closet from any adjacent side wall is between 460 mm and 480 mm and unobstructed transfer space a minimum of 920 mm wide by 1525 mm depth is provided on the other side of the water closet; or

   ii. a clear transfer space a minimum of 920 mm wide and 1525 m depth is provided on each side of the water closet;

c. provide a back support where there is no seat cover / lid or tank, and where there is a tank, ensure tank lid is securely attached;

d. ensure seat is secured;

e. provide internal extension guards that will not allow the seat to slide;

f. mount toilet paper dispenser:

   i. on the side wall closest to the water closet, below the grab bar;

   ii. with bottom edge at 600 mm to 800 mm high from floor; and

   iii. with the closest edge of the dispenser in line with front edge or a maximum of 300 mm from the front edge of the water closet seat;

g. provide automatic, lever or other type of flushing control (e.g., push button control) that:

   i. is located between 500 mm and 900 mm above the finished floor;

   ii. is located on and operable from the transfer side; and

   iii. is operable using a closed fist and does not require fine finger control, tight grasping, pinching, or twisting of the wrist, with a maximum force of 22.2 Newtons (5 pounds);

h. install at least one coat hook mounted at a maximum of 1200 mm high from floor, on a side wall and projecting a maximum of 50 mm from mounting surface.

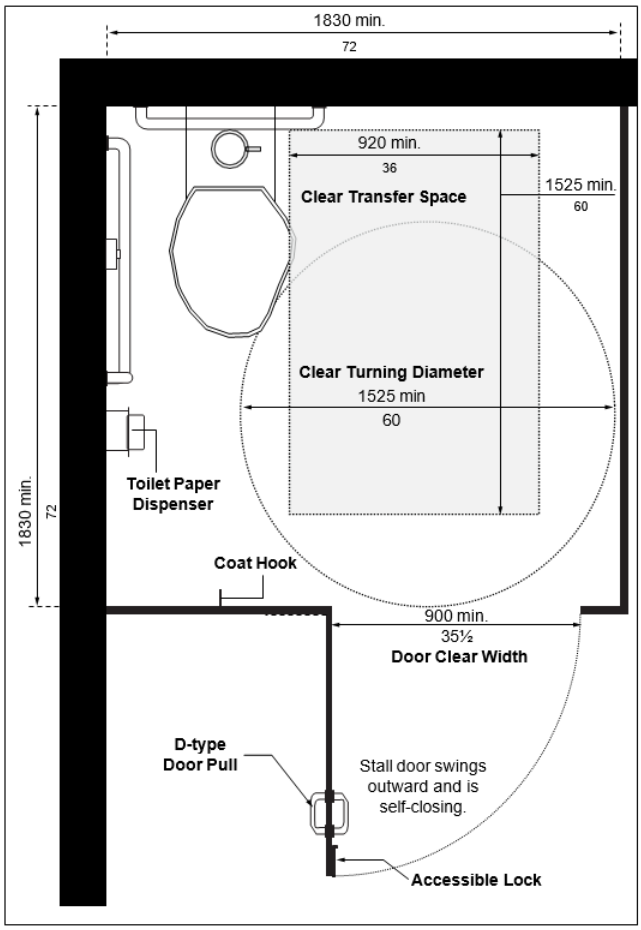


Figure 111 Accessible Water Closet Stall - Space

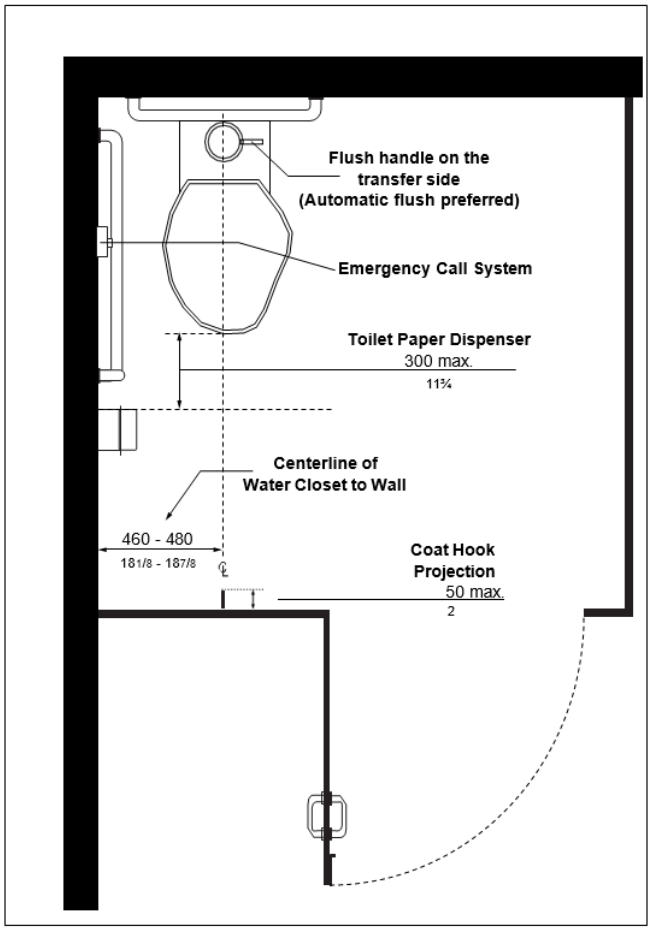


Figure 112 Accessible Water Closet Stall Features

4.5.7 Grab Bars

Where grab bars are provided ensure: (**Figures 113 & 114**)

a. surface is non-abrasive and slip-resistant (e.g., peened finish);
b. a high colour / tonal contrast is provided between grab bar and mounting surfaces;
c. grasping surface is circular in shape, with diameter between 30 mm and 40 mm;
d. clear space a minimum of 38 mm and a maximum 50 mm is provided between mounting surface and the inside surface of the grab bar;
e. it is mounted securely to withstand a force of 1.3 Kilonewtons (300 pounds) applied in all directions; and
f. grab bar does not rotate within its fittings.

Best Practice

Space of 100 mm (4 in) is recommended between grab bar and toilet paper dispenser.

Where large toilet paper dispensers are used, ensure they are suitably mounted and do not obstruct the use of the adjacent grab bar.

4.5.7.1 Horizontal Grab Bars

a. ensure minimum length of 600 mm;
b. mount between 840 mm and 920 mm high from floor level, centered behind water closet; and
c. where water closet has a water tank, mount bottom edge of grab bar a minimum of 150 mm above the tank.

4.5.7.2 L-shaped Grab Bars

a. ensure minimum length of 760 mm for both vertical and horizontal components, with a minimum clearance from toilet paper dispenser to any grab bar component of 60 mm;

b. mount vertical component a maximum of 150 mm from front edge of water closet; and

c. mount horizontal component a maximum of 750 mm high above floor.

Note

Grab bars with knurled finish are not acceptable for use.

Fold-down grab bar is permitted to encroach into the turning space or clear transfer space.

4.5.7.3 Fold-Down Grab Bars

Where fold-down grab bars are provided: (**Figures 115 & 116**)

a. mount on the wall behind the water closet;
b. locate on transfer space side;
c. ensure minimum length of 760 mm);
d. mount between 390 mm and 410 mm) from centerline of water closet;
e. mount with the horizontal component at a maximum of 750 mm high from floor level;
f. ensure force required to pull down grab bar is a maximum of 22.2 Newtons (5.0 pounds); and
g. where transfer space is provided on both sides of the water closet, provide a fold-down grab bar on each side.

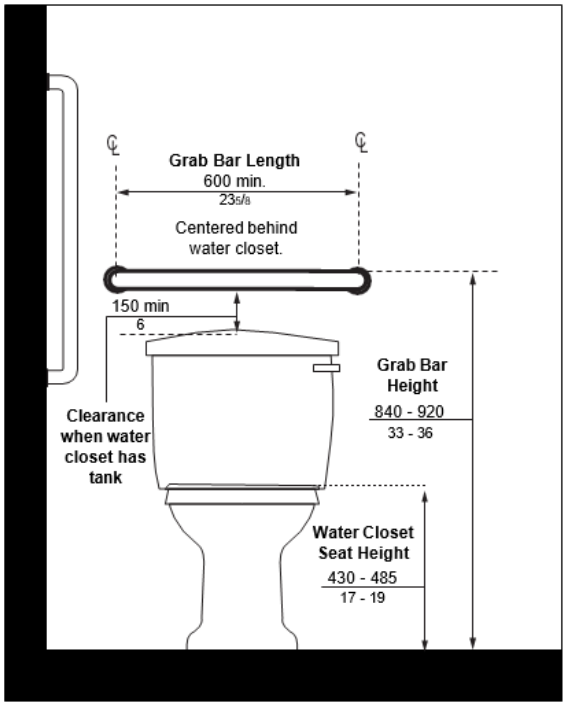


Figure 113 Horizontal Grab Bar and Seat Height

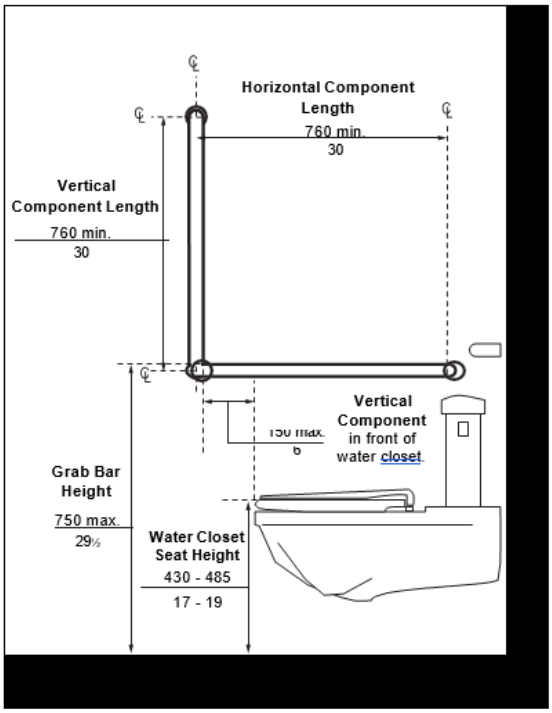


Figure 114 L-shaped Grab Bar and Seat Height

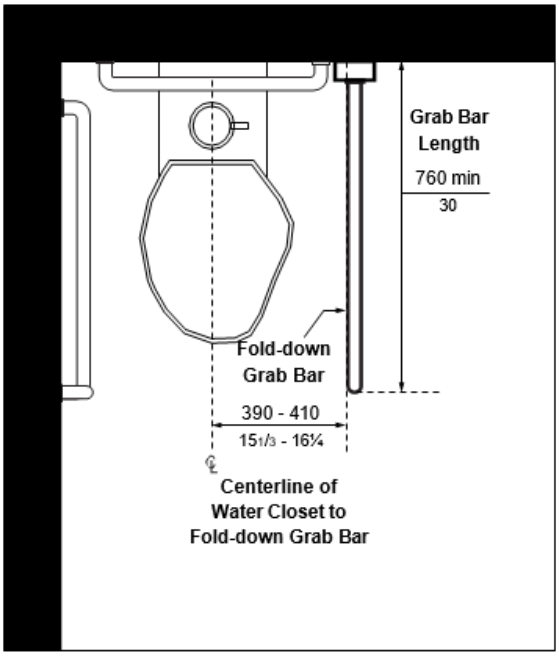


Figure 115 Fold-down Grab Bar - Plan View

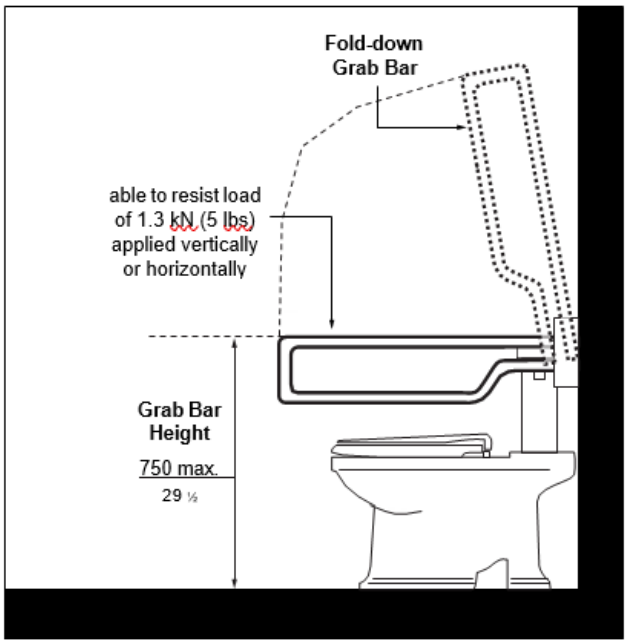


Figure 116 Fold-down Grab Bar - Elevation View

4.5.8 Lavatories

Provision of at least one accessible lavatory is required in each accessible washroom facility as follows: (**Figures 117 & 118**)

a. ensure centerline of lavatory is a minimum of 460 mm from adjacent side wall;
b. ensure top surface is continuous, with a high colour / tonal contrast, compared to adjacent wall surfaces;
c. mount top surface of lavatory at 820 to 865 mm high above floor;
d. provide clearances underneath lavatory no less than:
    i. 920 mm wide, centered on lavatory;
    ii. 735 mm high at front edge;
    iii. 685 mm high at 200 mm back from front edge; and
    iv. 350 mm high, over the distance from a point 280 mm to a point 430 mm back from the front edge, for toe space clearance;
e. provide automatic control or lever-type faucet without spring loading, located so that the distance from the centerline of the faucet is 485 mm (maximum) depth, measured from edge of a basin or to the front edge of a vanity;
f. mount soap dispenser at a maximum of 1100 mm above the finished floor, within 500 mm from the front edge of the lavatory, with automatic control (preferred) or with a manual control, operable using a closed fist and with a force of 22.2 Newtons (5.0 pounds) or less;
g. provide a minimum clear floor space of 920 mm wide by 1525 mm depth, centered on the lavatory, with a maximum depth of 500 mm permitted under the lavatory;
h. provide an automatic hand dryer (preferred) or manually operated towel dispenser, located at a maximum of 610 mm, measured horizontally, from the edge of the lavatory;
i. ensure water temperature is controlled to a maximum of 43 Degrees Celsius; and
j. ensure water pipes are covered or insulated below lavatories.

4.5.8.1 Shelves

Where shelves are provided: (**Figure 118**)

a. mount at a maximum of 1100 mm high above floor and installed in a location where it will not create a hazard;
b. ensure shelves do not project more than 100 mm from mounting surface along an accessible path of travel; and
c. where provided at a lavatory, mount at a maximum 200 mm high above top surface of lavatory.

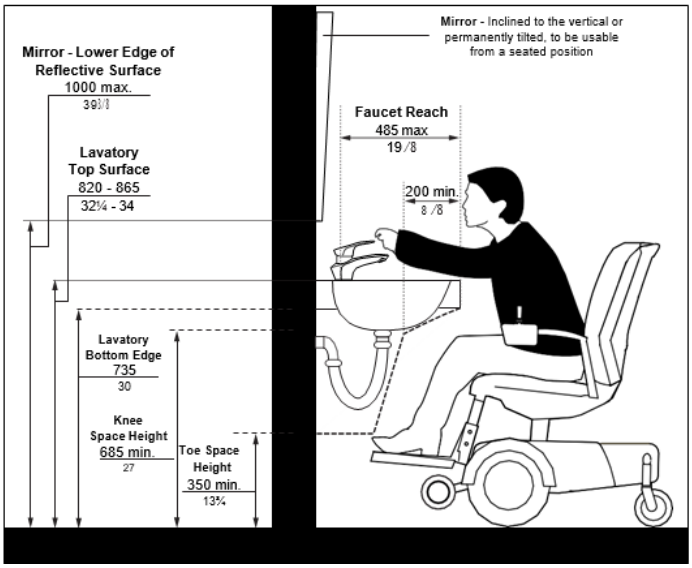


Figure 117 Lavatories - Section View

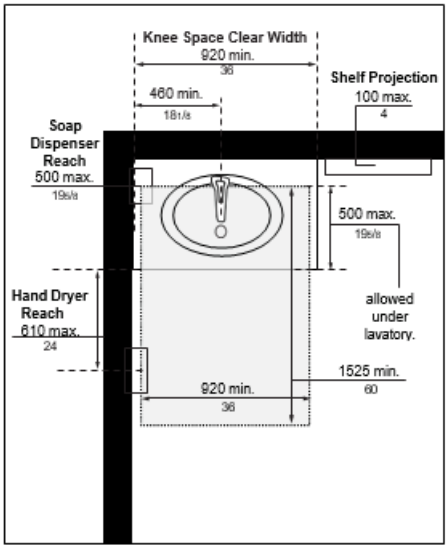


Figure 118 Lavatories - Plan View

4.5.9 Washroom Amenities

Best Practice

Automatic controls are preferred as they are easy to operate by a wider range of users and have improved hygienic performance.

Washroom amenities include, but are not limited to: vending equipment, hand dryers, paper towel dispensers, soap dispensers, waste receptacles, sanitary napkin dispenser / disposal units, mirrors, changing stations, and tables. Where washroom amenities are provided: (**Figures 118 & 119**)

a. ensure wall mounted amenities are recessed (preferred) or do not project more than 100 mm from any wall along an accessible path of travel or within the required clear transfer space of the toilet (e.g., sanitary napkin disposal units);

b. provide high colour / tonal contrast between amenities and mounting surfaces;

c. ensure any operating controls are mounted between 900 mm and 1100 mm high above floor, are automatic / push button type or are operable with a closed fist / one hand, without requiring tight grasping, pinching or twisting of the wrist and with a maximum force of 22.2 Newtons (5 pounds);

d. ensure the dispensing height of washroom amenities is between 900 mm and 1100 mm;

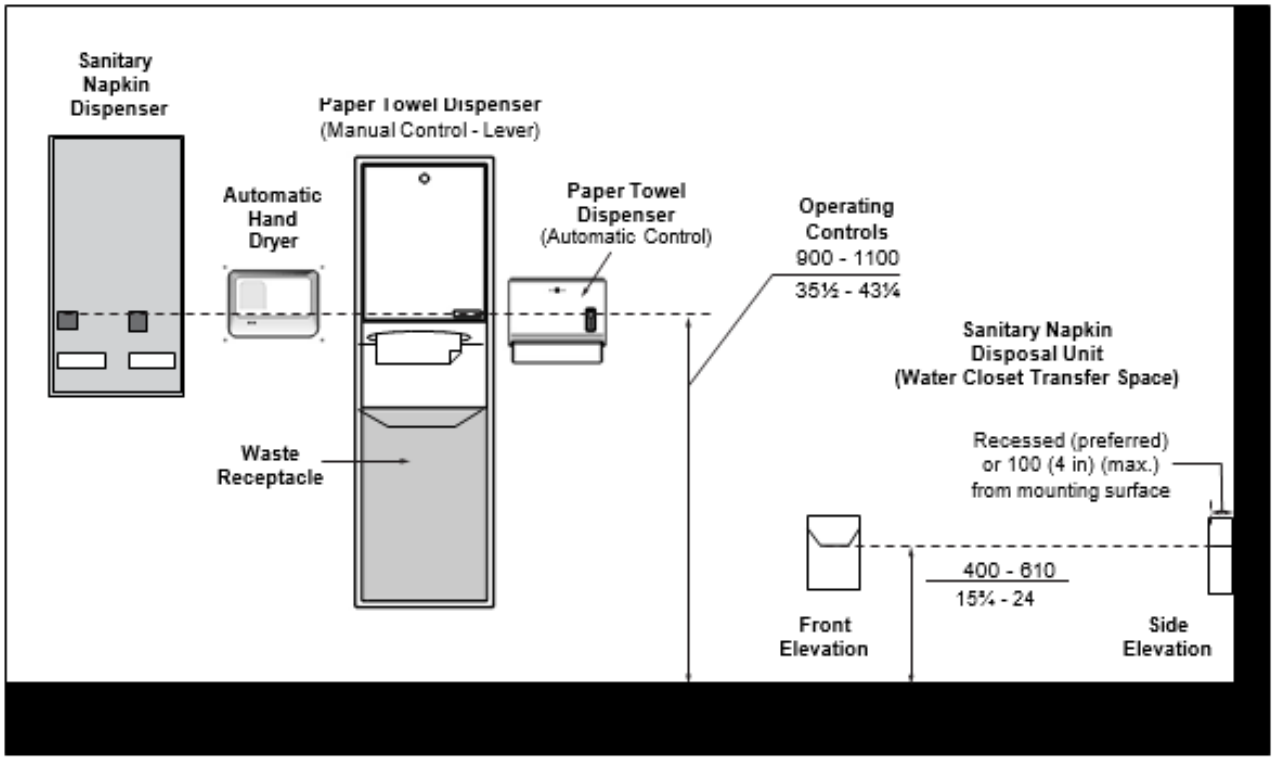


Figure 119 Typical Washroom Amenities - Mounting Heights for Operating Controls,

e. where amenities are mounted at lavatories (e.g., hand dryers, paper towel dispensers, soap dispensers), install at a maximum of 1100 mm high, between 500 mm to 610 mm measured horizontally from the edge of the lavatory;

f. provide minimum clear floor space of 920 mm (36 in) wide by 1525 mm (60 in) depth, for side and frontal approaches; and

g. for sanitary napkin disposal units:

i. locate unit in the clear transfer space at the side of the water closet, to allow frontal approach and use by users of mobility aids and / or for reach and use when seated on the water closet; and

ii. mount operating component (e.g., push handle for lid) of unit between 400 mm and 610 mm.

4.5.9.1 Mirrors

For mirrors provided at accessible lavatories: (**Figure 117**)

a. mount with the bottom edge of the reflecting surface at a maximum of 1000 mm high above floor or inclined to the vertical to be usable from a seated position;

b. ensure lighting level over mirrors does not create reflected glare; and

c. where full length mirrors are provided, ensure they are not installed where they will reflect path of travel and cause confusion for users.

Best Practice

A single full length mirror can accommodate a greater number of people, including children. In order for mirrors to be used by people who are ambulatory and people who use wheeled mobility devices, ensure the top edge of mirrors is. 1880 mm (74 in) (minimum) from the floor or ground.

Where tilted mirrors are provided, ensure they are permanently tilted for use at all times from a seated position, by children or users of shorter stature.

4.5.9.2 Baby Changing Stations

Where baby changing stations (e.g., which can also be referred to as a baby changing table) are provided: (**Figure 120**)

a. where provided, ensure at least one is accessible for users with disabilities, with unit placed in a location that does not obstruct adjacent paths of travel when in use and positioned in close proximity to a lavatory and waste receptacle;

Best Practice

Public facilities such as community and recreation centers should provide an adult-size change table in each universal washroom.

b. ensure a minimum clear floor space of 920 mm by 1525 mm for either forward or side approaches;

c. ensure the required floor clearance for changing station does not overlap with floor clearances of other fixtures, when the changing station is folded up;

d. mount with the highest edge or component of the station between 730 mm and 865 mm;

e. ensure minimum knee clearance of 685 mm high, and 480 mm depth is provided;

f. where a folding-type changing station is provided, ensure a maximum projection from wall of 100 mm when in folded position and located along accessible path of travel; and

g. where a folding-type changing station is provided, ensure operating control is:

i. mounted between 900 mm and 1100 mm high; and

ii. operable with a closed fist and without tight grasping, pinching of fingers or twisting of wrist, with a maximum force of 22.2 Newtons (5 pounds).

Note

Adult-size change tables located in universal washrooms are of benefit to many individuals and may be used as changing stations or tables.

They allow persons with limited balance or strength to sit and allow persons with disabilities to lie down and be changed with the assistance of an attendant.

Adult-size tables are also useful in change rooms, where people are expected to change clothing.

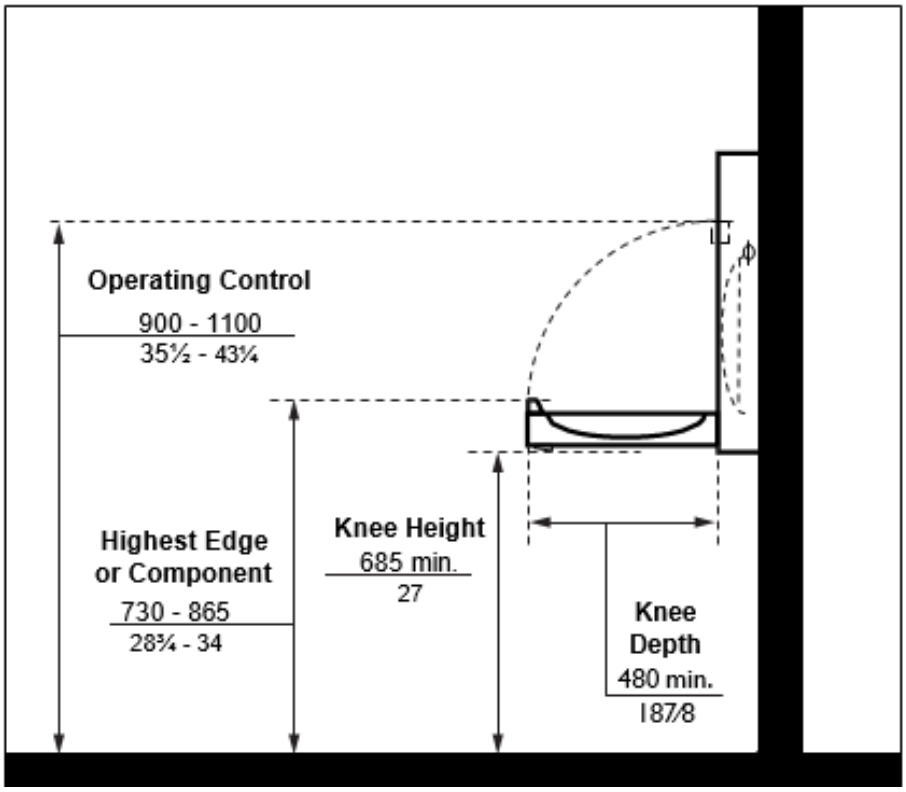


Figure 120 Folding Baby Changing Station - Section View

4.5.9.3 Adult-size Change Tables

Where an adult-size change table is installed in a universal washroom: (Figures 110, 121 & 122)

a. provide a change table surface that is a minimum of 810 mm wide by 1830 mm length with a minimum clear floor space of 920 mm wide by 1830 mm length, parallel to the long side of the table;

b. when fully loaded, ensure the surface height above the floor is adjustable (e.g., automatic preferred) from between 450 mm and 500 mm at the low range to between 850 mm and 900 mm at the high range;

c. where a fold-down change table is provided:

   i. install so that it does not encroach into the clear transfer space required adjacent to the water closet when positioned for use;

   ii. ensure operating mechanisms (e.g., latches, handles and pulls) are mounted between 900 mm to 1100 mm high; and

   iii. ensure automatic / manual operating mechanisms are operable with a closed fist and without tight grasping, pinching of fingers or twisting of wrist, with a maximum force of 22.2 Newtons (5 pounds);

d. ensure changing tables can support a minimum load of 1.33 Kilonewtons (300 pounds), with required wall reinforcements;

e. provide a high colour / tonal contrast between change table surface and adjacent mounting surface; and

f. ensure change table surfaces are free of sharp edges or abrasive materials and are easy to clean.

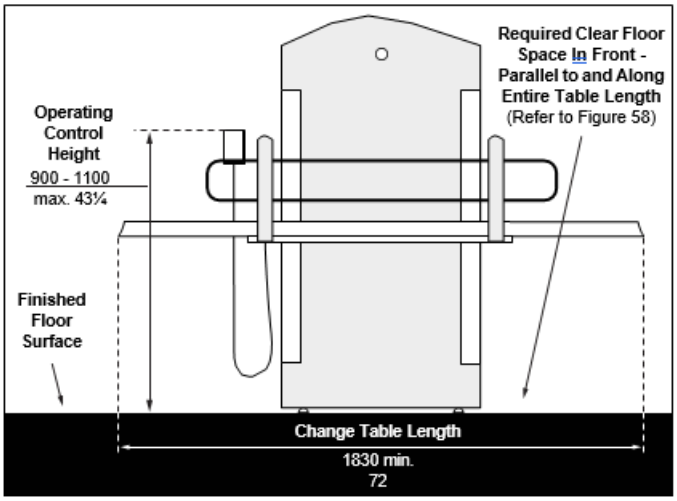


Figure 121 Adult-size Change Table - Front Elevation View

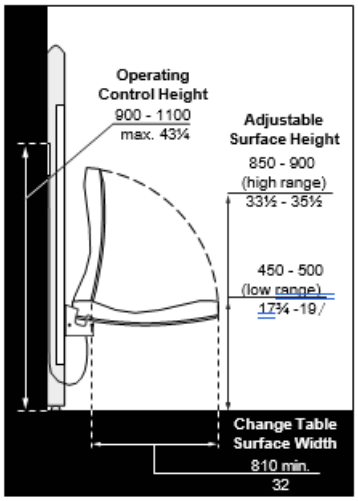


Figure 122 Adult-size Change

4.5.9 Urinals

Where more than one urinal is provided in men's multiple occupancy washrooms, provide at least one accessible urinal, as follows: (**Figure 123 & 124**)

a. locate within accessible path of travel with no step in front of the urinal;

b. mount urinal on wall with the lower rim located at a maximum height of 430 mm above floor, or provide a floor mounted urinal with the rim level with the floor level;

c. ensure the upper rim is no lower than 860 mm high above floor;

d. ensure a minimum depth of 345 mm, measured from the outer face of the urinal rim to the back of the fixture;

e. ensure urinal has high colour / tonal contrast compared with back wall;

f. provide lever, automatic, or other flush control operable with a closed fist, without tight grasping, pinching or twisting of the wrist (e.g., push button control) and with a force of no more than 22.2 Newtons (5.0 pounds), mounted between 900 mm to 1100 mm high above floor;

g. provide a minimum clear floor space of 920 mm wide by 1525 mm depth that is perpendicular to, and centered on the urinal and is unobstructed by privacy screens for front approach;

h. provide grab bars, on each side of urinal:

   i. mounted vertically, with centerline at a maximum of 1000 mm high above floor;
   ii. mounted at a maximum of 380 mm from centerline of urinal;
   iii. with a minimum length of 600 mm; and
   iv. with high colour / tonal contrast compared to back wall;

i. install centerline indicator for all urinals:

   i. centered above the urinal 50 mm wide (maximum);

   ii. extending a minimum of 1300 mm above floor but never less than 150 mm above the upper urinal rim;

   iii. ensure indicator has high colour / tonal contrast compared with back wall and raised a minimum of 3 mm; and

   iv. where more than one urinal is provided in a washroom, provide a centerline indicator at each urinal;

j. where privacy screens are provided:

Note

Placement of privacy screens is dependent on where grab bars are installed.

Vertical markers are used to identify. centerline of urinal for users with vision loss.

Various elements may be used as a centerline indicator, such as exposed piping, architectural features (e.g., raised ceramic tiles), etc.

i. provide a minimum clearance of 920 mm between screens;

ii. ensure a clearance of 50 mm from the grab bars; and

iii. ensure high colour / tonal contrast between screens and surrounding surfaces, as well as the vertical outer edges.

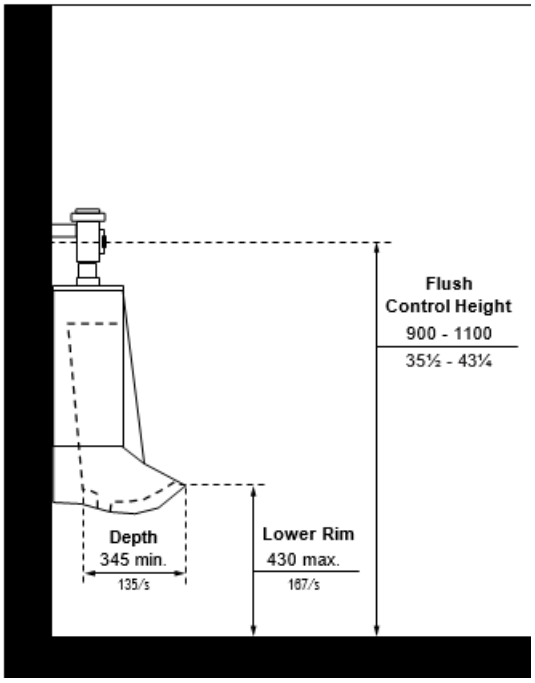


Figure 123 Urinals - Side Elevation

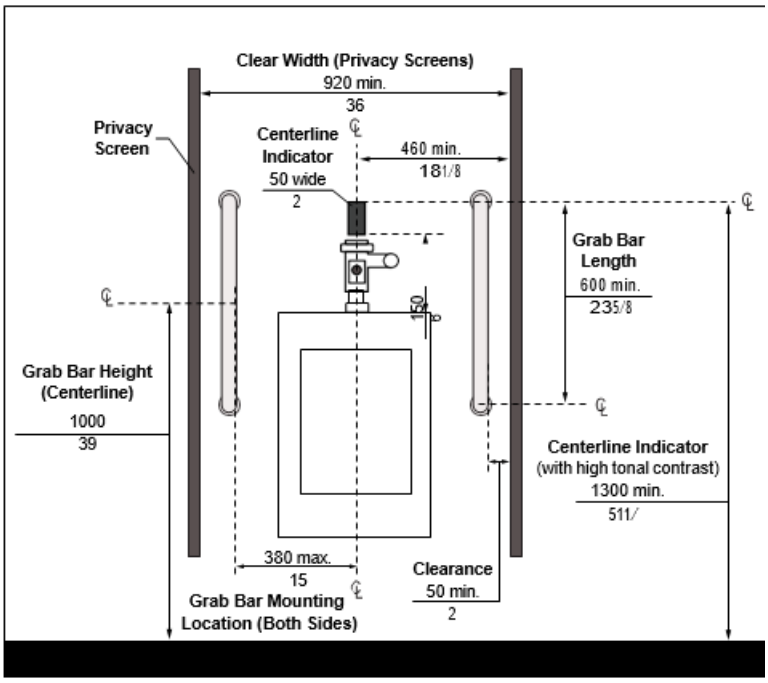


Figure 124 Urinals - Front Elevation View

RECOMMENDATIONS

- Consider the addition of horizontal or vertical grab bars at urinals to provide additional stability for seniors and persons with disabilities.
- Full length urinals where the lower rim extends to the floor for maximum flexibility.

4.6 Showers

Application

This section applies to accessible showers provided in all facilities, typically referred to as roll-in shower stalls

Reference

Sec. 5.1 Controls and Operating Mechanisms

Sec. 5.7 Lighting

4.6.1 Provision

a. provide at least one accessible shower stall where a group of showers are provided in a facility, as identified in **Table 9** below.

Table 9 Minimum Number of Accessible Showers

Number of Showers Provided in a Group	Minimum number of Accessible Showers required
1-7	1
Over 7	1, plus 1 for each additional increment of 7 showers in a group

Best Practice

Where additional space is available, provide an accessible drying area, adjacent to the shower area with bench and grab bars **(Figure 69)**.

Note

Where enclosure screens or curtains are provided, ensure. mounting provisions do not obstruct the shower controls, required clear floor space at entry. and the transfer from mobility aids to the shower seat.

4.6.2 Design and Layout

For accessible shower stalls, provide: (**Figure 125**)

a. interior floor space a minimum of 1525 mm wide by 920 mm depth;

b. additional clear floor space a minimum of 1525 mm wide by 920 mm depth at shower entrance;

c. a covered trench drain that is suitably located, based on the overall design of the stall and drainage requirements (e.g., preference is for water to drain away from user as much as possible, including consideration for additional drain(s) in drying area during detailed design);

d. level entry or a beveled threshold, 13 mm high (maximum);

e. a floor surface that is slip-resistant; and

f. a lighting level that is evenly distributed for all areas, at a minimum of 200 lux (20 ft. candles) (**Refer to Section 5.7, Lighting**).

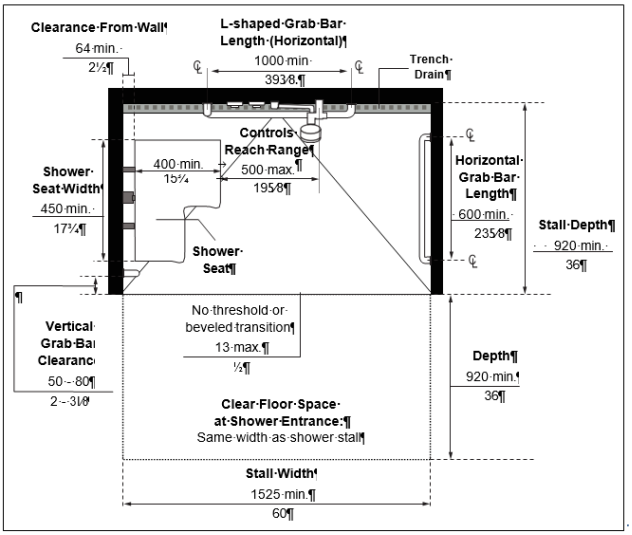


Figure 125 Accessible Shower Stall Design and Layout - Plan View

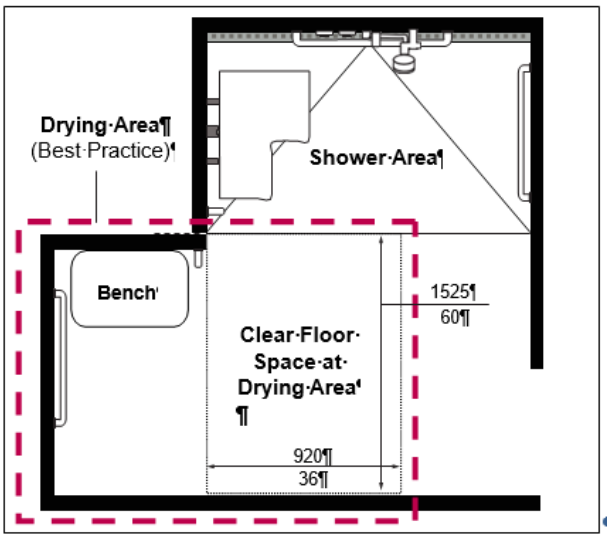


Figure 126 Drying Area - Plan View (Best Practice)

4.6.3 Controls and Accessories

4.6.3.1 General

For general features related to shower controls and accessories, provide:

a. lever type or automatic controls that can be operated with a closed fist and with a force of not more than 22.2 Newtons (5 pounds), mounted at 1000 mm high above floor;

b. locate all shower controls, including shower head, a maximum of 500 mm from the front edge of the seat;

c. a pressure equalizing or thermostatic mixing valve to control water pressure and avoid scalding, mounted at a maximum of 1000 mm high above finished floor; and

d. fully recessed soap holders, mounted between 900 mm and 1100 mm reachable from a seated position.

4.6.3.2 Shower Head

For shower heads, provide: (**Figure 70**)

a. a hand-held shower head with a flexible hose at a minimum length of 1800 mm;

b. vertical support used to mount shower head that allows operation as a fixed shower head, adjustable to a maximum height of 1200 mm above floor and reachable from a seated position; and

c. a vertical support and shower head placement that does not obstruct the use of grab bars.

Note

EXCEPTION: The use of two fixed-height shower heads with the capability of adjusting the direction of water flow is permitted instead of a hand-held shower head with flexible hose in facilities that may be subject to vandalism.

The higher shower head to be mounted at 1825 mm (72 in) high. The lower shower head to be mounted at 1400 mm (551/8 in) high.

A valve to direct water between the two shower heads, to be mounted / located adjacent to the shower control / mixing valve, as identified in this section.

4.6.3.3 Shower Seat

Provide a fixed shower seat or where a hinged seat is provided, ensure it is not spring-loaded, with seat mounted as follows: (**Figures 125 & 128**)

a. securely, capable of holding a minimum load of 1.3 Kilonewtons (300 pounds) and located on the same side wall as the vertical grab bar;

b. between 460 mm and 480 mm high above the finished floor, with the front edge of the seat located within 500 mm from the shower head and controls; and

c. with a smooth and slip-resistant surface, with no rough edges, a minimum of 450 mm wide by 400 mm depth with rear edge 64 mm from wall and with high colour / tonal contrast compared to surroundings.

4.6.4 Grab Bars

a. ensure grasping surface is non-abrasive, slip-resistant and provide a high colour / tonal contrast compared with mounting surface;

b. provide circular profile, with diameter between 30 mm and 40 mm;

c. ensure a minimum clear space of 50 mm between mounting surface and grab bar, as well as between ends of grab bars and any adjacent wall;

d. mount securely to withstand a force of 1.3 Kilonewtons (300 pounds) applied in all directions; and

e. ensure grab bars do not obstruct the use of the shower controls or accessories.

4.6.4.1 Vertical Grab Bar

a. provide a vertical grab bar, with a minimum length of 1000 mm and mounted as follows: (**Figures 125 & 128**)

   i. on the side wall adjacent to shower seat, with a clearance between 50 mm and 80 mm from the adjacent clear floor space; and
   ii. with bottom edge between 600 mm and 650 mm high above floor to provide additional support when entering / exiting or when transferring to the seat.

4.6.4.2 L-Shaped Grab Bar

a. mount on wall opposite to shower entrance between the shower head and shower controls, with: (**Figures 125 & 128**)

   i. horizontal component a minimum length of 1000 mm mounted between 750 mm and 870 mm high above the finished floor; and
   ii. vertical component a minimum length of 760 mm, mounted between 400 mm and 500 mm from the side wall on which the vertical grab bar is mounted.

4.6.4.3 Horizontal Grab Bar

a. mount on the side wall opposite the shower seat, with: (**Figures 125 & 128**)
   i. a minimum length of 600 mm; and
   ii. mounting height at 850 mm above finished floor.

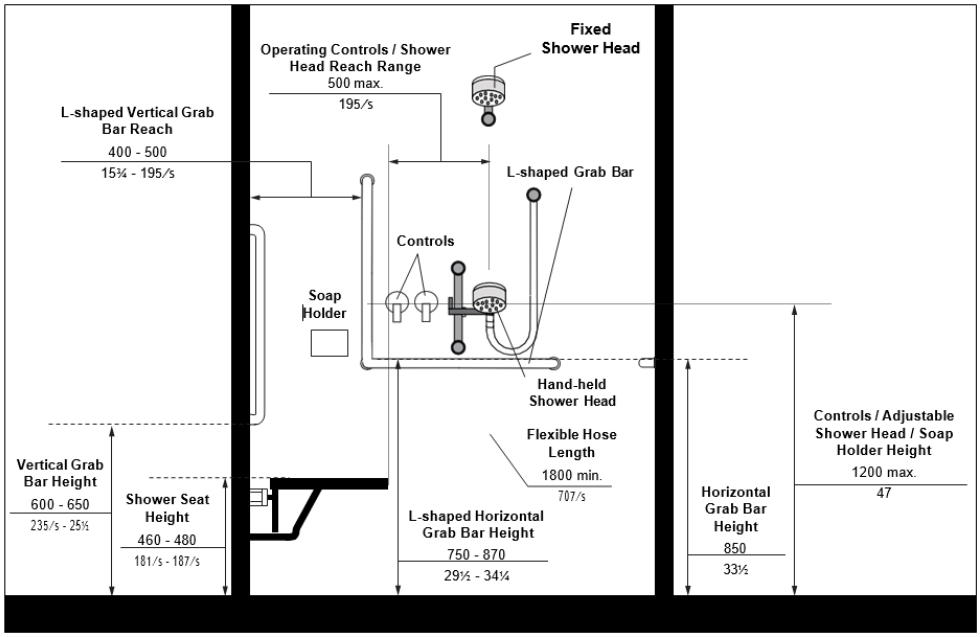


Figure 127 Accessible Shower Stall Design and Layout (Typical) - Section View

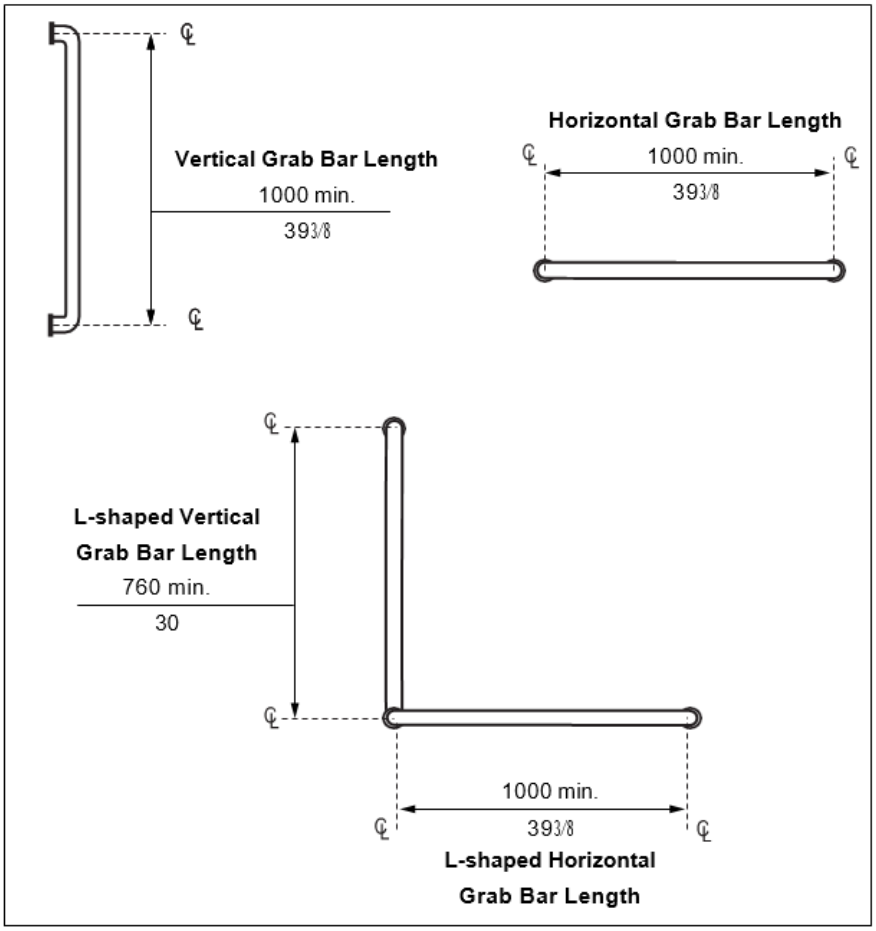


Figure 128 Accessible Shower Grab Bar Dimensions

4.7 Bathtubs

Application

This section applies to accessible bathtubs provided in all facilities, which typically include long-term care residences.

Reference

Sec. 4.5 Washrooms

Sec. 4.5.7 Grab Bars

Sec. 5.1 Controls and Operating Mechanisms

Sec. 5.7 Lighting

Note

Additional requirements not addressed in this section *may include considerations for the provision of portable or fixed transfer lifts* to meet the needs of diverse users, for assistance positioning into or out of a bathtub.

Other accommodations (e.g., using operating controls when seated in the bathtub) may also be required if.
bathtubs cannot be used independently, recognizing diverse types of disabilities.

4.7.1 Provision

Where bathtubs are provided: (**Figure 129**)

a. ensure all bathtubs are accessible and designed as per this section; and

b. ensure at least 10% but never less than one bathtub is accessible, in each bathing facility where they are provided in a retrofit situation where it is technically infeasible to have all bathtubs accessible.

4.7.2 Design and Layout

a. ensure bathtub is a minimum of 1525 mm in length and located in a room with a clear floor space not less than 1525 mm in diameter;

b. provide clear floor space, a minimum of 920 mm wide by a minimum 1525 mm long, extending along the full length of the bathtub to allow access into and out of the bathtub, with no tracks mounted on the bathtub rim;

c. ensure bottom of bathtub surface and adjacent clear floor space surface are slip-resistant; and

d. provide illumination of all areas that is evenly distributed at a minimum 200 lux, as required (Refer to Section 5.7, Lighting).

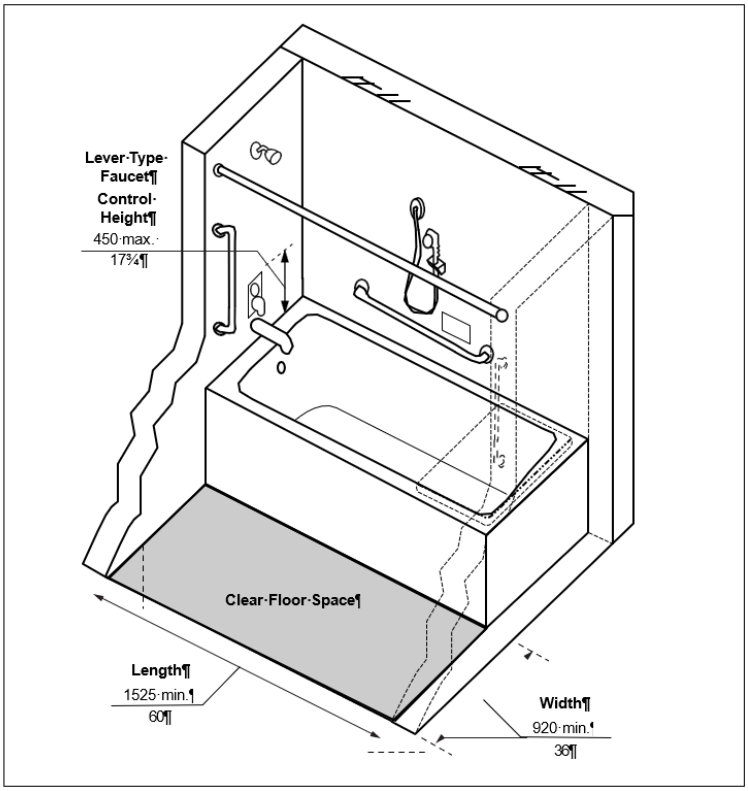


Figure 129 Bathtub Design and Layout - Plan View

4.7.3 Controls and Accessories

4.7.3.1 Faucets and Other Controls

For bathtub controls: (**Figures 129 & 130**)

a. provide lever type or automatically operable controls that are not spring-loaded;

b. locate at the foot end of the bathtub, on the centerline of the bathtub or between the centerline of the bathtub and the exterior edge of the bathtub rim (e.g., the adjacent clear floor space);

c. mount at a maximum of 450 mm high above the bathtub rim;

d. ensure they can be operated with a closed fist and with a maximum force of 22.2 Newtons (5.0 pounds);

e. provide a pressure equalizing or thermostatic mixing valve to control water pressure and avoid scalding; and

f. provide a fully recessed soap holder, which can be reached from a seated position, 50 mm to 60 mm above the horizontal component of the horizontal grab bar.

Note

A regular shower head to be provided in addition to accessible shower head control (e.g., typical mounting position and height, at foot of bathtub for standing users).

Use of operating controls is subject to limitations in hand. strength, dexterity and reach.

Refer to **Section 4.5.7, Grab Bars**, for additional details.

Grab bars are. not required for free-standing bathtubs.

4.7.3.2 Shower Head

Provide a hand-held shower head: (**Figure 129**)

a. with a flexible hose with a minimum of 1800 mm long;

b. ensure vertical support used to mount shower head allows operation as a fixed shower head, adjustable to a maximum of 1200 mm high above floor and reachable from a seated position; and

c. ensure the vertical support and shower head placement does not obstruct the use of grab bars.

4.7.4 Grab Bars

Unless the bathtub is free-standing, three (3) grab bars are required as identified in this section: (**Figure 130**)

4.7.4.1 Vertical Grab Bar

a. ensure a minimum length of 1220 mm;

b. mount at each end of the bathtub, a maximum 150 mm) from the outer edge of the bathtub rim / clear floor space, measured horizontally; and

c. mount between 80 mm and 280 mm above the bathtub rim.

4.7.4.2 Horizontal Grab Bar

a. ensure a minimum length of 1220 mm; and

b. mount on back wall, extending horizontally along the length of the bathtub, between 80 mm and 280 mm high above the bathtub rim.

4.7.5 Enclosures

Where applicable, ensure any bathtub enclosures:

a. do not obstruct controls;

b. do not interfere with a person transferring from a mobility aid; and

c. are not installed on the bathtub rim (e.g., sliding doors or tracks).

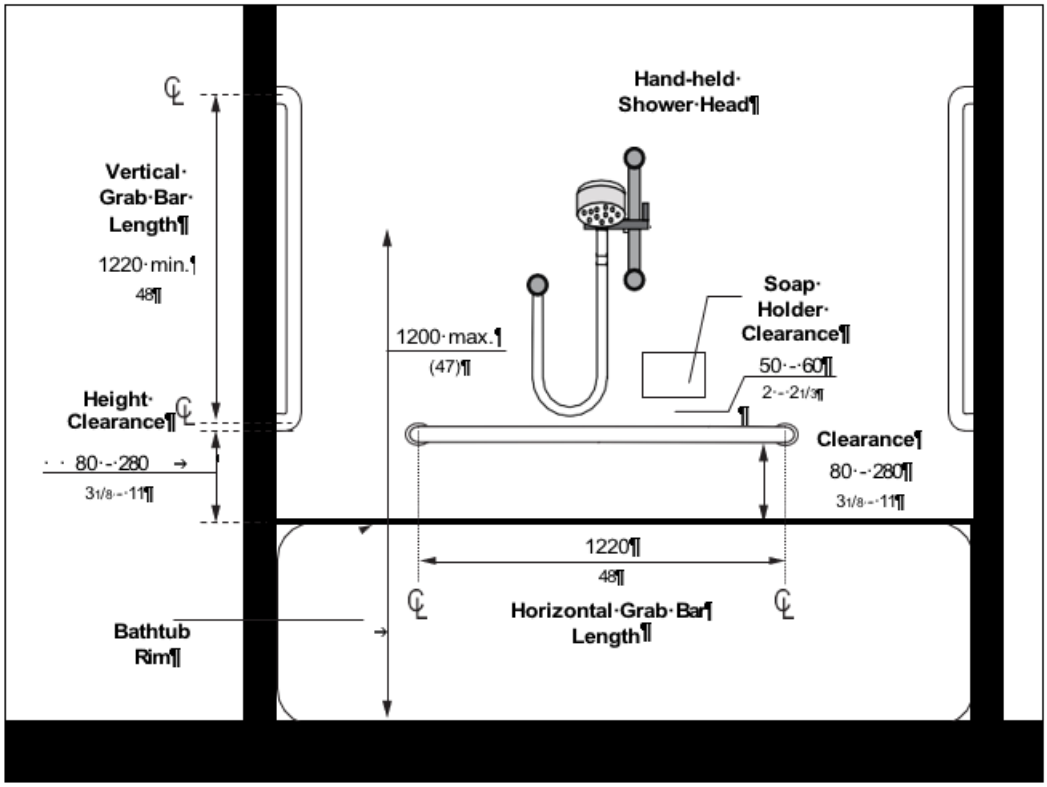


Figure 130 Bathtub Design - Section View

5.0 Systems, Controls, and Communications

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5.3 Public Address Systems
5.4 Acoustics
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5.7 Lighting
5.8 Signage and Wayfinding
5.9 Self-service Kiosks
5.10 Windows
5.11 Audible Pedestrian Signals

5.1 Controls and Operating Mechanisms

Application

This section applies to typical interior and exterior controls and operating mechanisms provided for public and staff use, throughout accessible routes and spaces.
Examples of typical controls and operating mechanisms related to interior and exterior environments include, but are not limited to:

- entrance call buttons or intercoms;
- emergency call systems related to parking areas;
- light switches;
- wall outlets / duplexes;
- fire or other alarm system controls (e.g., washroom emergency alarms);
- thermostats;
- door hardware; and
- plumbing fixture hardware (e.g., faucets and water closet flush controls).

Controls related to product and dispensing machines, such as food and beverage vending equipment, payment stations for parking and ticketing devices, touch screen devices for information and self-service kiosks and other activation devices are also required to be accessible.

5.1.1 Design Features

Ensure accessible controls and operating mechanisms address the following: (**Figures 131 & 132**)

a. are usable with closed fist and operable with one hand;
b. do not require tight grasping, pinching of the fingers, or twisting of the wrist;
c. can be used with a maximum force of 22 Newtons (5 pounds);
d. where push-button type controls are provided, button surface has a minimum diameter of 13 mm and is not recessed;
e. ensure controls are visible from a distance, based on use of high colour / tonal contrast between operable parts and adjacent mounting surface;
f. can be illuminated to a minimum level of 100 lux (10 ft. candles);
g. mount controls and operating mechanisms:
    i. no lower than 400 mm high for all controls;
    ii. a maximum of 1200 mm high for thermostat and manual fire alarm pull;
    iii. between 900 mm and 1100 mm high (centered) for all other controls and operating mechanisms; and
    iv. extending a maximum of 200 mm and a minimum of 900 mm high above the floor for vertically extended power door operators;
h. locate in prominent and obvious locations, for easy identification, adjacent to and centered on either the length or width of the required minimum clear floor space, as identified in this section.

Best Practice

Multiple forms of audible, visual, and tactile cues to indicate operating controls, benefit the widest range of users with varying disabilities (e.g., sensory / visual / cognitive).

Depending on the type of control, Braille can also be provided. Align controls at the same height, where possible.

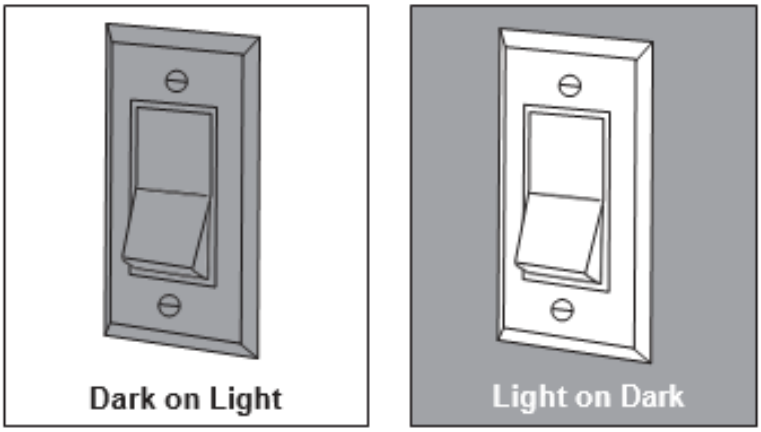


Figure 131 Colour / Tonal Contrast Between Background and Control

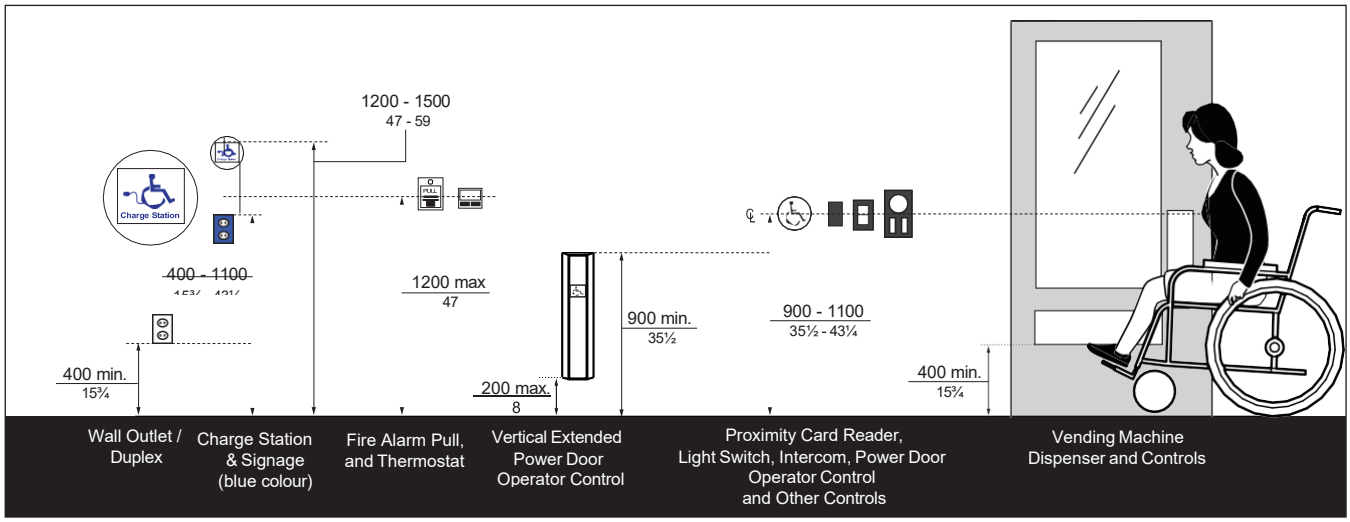


Figure 132 Control Mounting Heights - Elevation View

5.1.2 Floor Space and Reach Requirements

5.1.2.1 Floor Space Requirements

a. provide a minimum clear floor space, centered at operating controls and mechanisms at:
   i. 920 mm wide by 1525 mm depth for a forward approach; and
   ii. 1525 mm wide by 920 mm depth for a side approach.

5.1.2.2 Reach Requirements:

For both a forward and side approach, ensure the following mounting heights of controls and operating mechanisms for suitable reach (e.g., either touch or grasp) are provided: (**Figures 133 & 134**)

a. where there is no obstruction in front of controls and operating mechanisms:
   i. no lower than 400 mm;
   ii. at maximum 1200 mm high for thermostat and fire alarm pull controls; and
   iii. no higher than 1100 mm for other controls and operating mechanisms;
b. where there is an obstruction which allows for a touch reach over a 610 mm deep obstruction or a grasp reach over a 510 mm deep obstruction:
   i. for forward approach, maximum height at 1100 mm; and
   ii. for side approach, with obstruction at a maximum height of 865 mm, maximum height at 1170 mm.

Best Practice

Provide clear floor space or ground surface with turning diameter of 2500 mm. to allow both side and frontal approach for larger wheeled mobility aids such as powered scooters and wheelchairs.

Note

The clear floor space in front of controls and operating mechanisms may overlap the adjacent interior accessible route.

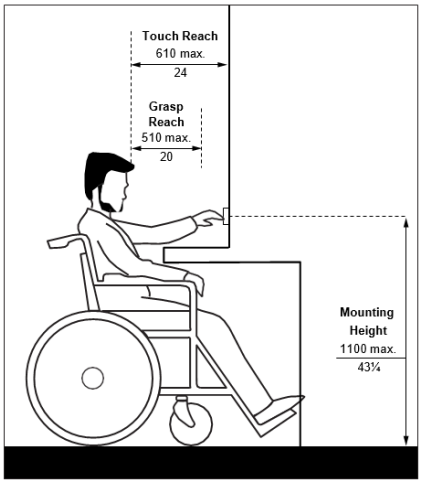


Figure 133 Maximum Mounting Height for an Obstructed Forward Approach and Reach

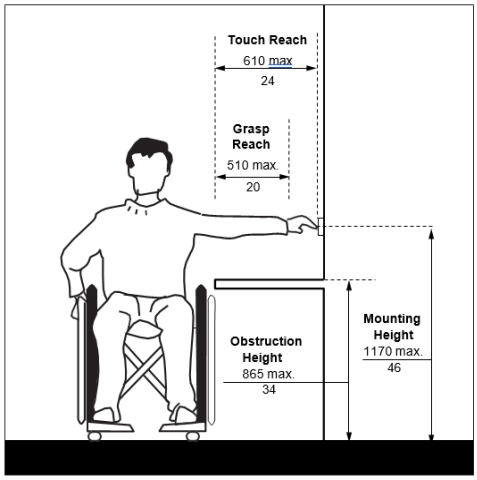


Figure 134 Maximum Mounting Height for an Obstructed Side Approach and Reach

5.1.3 Charge Stations

Where charge stations are provided for users of powered wheeled mobility devices, ensure: (**Figure 135**)

a. charge receptacles are mounted between 400 mm to 1100 mm high and are visible from a distance, based on use of high colour / tonal contrast, including a distinct blue colored receptacle compared to adjacent mounting surface; and
b. charge stations are marked with identification signage, with:
   i. required pictogram, consisting of a blue coloured mobility device and charge receptacle graphic, on a high colour / tonal contrasted background; and
   ii. mounting height at 1200 mm to 1500 mm high, centered above receptacle and finished floor surface.

Note

Additional identification and / or directional signage (e.g., overhead) may be used, depending on the facility/site. context to assist users with identifying the provision and location of charge stations.
Refer to Section 5.8 for detailed requirements related to Signage & Wayfinding.



Photo 13 Example of Charge Station Signage,

5.2 Assistive Listening Systems

Application

This section applies to assistive listening systems, required in assembly areas, including but not limited to classrooms, auditoriums, meeting rooms, recreation facilities, and theatres:

- with a floor area of 100 square meters or occupancy of fifty (50) or more fixed seats;
- where audible communication is integral to the use of space; and
- where audio amplification devices are used.

Induction loops, infrared systems, and FM radio frequency systems are considered acceptable types of assistive listening systems for persons with hearing loss.

Wireless sound transmission systems, such as FM, infrared or magnetic induction loop, improve sound reception for the hard of hearing by providing amplification which can be adjusted by each user while blocking out unwanted background noise.

These systems transmit a signal that is picked by special receivers available for use by people with a hearing disability, whether or not they use a hearing aid.

The transmitter can be jacked into an existing public address system amplifier or used independently with microphones. The induction loop system requires users to sit in the area circumscribed by the loop. Although installation of the loop is simple, the installer should be knowledgeable about these systems if proper functioning is to be achieved. FM or infrared systems can be designed to broadcast signals which cover the entire room and therefore, do not restrict seating to any one area. Portable systems are available (e.g., FM type); however, they are best suited for small audiences. Generally, the systems installed in auditoriums, theatres and similar places of assembly are not easily portable, as they are installed in auditoriums by a sound technician and form an integral part of the public address system of the room or building.

Reference

Sec. 5.8 Signage and Wayfinding
Sec. 6.1 Assembly Areas

Note

Some facilities such as courtrooms may have unique requirements and specifications and require a detailed review prior to implementation.

Hard wired systems (where a jack is provided at a particular seat) will not meet the requirements in this section unless adequate provisions are made to accommodate persons with hearing aids.

In choosing the most appropriate system, a number of factors must be taken into account. This includes cost, installation and maintenance, suitability to the audience, ease of operation and the need for privacy. Information on designers and suppliers of these systems may be obtained from organizations such as the Canadian Hearing Society.

5.2.1 Design Features

For assistive listening systems, whether permanent or portable, ensure:

a. system usability encompasses the entire floor area;
b. system provides personal amplification control;
c. system performs with or without the use of hearing aids; and
d. signage is provided with the International Symbol for Hearing Loss pictogram to identify the availability of the assistive listening systems, marked with a 'T,' where T-coil usage is available. (Refer to Section 5.8, Signage and Wayfinding)

Note

Where infrared assistive listening systems are used, ensure that no overhead incandescent lights cancel out the infrared signal at the receiver.

Receiver Hearing Aid Compatibility: Receivers should be hearing-aid compatible and should interface with telecoils in hearing aids through the provision of neck loops.

5.2.2 Assistive Listening Systems

5.2.2.1 Permanent Assistive Listening Systems

Where permanent assistive listening systems are provided, ensure:

a. the minimum number of required receivers is equal to 4% of the total number of seats, but never less than two;

b. the minimum number of required receivers to be hearing aid compatible is 25% of the total number of receivers that are provided, but never less than one;

c. seats are located within a 15 m viewing distance of the stage or playing area, as well as positioned to have a clear and complete view of the stage or playing area, at facilities with individual fixed seats that are served; and

d. to locate dimmer switches and other controls that incorporate transformer coils, so they do not interfere with the audio induction loop where an induction loop system is installed.



5.2.2.2 Portable Assistive Listening Systems

a. provide at least one portable assistive listening system, with a minimum of two receivers included, for facilities with assembly spaces on multiple floor levels (e.g., this provides enhanced flexibility for the systems to be available and used at different locations); and

b. ensure portable assistive listening systems include hearing aid compatibility

.

5.3 Public Address Systems

Application

This section applies to public address (P.A.) systems installed within a facility as well as exterior areas, including P.A. systems that provide information to the public and staff.

Reference

Sec. 2.5 Overhanging and Protruding Objects

Sec. 5.4 Acoustics

5.3.1 Design Features

a. ensure sound level is above ambient background noise without distortion or feedback;
b. consider zoning public address systems so that information can be directed to key locations only, to minimize background noise in other areas of the building; and
mount speakers without projecting into or obstructing accessible routes and above head-level to provide effective sound coverage in required areas such as:
    i. corridors;
    ii. assembly and meeting rooms;
    iii. recreational facilities;
    iv. entertainment and educational facilities; and
    v. common use areas located in institutional settings.

RECOMMENDATION

Public Address Systems should be designed, implemented, and continually evaluated with a focus on the environment in which they will be used and the audience they are designed to benefit.

5.4 Acoustics

Application

This section applies to the acoustic environment within a facility, which can either enhance or hinder a user's experience. Auditory cues along circulation routes in large open spaces and dedicated areas can serve as wayfinding cues, especially for people with vision loss.

Reference

Sec. 5.3 Public Address Systems

Best Practice

As identified by Gallaudet University, as part of the concept of designing "DeafSpace" and specific to acoustics:

"Deaf individuals experience many different kinds and degrees of hearing levels. Many use assistive devices such as hearing aids or cochlear implants to enhance sound.

No matter what the level of hearing, many deaf people do sense sound in a way that can be a major distraction, especially for individuals with assistive hearing devices.

Reverberation caused by sound waves reflected by hard building surfaces can be especially distracting, even painful, for individuals using assistive devices. Spaces should be designed to reduce reverberation and other sources of background noise."

(Source: Gallaudet University, Campus Design & Planning, DeafSpace).

5.5 Security Systems

Application

This section applies to typical security systems (e.g., proximity card readers, alarm systems, etc.), which are used to provide and limit access areas of a facility.

Reference

Sec. 4.2 Doors and Doorways

Sec. 5.1 Controls and Operating Mechanisms

Note

Designers are required to coordinate security system provisions and installations with specialists in this field as part of detailed review and design, to ensure the requirements of this section are met.

5.4.1 Design Features

To achieve a suitable acoustical environment, which can provide additional wayfinding cues for persons with vision and / or hearing loss:

a. integrate the use of sound-reflective or sound absorbent / dampening materials to differentiate essential sounds from general background sounds and to address the specific acoustic requirements of each type of unique space;

b. select floor, wall, and ceiling finishes to ensure that occasional noise is not unintentionally amplified (e.g., avoid hard floor surfaces such as marble and terrazzo);

c. design ceiling shapes so that echoes do not occur;

d. minimize all background noise (e.g., fans, mechanical systems, air conditioners, and diffusers) in meeting rooms and assembly areas where spoken word is key to understanding proceedings; and

e. install a permanent inductive loop or similar assistive listening system for high use buildings and areas, especially where the surrounding environment may be noisy (**Refer to Section 5.2, Assistive Listening Systems**).

Best Practice

Flooring materials that can assist with dampening sound include carpet, cork, vinyl, and rubber.

Additionally, acoustic ceiling tiles and upholstered furniture absorb sound and dampen reflected sound, emphasizing that it is important. **to create a suitable balance of sound absorption and sound reflective materials, based on the overall design and type of space.** (Adapted from the **CNIB's "Clearing Our Path"** resource, current edition).

Note

Hard floor surfaces allow footsteps to be heard by persons with a vision loss, but too much additional noise may add confusion for persons with a hearing loss or other type of sensory disability (e.g., autism).

In general, domed shaped ceilings may distort sound.

5.5.1 Design Features

Best Practice

Proximity card reader systems are preferred at secured entry / exit areas to accommodate diverse users.

Where users control independent entry or exiting to secured areas of facilities: (**Figure 135**)

a. locate controls between 900 mm to 1100 mm from the floor;
b. mount controls at least 600 mm clear of the arc of any door swing;
c. where electronic keypads or push button systems are provided, ensure buttons are raised from surface, mounted on surface with high colour / tonal contrast and have raised numerals or letters to assist users with vision loss;
d. ensure both audible and visual indicators are provided to alert users when access has been granted or denied;
e. where proximity card reader systems (e.g., swipe cards) are used at doors equipped with power door operators, ensure activation of both systems is synchronized; and
f. provide high colour / tonal contrast on system controls, compared to mounting surface

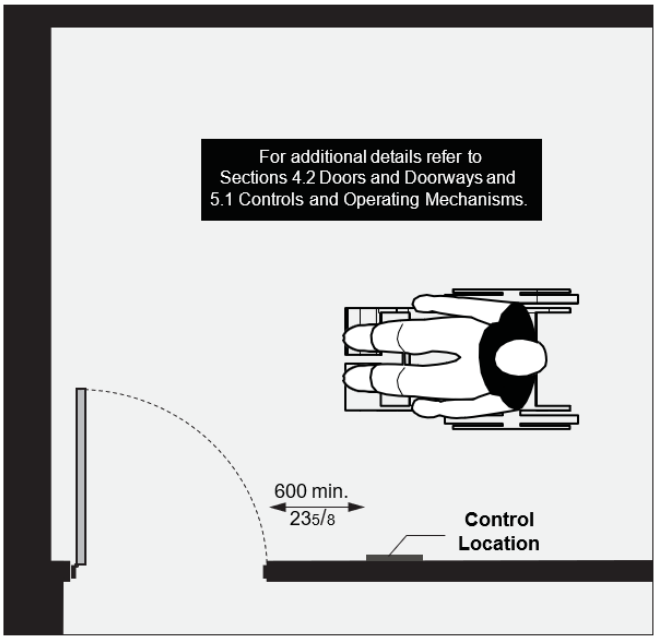


Figure 135 Proximity Card Reader Location - Plan View



Photo 14 Example of proximity card

5.6 Fire and Life Safety Systems

Application

This section applies to fire and life safety systems, addressing the challenges needs of people with varying disabilities, in emergency situations. Key components of typical fire and life safety systems include, but are not limited to:

- Evacuation & fire safety plans;
- alarm signals & sounds (both audible and visual);
- areas of refuge; and
- emergency exits.





Photo 15 Example of combined visual and audible alarm signals. Public facilities should have both visual and audible fire alarm systems strategically located.

Reference

Sec. 4.2 Doors and Doorways

Sec. 5.1 Controls and Operating Mechanisms

Sec. 5.8 Signage and Wayfinding

Best Practice

Fire and life safety systems are especially important in facilities providing specialized services or programs to seniors and persons with disabilities, groups that may be at greater risk and that may require additional assistance or accommodation to evacuate a facility.

Note

The information in this section is provided as an additional resource to support other code and fire / life safety requirements that may be mandatory, including requirements of the Ontario Fire and Building Codes.

5.6.1 Fire Safety and Evacuation Plans

a. provide a fire and life safety plan that addresses the needs of users with varied disabilities, with key considerations as follows:
   i. for facilities with floors above or below grade, develop a fire safety and evacuation plan, indicating in detail the preferred evacuation strategies for persons with disabilities (e.g., that supports a “Buddy System” where staff can help co-workers with disabilities evacuate);
   ii. ensure the base of evacuation plans are posted no higher than 1200 mm (47 in) from the floor;
   iii. ensure evacuation plans incorporate a font size of 14 point (minimum);
   iv. ensure evacuation plans are available in alternate formats; and
   v. provide signage to identify evacuation plans.

5.6.2 Fire Alarms and Safety Controls

a. mount controls and operating mechanisms:
   i. between 900 mm (35½ in) and 1100 mm (43¼ in) from floor for emergency / life safety controls and operating mechanisms such as fire extinguishers, first aid kits and defibrillators; and
   ii. at maximum of 1200 mm (47 in) high from floor for a manual fire alarm pull station.
b. ensure any manual fire alarm pull station is:
   i. located so as to be adjacent to and centered on either the length or the width of a minimum clear floor space of 920 mm (36 in) by 1525 mm (60 in), and
   ii. operable using one hand, without requiring tight grasping, pinching with fingers, or twisting of the wrist, and with a force of not more than 22.2 Newtons (5 pounds).

5.6.3 Visual Alarm Signals

5.6.3.1 Provision

Provision of visual fire alarm signals (e.g., strobes) to be determined as follows:

a. for any building or portion of a building intended for use primarily by persons with hearing loss;
b. for public corridors and all general use areas such as lobbies, offices, meeting rooms and all washrooms, including universal / single use washrooms and change rooms; and
c. for any mechanical rooms where there is a concern with noise levels.

5.6.3.2 Design Features

Where visual alarm signals are provided for users with hearing loss:

a. integrate visual alarm signals with required audible fire alarm system, including during retrofit projects where feasible;
b. mount appliance at a minimum 2100 mm (82¾ in) above the floor level within the space or 150 mm (57/8 in) below the ceiling, whichever is lower;
c. where visual alarm signals are provided in any common space, public corridor, hallway, lobby or room, ensure they are placed no more than 15 m apart, on the horizontal plane;

d. install visual alarm signals so that the signal from at least one device is visible throughout the floor area or portion of it in which they are installed
e. Ensure light and flashing features are based on the following criteria:
   i. use a xenon strobe type or equivalent for light or lamp fixture;
   ii. ensure clear or nominal white colour (e.g., unfiltered, or clear filtered white light);
   iii. provide maximum pulse duration of 0.2 seconds, with a maximum duty cycle of 40 percent;
   iv. ensure the intensity of the visual alarm signal is significantly brighter than the ambient light and raises the overall light level sharply, but not so intense as to be unsafe for direct viewing;
   v. ensure a flash intensity of 75 candela (minimum) with a flash rate between 1 Hertz (minimum) and 3 Hertz (maximum); and
   vi. synchronize visual alarms that are located in the same proximity to flash at the same time.

5.6.4 Areas of Refuge

5.6.4.1 Provision

Areas of refuge to be provided as identified in Table 10, based on occupant load:

Table 10 Provision of Area of Refuge Spaces

Occupant load of the floor area served by the area of refuge	Minimum number of area of refuge spaces
1 to 400	2
Over 400	3 plus 1 for each additional increment of 200 persons in excess of 400 persons

5.6.4.2 Design Features

Where an area of refuge is included as a component of a facility's fire safety and evacuation plan for persons with disabilities:

a. locate on an accessible route, which is served by an exit or fire fighter's elevator;
b. locate clear of any adjacent door swing and away from pedestrian exit route(s);
c. ensure areas of refuge are easy to identify and are designated with signage (e.g., large print, tactile features stating, Area of Refuge' and marked with the International Symbol of Accessibility);
d. ensure a minimum clear floor space of 920 mm (36 in) wide by 1525 mm (60 in) depth, for each area of refuge space that is provided, with an adjacent minimum clear turning circle of 1525 mm (60 in) diameter, or preferred 2500 mm (981/2 in), where space is available in a stairwell or a separate room that is used to accommodate users of mobility aids;
e. provide protective enclosure for a minimum of one-hour;
f. provide a two-way, accessible communication system supported by the facility's backup generator and for use between each area of refuge and the building's designated annunciator / fire control panel;
g. ensure communication system is marked with signage and includes both audible and visual notification devices to indicate "help is on the way;" and
h. provide separate emergency lighting and ventilation systems supported by a backup generator.

5.7 Lighting

Application

This section addresses lighting requirements for both interior and exterior environments.

For measuring lighting levels (e.g., lux), a digital light meter is typically used to verify the overall performance of the site and facility lighting system as a whole.



5.7.1 Lighting Level Requirements

For lighting level requirements for interior and exterior environments:

a. ensure enhanced lighting levels beyond IESNA requirements (e.g., CNIB) for elements in both interior and exterior environments are provided, as summarized in **Table 11**; and

b. provide the highest lighting level (lux) where identified in **Table 12** (e.g., highlighted in bold).

Table 11 Lighting Requirements for Exterior and Interior Environments

Typical Elements, Features and Locations	Lighting Level (lux)				
	IESNA (2011)	CNIB (2009)	CSA (2018)	OBC (2012)	Other Best Practice
	Min. / Avg.	Enhanced (+ 25 - 50%)	Min.	Min.	Min.
Common Elements (both Exterior & Interior)					
Ramps	50 (avg.)	**62.5 - 75**	50	50	-
Stairs	50 (avg.)	62.5 - 75	50	50	**100**
Rest Areas	50 (avg.)	**62.5 - 75**	50	-	-
Signage	-	**200**	200	-	-
Exterior Environments					
Surface Parking: Accessible & Limited Mobility / Caregivers Spaces	10 (min.)	12.5 - 15	-	-	**30**
Parking Garage	10 (min.)	12.5 - 15	-	-	**30**
Passenger Loading Zone	-	-	-	-	**30**
Exterior Circulation Routes (e.g., sidewalks)	10 (avg.)	12.5 - 15	**50**	-	-
Main Entrance	-	-	-	-	**100**
Interior Environments					
Public Corridors	50 (avg.)	**62.5 - 75**	-	50	-
Elevator Lobby	100 (avg.)	**125 - 150**	-	-	**200**
Elevator Cabs	50 (avg.)	62.5 - 75	**100**	-	-
Emergency Lighting (Accessible Routes, Stairs, Ramps or Areas of Refuge)	-	-	-	-	**50 - 100**
Reception	150 (avg.)	**187.5 - 225**	-	-	-
Lobbies / Waiting Areas	100 (min.)	**125 - 150**	-	-	-
Service Counters	150 (avg.)	**187.5 - 225**	-	-	-
Kiosks	200 (avg.)	**250 - 300**	200	-	-
Operating Controls and Mechanisms	-	-	**100 - 200** where reading is required **50 - 100** where control has own illumination or is backlit	-	-

Table 12 Lighting Requirements for Exterior and Interior Environments (Continued)

Typical Elements, Features and Locations	Lighting Level (lux)				
	IESNA (2011)	CNIB (2009)	CSA (2018)	OBC (2012)	Other Best Practice
	Min. / Avg.	Enhanced (+ 25 - 50%)	Min.	Min.	Min.
Washrooms					
General	50 (avg.)	62.5 - 75	-	**200**	-
Fixtures	150 (avg.)	**187.5 - 225**	-	200	-
Shower Stall / Room	100 (avg.)	125 - 150	-	**200**	-
Special Rooms & Facilities					
General Assembly	100 (avg.)	**125 - 150**	-	-	-
Multi-purpose Rooms	300 (avg.)	**375 - 450**	-	-	-
Offices - Workstation	300 (avg.)	**375 - 450**	-	-	-
Library Stack & Shelving	-	-	-	-	**200**
Library Study Area Carrel	-	-	-	-	**300**
Cafeteria, Food Court or Kitchen and Kitchenette - Cashier / Food Displays	200 (avg.)	**250 - 300**	-	-	-
Cafeteria, Food Court or Kitchen and Kitchenette - Seating and Circulation	150 (avg.)	**187.5 - 225**	-	-	-
Change Room	-	-	-	**300**	-
Elevated Stages / Platforms					**100** (at floor level / darkest point)

5.7.2 Exterior Lighting

a. ensure lighting sources and design provides consistent and even distribution of illumination levels and are located at or beside all ramps, steps, and stairs, to illuminate and identify surfaces, treads, risers, nosings and handrails;

b. ensure all lighting over pedestrian routes is evenly distributed and provides a reasonable colour spectrum while minimizing any shadows cast;

c. provide supplementary lighting to highlight all wayfinding signage, as required;

d. ensure lighting fixtures or posts are mounted away from accessible routes / paths of travel;

e. ensure low-level lighting fixtures are mounted high enough to clear normal snow accumulation heights; and

f. ensure overhead light fixtures are mounted with minimum clear headroom of 2100 mm

RECOMMENDATION
When changing or upgrading lighting in exterior environments, ensure any new lighting source provides the same degree of consistent light quality and coverage. Refer to sections 5.7.2(a) through (f)

5.7.3 Interior Lighting

a. provide occupancy sensors or accessible controls (e.g., usable with closed fist, rocker-style) for all frequently used spaces that are not centrally controlled (e.g., washrooms, meeting rooms, offices, assembly areas, etc.), as well as controls that have the capability of adjusting lighting levels (e.g., dimmer switches) (Refer to Section 5.1, Controls and Operating Mechanisms);

b. use natural light wherever possible to illuminate entrances, corridors, and key workspaces, however, avoid designs that results in direct glare reflected from flooring or work surfaces;

c. integrate sources of both artificial and natural lighting to provide comfortable, evenly distributed light at working surfaces and throughout circulation routes that minimizes pools of light as well as areas of shadow;

d. ensure lighting design provides consistent and even distribution of illumination levels and allows an illumination quality that is as close to a full spectrum as possible to aid in identifying edges and colour / tonal contrasted surfaces which are used as wayfinding cues (this ensures the warm end of the spectrum provides appropriate colour definition);

e. ensure any leading edge of stairs, steps, ramps, or escalators are evenly lit;

f. ensure sources of light (natural or artificial) are not positioned at the ends of corridors or behind people at reception areas or counters; and

g. provide enhanced lighting options at lecterns, podiums, stages, or other speaker locations, where other adjacent space lighting is capable of being dimmed or lowered, to facilitate the ability of lip-reading and viewing sign language interpreters for users with hearing loss.

Best Practice
When entering buildings, eyes may require a few moments to adjust from a brighter exterior environment to a darker interior or vice versa. For people With vision loss, the adjustment time may be longer. Consider transitional lighting options (e.g., higher artificial lighting levels near the entrance in daylight and lower levels after dark).

Note
Variations in lighting levels can be confusing to many older adults, people with cognitive disabilities and people with vision loss.

5.7.4 Additional Considerations: Issues Related to Glare

a. select lighting sources, materials and finishes that do not reflect glare, including implementing strategies to control natural lighting sources wherever possible;

b. ensure floor surface finishes such as vinyl, terrazzo and ceramic tile, mosaics or other materials have a matter or satin finish;

c. provide matte or satin wall finishes (e.g., paint, vinyl coverings, stone, marble, wood, plastic or laminate, etc.) to prevent and minimize glare;

d. provide curtains, blinds, screens, or other strategies to shield bright, natural lighting sources, especially where direct sunlight may cause glare;

e. select light fixtures that prevent or minimize any potential for direct glare (e.g., with diffusers, lenses, or recessed light sources); and

f. where surface mounted fluorescent ceiling lights are used (e.g., in corridors), it is generally recommended that they have darkened sides (e.g., wrap-around lenses are not recommended) and that they are positioned at right angles to the path of travel. The use of recessed non-fluorescent lighting fixtures is preferred and recommended where possible.

5.8 Signage and Wayfinding

Application

This section applies to signage and wayfinding strategies, where provided in exterior and interior environments and for signs that provide direction, or information about, functional spaces.

Recognizing that signage programs and wayfinding strategies are customized based on facility types and use of space, the information and criteria in this section is provided as a starting point.

There are three (3) key types of signage:

- regulatory signs, which include prohibition signs denoting an order forbidding an action, and mandatory signs which denote an order requiring an action;
- warning signs, such as caution and danger signs denoting a potential hazard and a definite hazard; and
- identification signs, which include rooms, titles, names, or numbers that are provided for general orientation or specific information, such as washrooms, routes of egress, stairwells, doorways, or offices.

Reference

Sec. 2.5 Overhanging and Protruding Objects

Sec. 4.2 Doors and Doorways

Sec. 5.7 Lighting

Sec. 5.9 Self-service Kiosks

Exception

Facility directories and all other signs that are *temporary* are not required to comply with the requirements in this section.

5.8.1 Signage

5.8.1.1 Design Features

a. ensure signage surfaces have matte, eggshell, or non-glare finish;

b. ensure signage is of uniform design and positioned / mounted to avoid any shadow areas and glare;

c. provide high colour / tonal contrast between signage and mounting surfaces;

d. where used to give the same type of information within the same facility, ensure signage is consistently shaped, colored and positioned;

e. provide signage with the International Symbol of Accessibility to designate the following accessible spaces or elements as accessible: (**Figure 136**)

   i. parking spaces, designated as reserved for individuals with disabilities;

   ii. accessible passenger-loading zones;

   iii. accessible ramps located on an accessible path of travel serving an accessible building entrance;

   iv. accessible entrances when not all are accessible. Entrances that are not accessible must have directional signage to indicate the accessible path of travel to the nearest accessible entrance;

   v. accessible washroom, change room and bathing / shower facilities;

   vi. accessible elevators and other elevating devices only if an elevator or escalator is specifically designated as accessible.

   vii. accessible means of egress; and

   viii. accessible areas of refuge;

f. ensure lighting level is evenly distributed, at a minimum of 200 lux (20 ft. candles) and provided at all accessible signage locations as required (Refer to Section 5.7, Lighting).

Best Practice

Avoid using vertical wording and electronic scrolling signage. Where scrolling signage has to be used, ensure characters and symbols move slowly across the screen. Keep information on signage short and simple.

Using a combination of lower case and upper case lettering is easier to read than using all upper case lettering.
The “shape” of the text or message is more legible and creates its own image for familiarity.
Avoid fine type and very thick type font.

Note

Consistent locations include height considerations for overhead or wall-mounted signs, as well as uniform placement of identification signs for facilities and services.

Nearsighted persons might have to approach much closer to reading a sign than persons with average visual acuity. Signs at eye level allow persons to get closer to the sign.



Figure 136 Examples of International Symbols of Accessibility and Pictogram

5.8.1.2 Character Features and Sizes

For text characters, ensure: (**Figure 80**)

a. text characters (e.g., letter or number) are a combination of upper and lower case, sans serif font type and have Arabic numerals;

b. a width to height ratio between 3:5 and 1:1;

c. a stroke width to height ratio between 1:5 and 1:10;

d. ensure characters are not italic, oblique, script, highly decorative or of other unusual forms;

e. use of high colour / tonal contrast between text characters and background surface (e.g., light characters on dark background or dark characters on light background);

f. the minimum character height is provided as per City-defined viewing distances

g. use of an uppercase “X” for character measurement.

5.8.1.3 Pictograms and Symbols

Pictograms and symbols are used to complement text information and to identify important accessible facility features, elements or services, including information desks, public washrooms, and elevators. Where pictograms are used: (**Figures 137, 138 & 83**)

a. ensure pictogram has a field height (i.e., border dimension) a minimum of 150 mm (6 in);

b. provide text descriptors and braille directly below the pictogram field and not in the pictogram field;

c. provide high colour / tonal contrast between the pictogram and the field;

d. use the International Symbol of Accessibility to identify accessible facility features, spaces, elements and amenities; and

e. use recognized, standardized or international symbols for pictograms identifying accessibility features or other key building elements (e.g., washrooms and elevators) to facilitate wayfinding for all users.

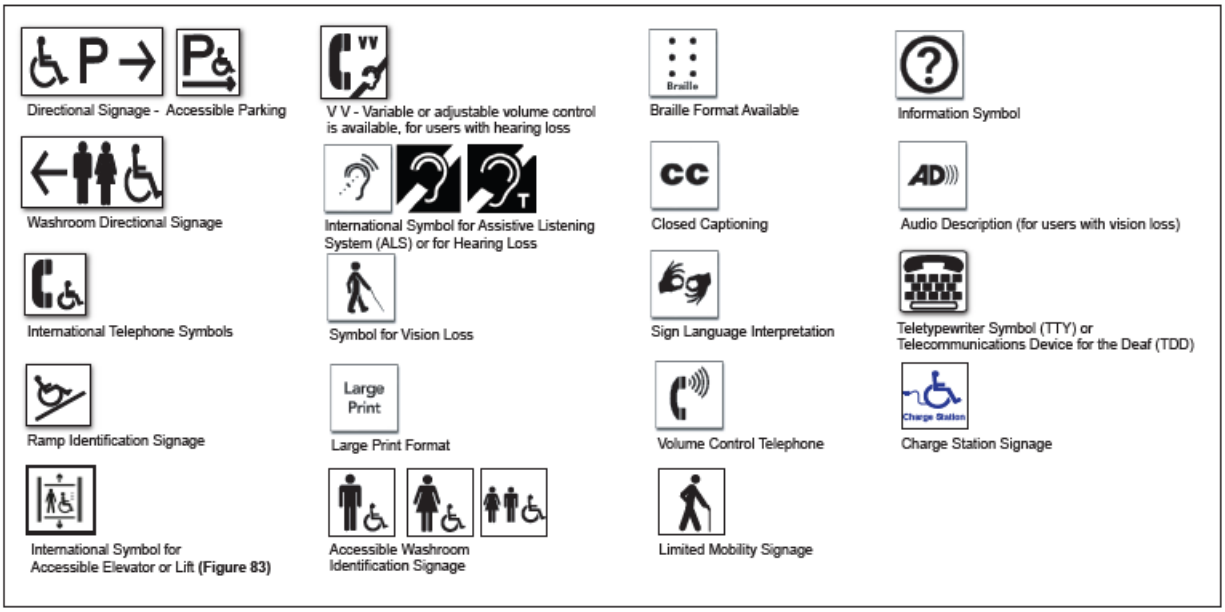


Figure 137 Example of Typical Pictograms and Symbols

5.8.1.4 Braille

Where braille is provided on signage:

a. ensure it is uncontracted braille (Grade 1);

b. ensure braille dots have a domed or rounded shape;

c. locate immediately below the corresponding text (e.g., room numbers, names) and / or pictogram; and

d. where text is multi-lined, place braille below the entire text.

5.8.2 Tactile Signage

Signage with tactile features (e.g., braille, raised characters / text, symbols, or pictograms) are designed to be read by touch. Where a wall-mounted tactile sign is provided on a path of travel or floor that is not required to be accessible as

per the Ontario Building Code, design features and requirements of this section are also provided.

5.8.2.1 Design Features

Where tactile characters are provided for accessible signage identifying permanent rooms or spaces:

a. ensure text characters (e.g., letter or number) and pictograms (where provided) are raised between 0.8 mm to 1.5 mm above the surface;

b. ensure the edges of the text characters are gently rounded (i.e., no sharp edges);

c. provide high colour / tonal contrast between the tactile characters and the background surface;

d. ensure all raised text characters, pictograms or symbols are accompanied by equivalent description in braille;

e. where a pictogram is provided, ensure they are 150 mm (minimum) high; and

f. for text characters (e.g., letter or number):

   i. ensure they are sans serif font and Arabic numerals;

   ii. ensure height of characters are between 16 mm and 50 mm; and

   iii. ensure text is entirely in upper case lettering, where text is intended to be read by touch only, as it is easier to read by touch, compared to a combination of upper and lower case letters.

5.8.2.2 Mounting Locations

Where wall-mounted signage with tactile features is provided: (**Figure 138**)

a. mount between 1200 mm and 1500 mm high above finished floor (e.g., includes position / location of characters, symbols, or pictograms);

b. where provided at a door, install consistently on the wall beside the latch edge of door, with leading vertical edge of sign 150 mm +/- 10 mm from the door frame;

c. were provided at double doors with one active leaf, mount signage to the right of the right hand door;

d. where there is no wall space at the latch side of a single door or on the right side of a double door, install signage on nearest adjacent wall;

e. install to allow users to approach within 100 mm of sign location, clear of any door swing or protruding objects;

f. mount so that a minimum clear floor space of 455 mm by 455 mm (18 in by 18 in) (minimum), centered on the tactile characters is provided beyond the arc of any door swing between the closed position and the 45 degree open position; and

g. ensure a clear wall area of 75 mm (3 in) wide (minimum) around the sign is provided.

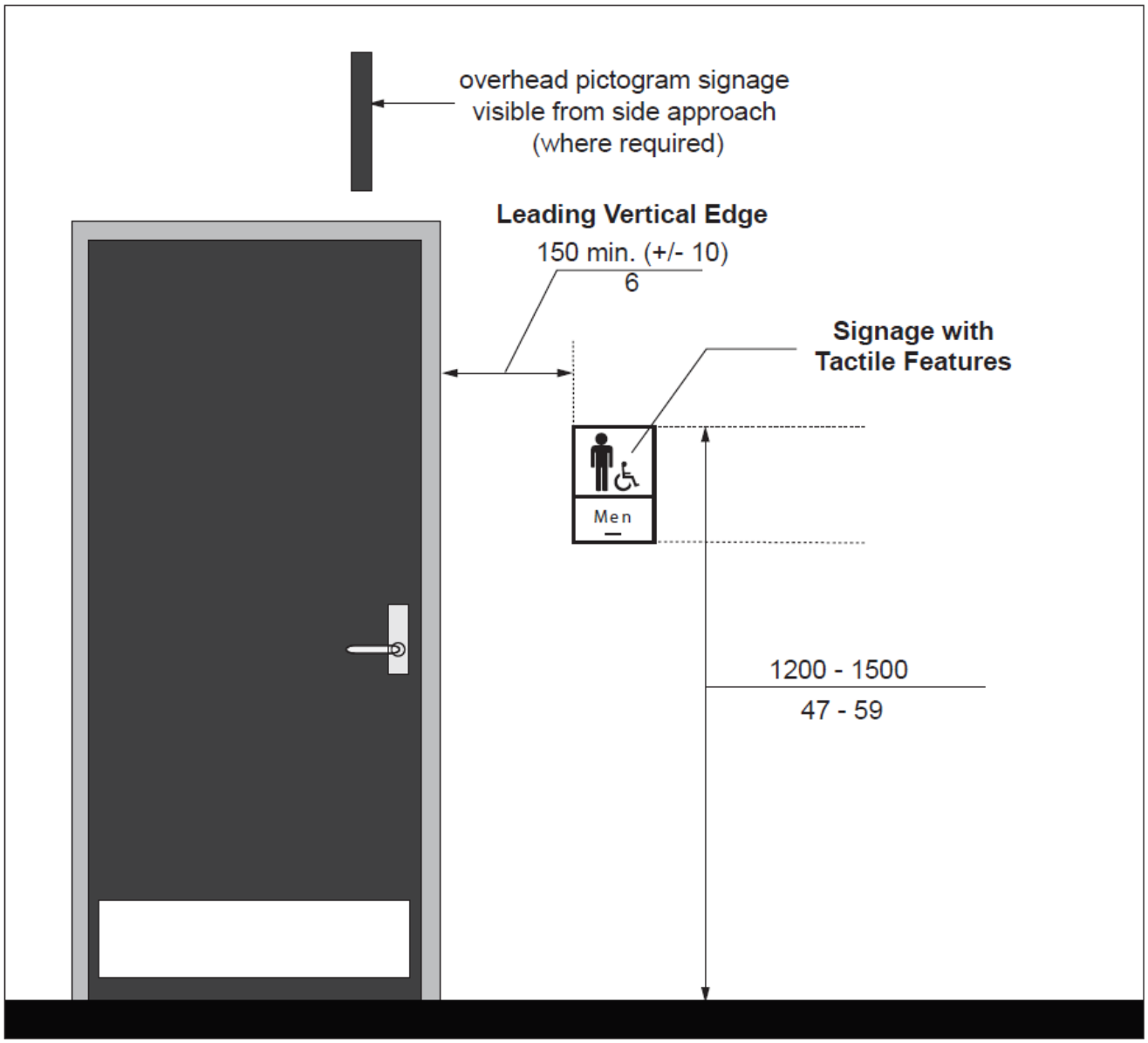


Figure 138 Mounting Location of Signage with Tactile Features - Elevation View

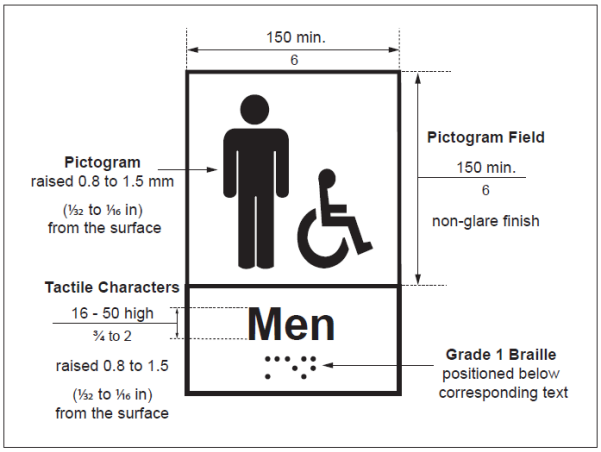


Figure 139 Signage with Tactile Features

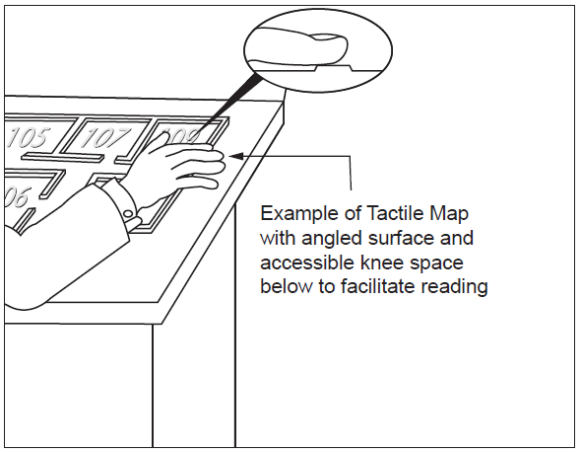


Figure 140 Tactile Map (Best Practice)

5.8.3 Wayfinding Principles

a. where facilities or amenities are not accessible, provide directional signage indicating the location of accessible facilities / amenities, including public washrooms;

b. ensure consistent design, strategic placement, and ideal mounting heights at key decision-making points along accessible routes for all signage;

c. provide high colour / tonal contrast between signage and mounting surfaces for full visibility;

d. ensure there is no information overload or cluttering of signage to avoid confusion; and

e. avoid placing suspended signs against a light source to ensure full visibility (e.g., at the end of corridors which have windows, glass doors, or window walls).

5.9 Self-service Kiosks

Application

This section applies to self-service kiosks, which are interactive electronic terminals, such as point-of-sale devices that staff or the public may use to access one or more services independently.

Examples of where self-service kiosks are used include, but not limited to the following:

- paying parking fees;
- validating tickets;
- providing information (e.g., such as interactive building directories and maps);
- checking in / registering for appointments; and
- purchasing goods or services.

When procuring or acquiring self-service kiosks, ensure compliance with the most up-to-date version of **CAN / CSA B651.2: Accessible Design for Self-service Interactive Devices**.

Reference

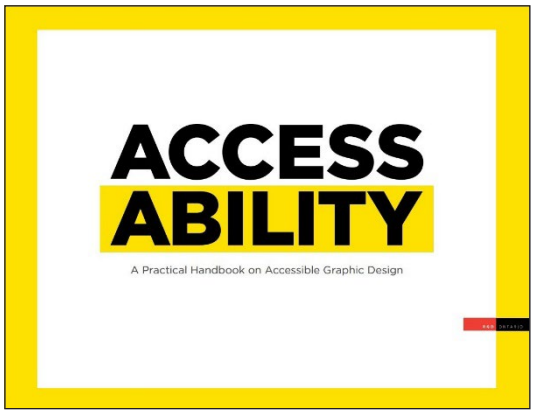
Sec. 5.1 Controls and Operating Mechanisms

Sec. 5.8Signage and Wayfinding

Best Practice

Refer to the most current versions of:

1. CNIB, “Clear Print Accessibility Guidelines;” and
2. The Association of Registered Graphic Designers of Ontario (RGD Ontario), AccessAbility: A Practical Handbook on Accessible Graphic Design.





5.9.1 Design and Layout

Where self-service kiosks are provided, ensure:

a. they are located adjacent to an accessible route, recessed or with a leading edge that is cane detectable at a maximum of 680 mm high, if they protrude into an accessible route;
b. that if only one self-service kiosk is provided, it accommodates both seated and standing users with either frontal or side approach for use of any operating controls or display screens;
c. accessible kiosks are identified with the International Symbol of Accessibility;
d. there are no sharp edges; and
e. mounting / placement is secured firmly and is stable when free-standing.

Best Practice

Provide a clear floor space or ground surface with turning diameter of 2500 mm (98½ in), to allow both side and front approach or turning around by users.
of larger wheeled mobility aids, such as powered scooters and wheelchairs.

Provide display panels or screens with an automatically adjustable mount, to allow use at different heights for diverse users.

5.9.2 Clear Floor Space Requirements and Knee and Toe Clearances

a. provide a clear floor space in front of self-service kiosks of: (**Figure 135**)
   i. a minimum of 920 mm wide by 1525 mm depth for forward approach; and
   ii. a minimum of 1525 mm wide by 920 mm depth for side approach;
b. where self-service kiosks are designed with knee space clearance, ensure the knee space clearance is minimum of 760 mm wide by 480 mm depth by 680 mm high; and
c. where toe clearances are provided, ensure the minimum toe height is 350 mm above the finished floor.

5.9.3 Display Panels and Screens

For display panels and screens: (**Figure 141**)

a. locate display panels / screens free from obstructions above or around panels / screens;
b. position display panels / screens to minimize glare and reflections;
c. where display panels or screens are inclined and cannot be read from 750 mm (29½ in) away:
   i. ensure suitable knee and toe clearances are provided underneath self-service kiosks to allow users of mobility aids to approach screens, as identified in this section; and
   ii. ensure the top of the panel is a maximum of 1380 mm high above the floor;
d. where self-service kiosks with vertical display panels or screens are provided, ensure the text or information provided on the panels or screens is located between 750 mm and 1750 mm high.

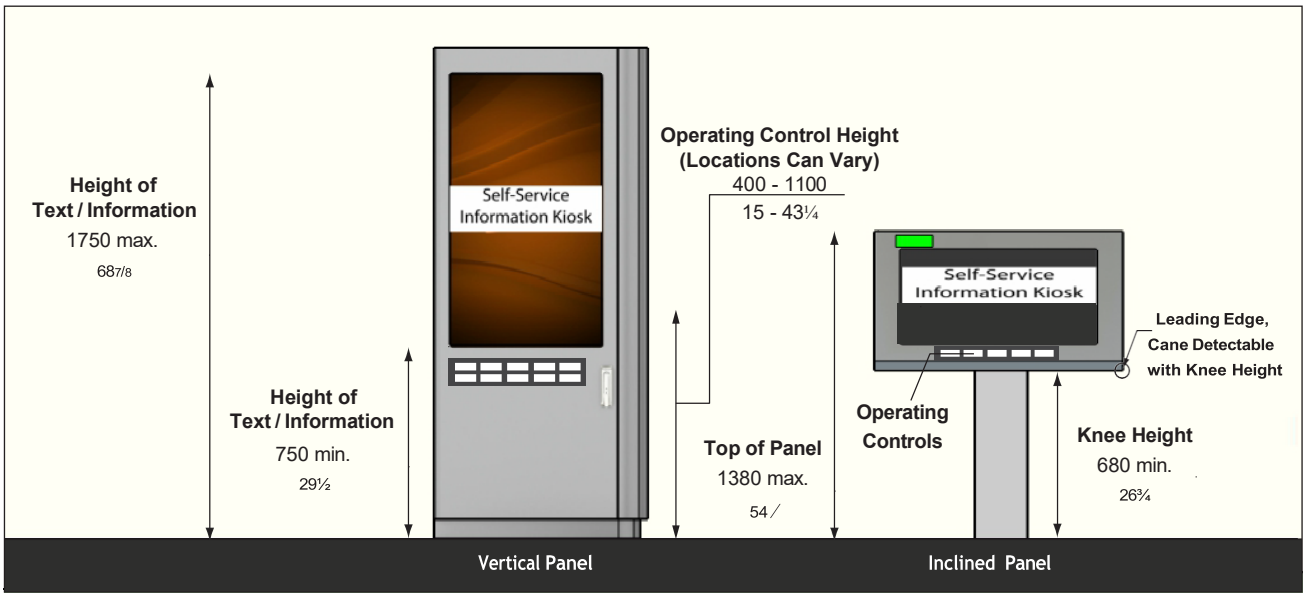


Figure 141 Self-service Kiosks - Elevation View



Examples of self-service kiosks with different accessibility features.

5.9.4 Operating Controls

For operating controls, recognizing provision and locations can vary significantly based on the type of kiosk: (**Figure 141**)

a. mount operating controls or input and output components between 400 mm (15 in) and 1100 mm high above floor level; and
b. ensure controls are operable with one hand, without using tight grasp, pinching, or twisting of the wrist, requiring a maximum operating force of 22 Newtons (5 pounds).

5.9.5 Other Accessibility Features

Accessibility features for self-service kiosks vary based on the type of services provided. Key accessibility features to consider when procuring or acquiring self-service kiosks include the following:

a. ensure high colour / tonal contrast is provided between characters and the background on display panels / screens;
b. ensure display panels / screens are positioned to provide sufficient brightness to overcome ambient conditions;
c. where insertion slots for notes, coins, or other media are provided as part of self-service kiosks, ensure a high colour / tonal contrast is provided with adjacent surface, or a lead-through indicator light is provided for slot location assistance;
d. where visual information is integral to the use of self-service kiosks, provide an alternative mode of operation and information retrieval (e.g., audio output with information displayed on screen conveyed in spoken form);
e. where audio information and instructions are provided:
    i. equip with headset jacks with adjustable volume controls for users with hearing loss; and
    ii. ensure headset jack receptacles are identified with a tactile symbol;
f. where touch screen displays are provided:
    i. ensure they are usable with items such as prosthetic limb or stylus; and
    ii. provide audible and visible feedback to indicate that the screen has been touched;
g. where users are required to complete tasks, ensure the time allowed for completion is adjustable;
h. provide specialized keypads or keyboards (e.g., tactile keyboards); and
i. where a biometric component is incorporated as part of the self-service kiosk, provide an alternative identification method (e.g., non-biometric).

Best Practice

Self-service kiosks that use touch-screen technology are difficult or impossible to use for people with vision loss.

This is a technical and structural barrier that can have a significant impact.
for people trying to make purchases independently and securely using a touch-screen kiosk.
When determining what accessibility features can be included in the design or purchase of a kiosk, ensure to include an alternate (non-visual) way to use it, such as a tactile keyboard and audio instructions.

5.10 Windows

Application

This section applies to windows, glazed screens, vision panels indoors, and fully glazed sidelights, intended for viewing or that are required for ventilation.

Reference

Sec. 4.2 Doors and Doorways

Sec. 5.1 Controls and Operating Mechanisms

Note

Accessibility requirements are applicable to windows that are intended for use by facility occupants, staff, or public.

5.10.1 Design Features

For windows, glazed screens and vision panels, designed for the purpose of viewing: (**Figure 142**)

a. provide clear floor space, a minimum of 920 mm wide by 1525 mm depth for forward approach and a minimum of 1525 mm wide by 920 mm depth for side approach by users of mobility aids;
b. locate bottom sill height no more than 760 mm above the finished floor;
c. where ventilation or operating controls are provided, mount between 400 mm and 1100 mm above the finished floor to be reachable from a seated position and ensure controls are usable with one hand and not require fine finger control, tight grasping, pinching of fingers, or twisting of the wrist during use;
d. do not locate any horizontal structure (e.g., mullion or other visual obstruction) between 900 mm and 1300 mm above the floor; and
e. where wall systems include extensive use of glazing, etched or patterned glass, provide horizontal marking strips:
    i. 50 mm in height, extending full width of glazed area, mounted between 1350 mm and 1500 mm above finished floor; and
    ii. ensure high colour / tonal contrast is provided for users with vision loss.

Best Practice

Floor space with turning diameter of 2500 mm.
is preferred to accommodate larger mobility aids.

Where there is extensive glazing, or use of etched or patterned glass, provide decals or a strip at a lower level, between 850 to 1000 mm high above finished floor level.

At locations where frameless glass panels are used, cap any exposed ends or edges with a high colour / tonal contrasted vertical safety stripe, to enhance visibility.

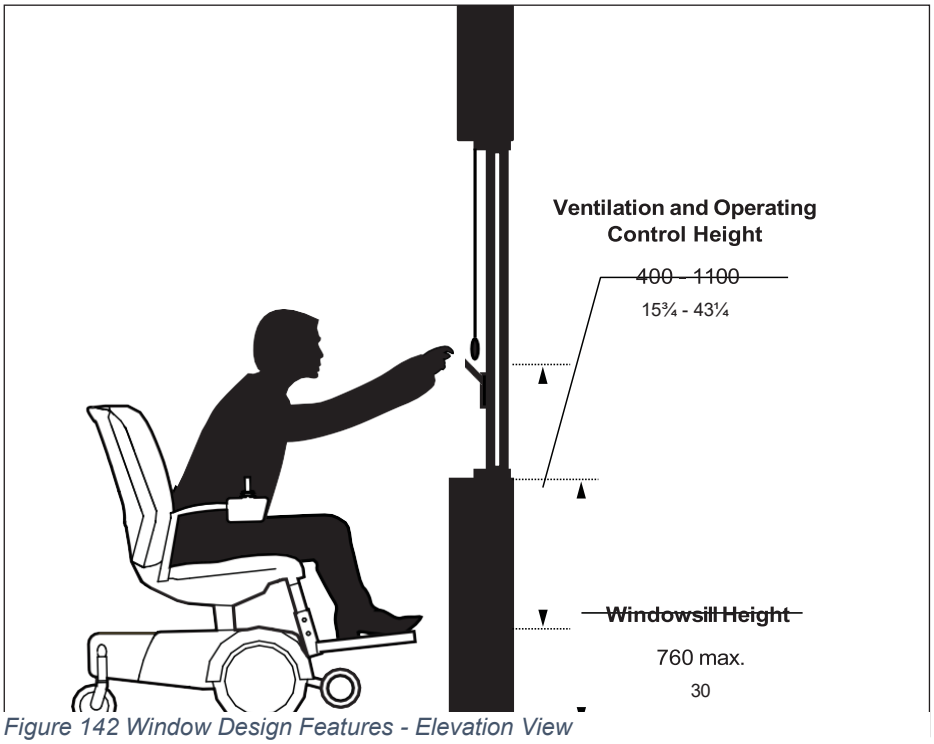


Figure 142 Window Design Features - Elevation View

Recommendation

Cords, blind and curtain controls and handles should be usable by persons of all abilities and should not present protruding hazards.

5.11 Audible Pedestrian Signals

Application

This section addresses Accessible Pedestrian Signals (APS), required for public safety at pedestrian crossings equipped with signalized intersections. APS should be designed to accommodate residents of all abilities. Installed signal systems should be able to assist people with low or no vison and persons with disabilities generally when they have the right of way through vibro-tactile and audible indicators, audible sound cues, and location indicators.

Standardized location of controls.

Installation and the effectiveness of APS may be influenced by circumstances beyond the control of the City including but not limited to the traffic patterns, pedestrian usage, and presence of other infrastructure, ambient noise levels, and location. The range of visual impairment and experience of the user may result in differences in the perception of usability.

Note

A “pedestrian crossover” is defined in the Highway Traffic Act as: “any portion of a roadway, designated by by-law of a municipality at an intersection or elsewhere, distinctly indicated for pedestrian crossing by signs on the highway and lines or other markings on the surface of the roadway as prescribed by the regulations.”
More information is provided in the Transportation Association of Canada’s “TAC Guidelines for Understanding, Use and Implementation of Accessible Pedestrian Signals” - May 2008

Recommendation

Adjustments should be considered where public consultation indications changes may provide a more beneficial and functional experience for end user.

5.11.1 Provisions

a. accessible pedestrian signals must be installed where new pedestrian signals are to be installed or where existing pedestrian signals are being replaced or upgraded;
b. Controls, including push buttons should have a clear ground space, be connected to an accessible path of travel or pedestrian clearway, and be placed back from the curb to ensure that activating the control can be performed safely
c. crossing time must take into consideration the full spectrum of users including but not limited to residents with the full range of visual impairments and senior citizens that may move at a rate that is slower than the average user.
d. Vibro-tactile walk indicators must provide a tactile cue to help persons with low or no vision know when the walk indicator is on and that they have the right-of-way to cross the roadway. Ensure the direction of all tactile cues are correctly aligned with the direction of pedestrian travel.

Caution

Avoid the installation of two APS on the same post to avoid confusing residents with visual impairments.

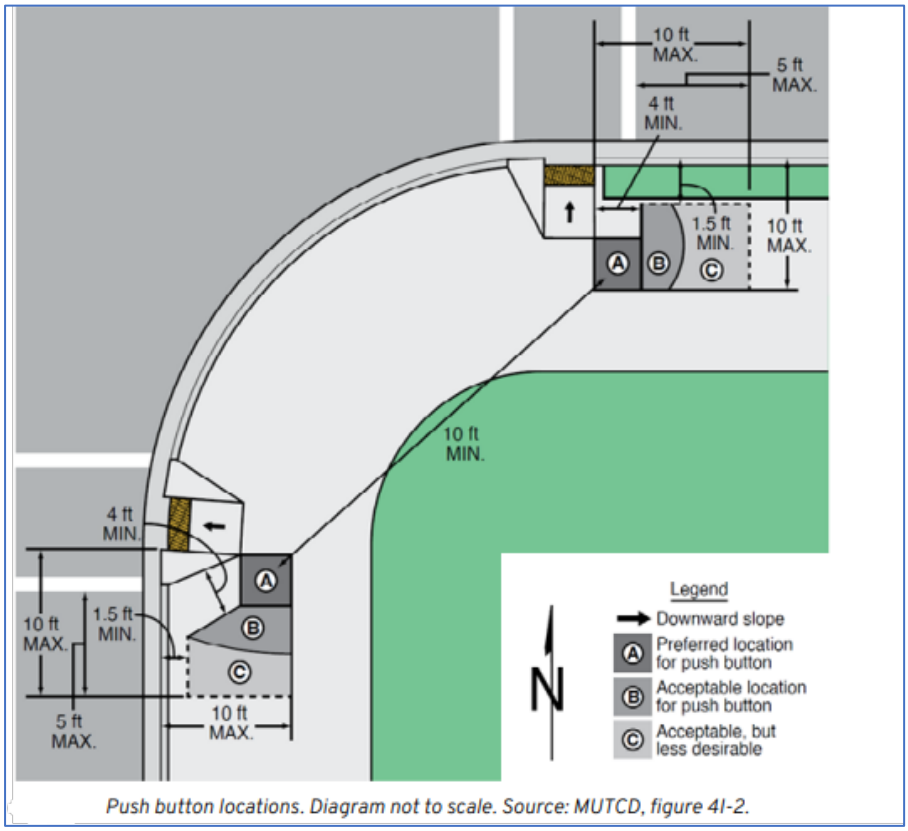
Best Practices

- Use audible messages that allow residents to easily distinguish between streets at the intersection for users of APS-enabled intersections.
- Conduct consistent, periodic reviews of all APS signals to confirm that a signal provides safe and effective right of way for users that rely on signals to travel through pedestrians safely.
- It is essential that the tactile arrows be pointed out precisely in the direction of travel that would otherwise put pedestrians at serious risk.

5.11.2 Design and Layout

a. install within 1500 mm of the edge of the curb except when it is technically infeasible
b. provide tactile arrows that align correctly with the direction of crossing
c. ensure tactile buttons are easy to push for users of all abilities
d. be equipped with both audible and vibro-tactile walk indicators
e. comprise both audible and vibro-tactile walk indicators.
f. where two APS assemblies are installed on the same corner, confirm they are installed a minimum of 3000 mm apart.
    (i) where two APS assemblies cannot be installed 3000 mm (minimum) apart because of site constraints or existing infrastructure, they can be installed on a single post and must include a verbal announcement clearly stating which crossing is active
g. provide a locator tone that is distinct from a walk indicator tone.
h. mount at 1050mm - 1100 mm (maximum) high above ground level





Push button locations. Diagram not to scale. Source: MUTCD, figure 4I-2.

6.0 Special Facilities and Spaces

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6.1 Assembly Areas

Application

This section applies to assembly areas in both interior and exterior environments. Common assembly areas, where accessible seating spaces are required are identified in **Table 12**.

Reference

Sec. 2.4 Guards and Handrails

Sec. 5.1 Controls and Operating Mechanisms

Sec. 5.2 Assistive Listening Systems

Sec. 5.7 Lighting

Sec. 5.8 Signage and Wayfinding

Sec. 6.12 Elevated Platforms or Stages

Civic	Entertainment / Cultural	Educational	Sports
Council Chamber	Theatre	Lecture Hall	Arena
Public Meeting or Hearing Room	Places of Worship	Classroom	Stadium
Auditorium	Performing Arts Center	Conference / Symposium Room	Gymnasia
Multi-purpose Room (e.g., Community or Recreation Centers)	Museum	Stage / Podium	Grandstand Stage

Best Practice

When designing assembly areas, consider the needs of those experiencing hyper-sensitivities or hypo-sensitivities, especially where there are expected to be large groups of people, or increased activity in space. Integrating sensory design strategies is recommended. Sensory design means designing spaces that respect sensitivities related to hearing, taste, smell, and touch but also sensations that extend from senses such as temperature, vibration, and pressure. Sensory design strategies can address the needs of diverse users of all ages and abilities including people with autism, developmental / intellectual disabilities, dementia, or brain injury, for example.

These solutions may include:

- Ensuring that there is enough room to step away from a line or entranceway if required;
- Separate quiet spaces or transition areas (for a family or individual to retreat or withdraw from a line or chaotic situation to a calmer environment when required);
- Snoezelen rooms or snoezelen equipment (e.g., these spaces may consist of specialized lighting, decorations, music, aromatherapy, calming toys, books, and other types of sensory or tactile equipment to allow options for relaxing or stimulating experiences, depending on individual needs); and
- Dimmer lighting.

6.1.1 Design and Layout

a. ensure lighting level is evenly distributed at a minimum of 150 lux (15 ft. candles), throughout all accessible routes and accessible seating spaces (Refer to Section 5.7, Lighting);

b. ensure a consistent accessible route / path of travel at a minimum of 1100 mm clear width, or preferred 1830 mm, with required turning spaces, throughout circulation areas (Refer to Section 4.3, Interior Accessible Routes);

c. provide accessible seating options for users of mobility aids;

d. provide assistive listening systems, designed for the type of venue and audience;

e. ensure all audio-visual equipment, features, controls, and related technology are usable by all participants and staff, where provided, including the provision of instructions and guidance in alternative formats; and

f. designate accessible seating spaces and adaptable seating with the International Symbol of Accessibility (ISA) signage (Refer to Section 5.8, Signage and Wayfinding).

Best Practice

In assembly areas, where lighting is dimmed (e.g., theatres or performing arts center), ensure steps and accessible routes are illuminated. (e.g., marked with lighting strips) to assist with identification.

Adaptable seating, with armrests that flip up and down at the end of aisle seats, provide assistance to persons transferring from mobility aids.

Note

Persons using mobility aids usually sit higher than persons in standard seating and accessible seating spaces should be located to ensure. that when they are occupied, the views of others that may be seated behind them are not obstructed. Companion seating to be calculated. in addition to the required number of accessible seating spaces.

6.1.2 Accessible and Adaptable Seating

6.1.2.1 Provision

Where fixed seating is available in assembly occupancies:

a. provide accessible seating spaces for users of mobility aids and adaptable seating based on total number of fixed seats, as identified in **Table 13**:

Table 13 Accessible and Adaptable Seating Requirements in Assembly Areas

Total Number of Fixed Seats	Minimum Number of Accessible Seats	Minimum Number of Adaptable Seating
Up to 20	2	1
21 to 40	2	2
41 to 60	2	3
61 to 80	2	4
81 to 100	3	5
Over 100	3% seating capacity	the greater of 5 seats or 5% of the aisle seating capacity

6.1.2.2 Accessible Seating Spaces

Where accessible seating spaces are provided: (**Figures 143, 144 & 145**)

a. install directional signage in prominent locations to identify location of accessible seating spaces;

b. locate spaces adjoining an accessible path of travel, without infringing on egress from any row of seating;

c. provide at least one fixed companion seat adjacent to accessible seating spaces and within the same row, ensuring shoulder alignment for users sitting beside each other;

d. for front, rear or side approaches, ensure a minimum clear floor space at each accessible seating space is 920 mm wide by 1525 mm depth;

e. ensure at least two accessible seating spaces are provided side by side, with a minimum clear turning circle of 1525 mm diameter, or preferred 2440 mm in front or behind accessible seating spaces;

f. locate accessible seating spaces as part of the designated / overall seating plan, provide a choice of viewing location and ensure there is a clear view of the event taking place;

Best Practice

An increased riser height for accessible seating spaces ensures suitable sight lines.
and comparable views when users in front are in a standing position.

Recommendation

Accessible seating should be distributed throughout the assembly space and guests with disabilities should be able to choose where they wish to sit. Factor in range of disabilities and choices.

g. where accessible seating spaces are provided on an elevated platform, ensure sight lines are:

   i. comparable to those for all viewing positions;

   ii. not reduced or obstructed by standing members of the audience; and

   iii. free of any obstructions (e.g., any barriers, handrails, guardrails, or columns);

h. ensure accessible seating spaces are positioned so that they do not obstruct sight lines of other users either sitting or standing.

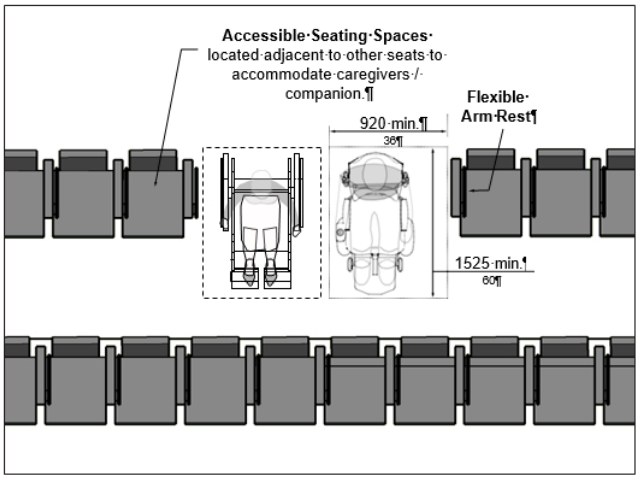


Figure 143 Accessible Seating Space Dimensions

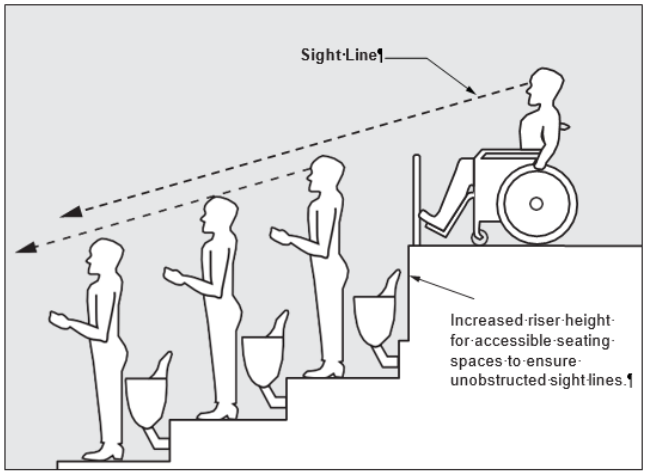


Figure 144 Sight Lines

6.1.2.3 Adaptable Seating

For designated adaptable seating: (**Figure 143**)

a. provide a minimum of one adaptable seat adjacent to every accessible seating space;

b. locate adjacent to an accessible route without infringing on egress from any row of seating or any aisle requirements;

c. equip with a movable or removable armrest on the side of the seat adjoining the accessible route; and

d. locate, as part of the designated seating plan, and provide a choice of viewing location with a clear view of the event taking place.

6.1.2.4 Storage for Mobility Aids

a. ensure at least one (1) storage space where less than 200 fixed seats are provided and a minimum of two (2) storage spaces, where more than 200 fixed seats are provided;

b. provide a minimum clear floor space of 920 mm wide by 1525 mm depth for each space; and

c. locate storage space (e.g., can be in a separate room or alcove, away from any adjacent accessible route) on the same level and in close proximity to the accessible seating spaces and seats designated as adaptable seating.

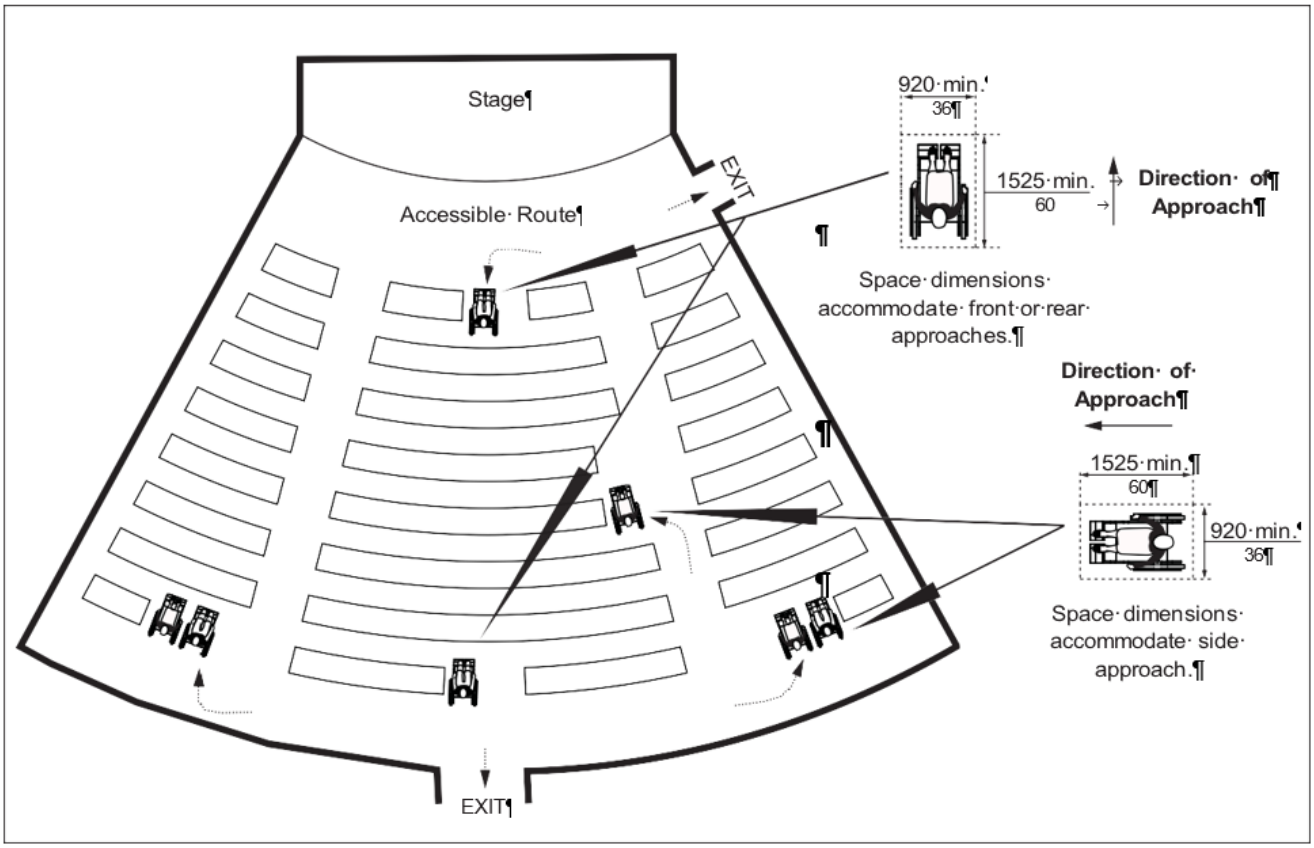


Figure 145 Accessible Seating Plan - Example of Viewing Positions

6.2.1 Design and Layout

Typical features for accessible meeting rooms include: (**Figure 146**)

a. locate on an accessible path of travel;

b. identify meeting / multi-purpose room locations with appropriate signage (e.g., braille / tactile) (Refer to Section 5.8, Signage and Wayfinding);

c. ensure a consistent accessible route / path of travel a minimum of 1100 mm (431/4 in) clear width, or preferred 1830 mm (72 in), with required turning space, throughout circulation areas (Refer to Section 4.3, Interior Accessible Routes);

d. provide a minimum clear turning circle of 1525 mm (60 in) diameter, or preferred 2440 mm adjacent to the main entrance;

e. provide accessible tables and work surfaces with suitable knee clearances and seating, as identified in related sections of these standards;

f. provide an assistive listening system (type to be determined based on use of space / occupancy), identified with signage and the International Symbol for Hearing Loss;

g. where a server area / related millwork and any wall-mounted posting or writing surfaces are provided, ensure minimum clear floor space is 920 mm (36 in) wide by 1525 mm (60 in) depth, for both forward and side approaches, for at least one section of the millwork;

h. mount any posting, display, or writing surfaces (e.g., Sign By-Law SCHEDULE B FEES 202white boards or smart screens) with bottom edge at a maximum of 1000 mm high;

i. ensure all audio-visual equipment, features, controls, and related technology are usable by all participants and staff, where applicable, including the provision of instructions and guidance in alternative formats;

j. provide an accessible phone / teleconference system, including a portable microphone (e.g., flexible, goose-neck style), a cordless microphone, or a personal voice amplification system, usable and available for each accessible seating position (or alternate systems/options for equivalent use); and

k. ensure lighting level is evenly distributed at a minimum of 375 lux (37.5 ft. candles) at work surfaces and any additional task lighting based on user's needs (Refer to Section 5.7, Lighting).

Best Practice

Entrances to large and highly used meeting or multi-purpose rooms to be equipped with power door operators.

Additional clear floor space of 2500 mm by 2500 mm) within the room is recommended where space is available.

Movable tables and seating are. recommended as they allow flexibility and accommodations to be made.

Note

For larger multi-purpose meeting rooms, consider ways to allow easy and logical subdivision of the room (e.g., partitioning using automatic movable walls, which provide acoustic and visual barriers).

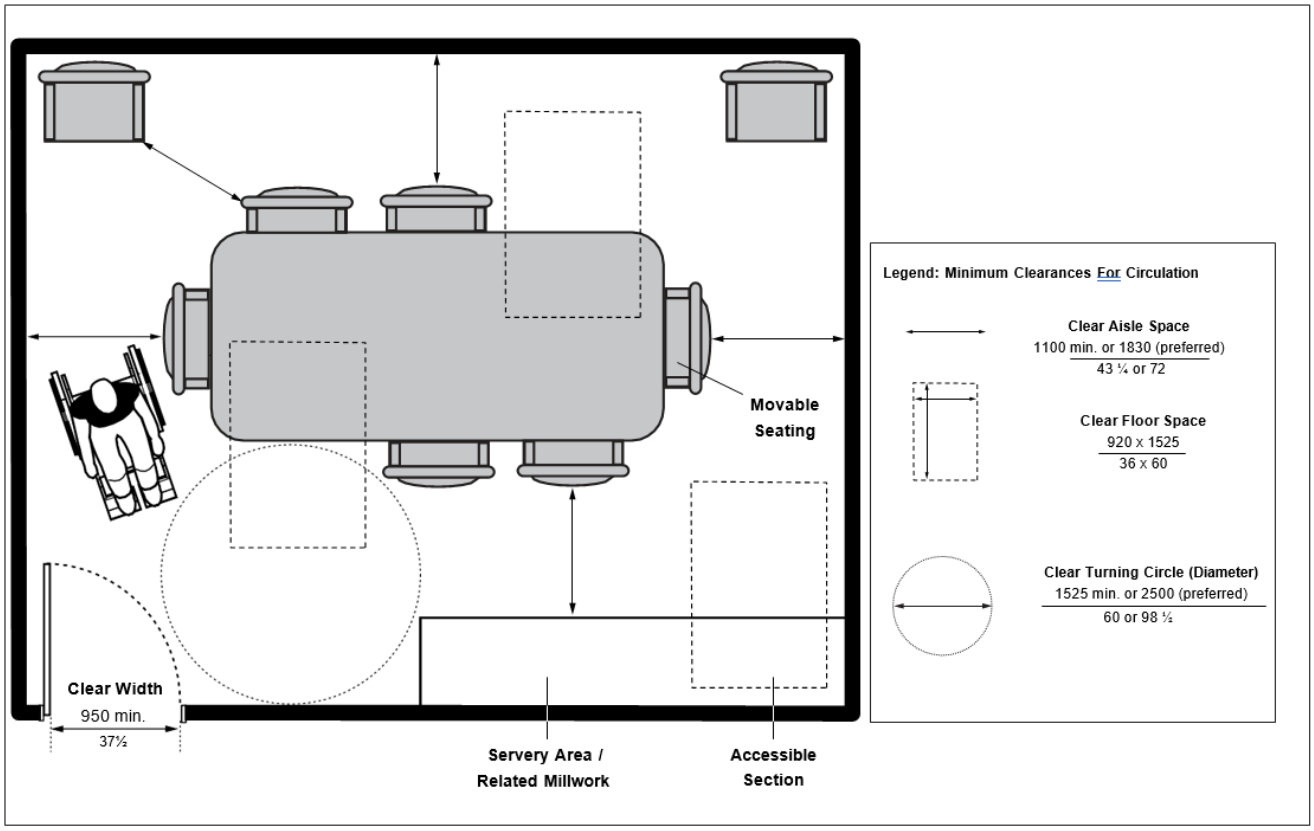


Figure 146 Meeting Room Design and Layout

6.3 Cultural and Art Facilities

Application

This section applies to cultural and art facilities which include, but are not limited to: art galleries, concert halls, theatres, museums, and heritage sites.

Recognizing there are unique circumstances and challenges related to improving accessibility of heritage sites and facilities, additional considerations beyond architectural and physical design are often required.

These can include staff training and awareness, additional use of technology and implementation of facility-specific management policies and practices.

Reference

Sec. 2.5 Overhanging and Protruding Objects

Sec. 2.8 Seating, Tables and Work Surfaces

Sec. 4.1 Entrances

Sec. 4.2 Doors and Doorways

Sec. 4.3 Interior Accessible Routes

Sec. 5.1 Controls and Operating Mechanisms

Sec. 5.2 Assistive Listening Systems

Sec. 5.7 Lighting

Sec. 5.8 Signage and Wayfinding

6.3.1 Design and Layout

a. ensure a consistent accessible route / path of travel a minimum of 1100 mm clear width, or preferred 1830 mm with required turning spaces, throughout circulation areas (**Refer to Section 4.3, Interior Accessible Routes**);
b. where exhibits or displays follow a specific order, ensure circulation route is intuitive;
c. provide an accessible floor plan or map to facilitate wayfinding;
d. provide assistive listening systems in large assembly, meeting, or performance areas; and
e. where exhibits and displays are provided:
    i. mount top surface of display cases at a maximum of 920 mm high from floor;
    ii. provide minimum clear floor space of 920 mm wide by 1525 mm depth for both forward and side approaches in front of exhibits;
    iii. provide a high colour / tonal contrast between the items exhibited and adjacent background;
    iv. eliminate or minimize glare that may be reflected from display surfaces or covers;
    v. where interactive displays are provided, ensure controls and operating mechanisms are mounted at a maximum height of 1100 mm high from floor (**Refer to Section 5.9, Self-service Kiosks**); and
    vi. ensure lighting level is evenly distributed at a maximum of 200 lux (20 ft. candles), at display labels for reading and other viewing areas (Refer to Section 5.7, Lighting).

Best Practice

Provide line drawings and photographs that complement any labels or text, to aid in comprehension for those with reading difficulties.

Provide exhibits and display labels in alternative formats. (e.g., braille or audio).

Refer to the Ontario Historical Society's "Accessible Heritage: An Accessible Toolkit for Ontario's Heritage Organizations and Institutions (current edition)."

RECOMMENDATION

Interactive displays are encouraged in all cultural and arts facilities to ensure residents of all abilities can equally participate in.

6.4 Cafeteria and Dining Facilities

Application

This section applies to elements unique to cafeterias and dining facilities. Typical considerations include:

- serving line and seating areas with lower sightlines, reachable surfaces and displays for users of mobility aids;
- clear aisle and floor space for overall circulation; and
- independent access.

Reference

Sec. 2.8 Seating, Tables and Work Surfaces
Sec. 4.3 Interior Accessible Routes
Sec. 5.1 Controls and Operating Mechanisms
Sec. 6.10 Service Counters
Sec. 6.11 Waiting and Queuing Areas

Note

Providing accessible customer service is especially important for this type of environment.

6.4.1 Design and Layout

a. ensure a consistent accessible route / path of travel at a minimum clear width of 1100 mm (431/4 in), or preferred 1830 mm (72 in), with required turning spaces, throughout circulation areas, including displays, service lanes, service or payment counters, as well as between and around any fixed tables or seating / dining areas (Refer to Section 4.3, Interior Accessible Routes); and
b. where the layout of cafeteria amenities is dispersed, ensure a minimum clear floor space in front of food displays, condiment counters and dispensing equipment as follows:
    i. 920 mm wide by 1525 mm depth (36 in by 60 in), for a forward approach; or
    ii. 1525 mm wide by 920 mm depth (60 in by 36 in) for a side approach.

Best Practice

Provide clear floor space with turning diameter. of 2500 mm (98½ in), to allow enhanced maneuverability, as well as both side and frontal approach of larger wheeled mobility aids such as powered scooters and wheelchairs.

6.4.2 Food Displays and Service Lanes

Where self-service food displays are provided: (**Figures 147 & 148**)

a. ensure minimum clear aisle width between tray slide and separating rail is 1100 mm, or preferred 1830 mm;
b. provide tray slides mounted between 730 mm and 865 mm high above floor;
c. ensure at least 50% of shelves are mounted 400 mm to 1370 mm high for unobstructed side approach; and
d. ensure maximum side reach of 500 mm depth.

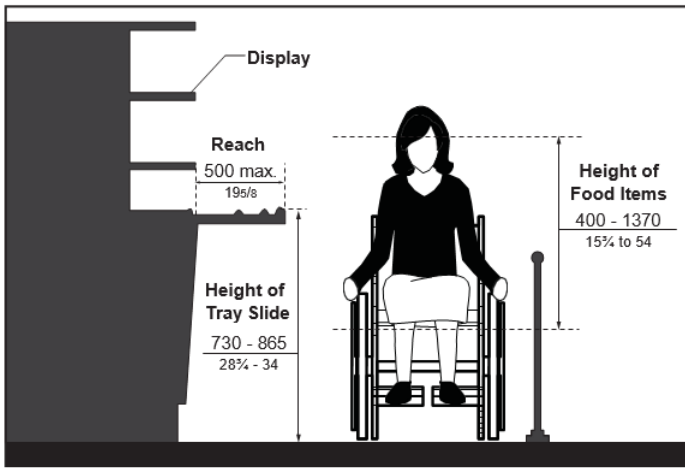


Figure 147 Food Displays and Tray Slides - Section View

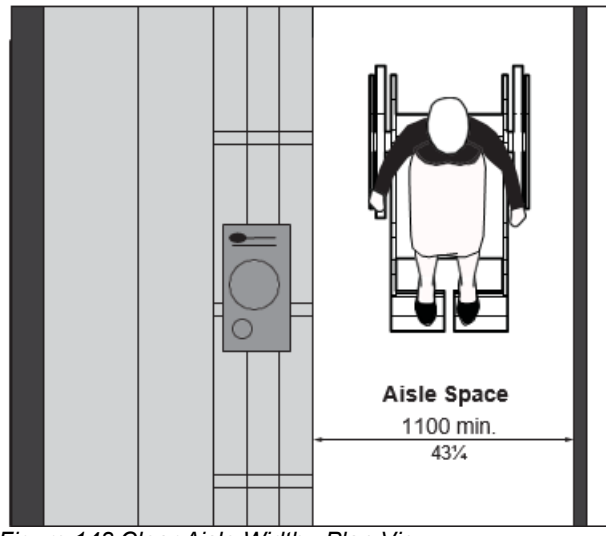


Figure 148 Clear Aisle Width - Plan View

6.4.3 Service and Payment Counter

Where required, ensure at least one accessible service counter is provided, with (Refer to additional requirements, Section 6.10 Service Counters):

a. a minimum clear floor space of:
   i. 920 mm wide by 1525 mm depth for a forward approach; or
   ii. 1525 mm wide by 920 mm depth for a side approach; and
b. staff that are visible from a seated position, to assist users if required.

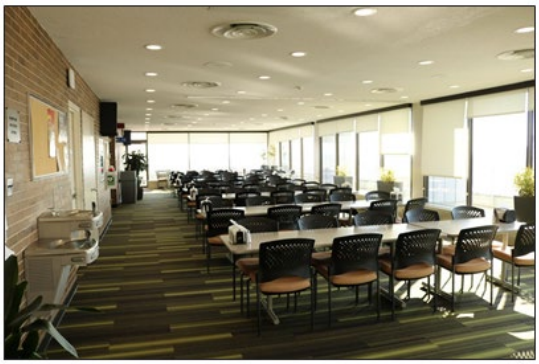
6.4.4 Dining and Seating Areas

a. ensure all dining and seating areas are accessible, or a minimum of 20% of the total are accessible, with a range of seating / eating areas for users of mobility aids;
b. provide dining tables with clear knee space underneath table, as identified in relevant sections of these standards; and
c. provide informational and directional signage identifying accessible amenities, marked with the International Symbol of Accessibility.

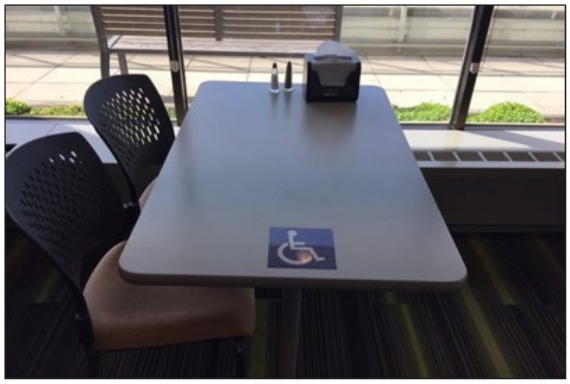
Best Practice

Refer to the AODA Customer Service Standards, Ontario Regulation 429 / 07.

Flexible seating and tables allow easier accommodations for all users. However, where provided, regular maintenance is required to ensure suitable placement and to ensure seats or tables that are? temporarily moved do not obstruct accessible routes and floor space clearances.







6.5 Kitchens and Kitchenette

Application

This section applies to common-use kitchens and kitchenettes, for public and staff, typically available as amenities in public facilities, such as office environments and community centers, where multi-purpose activity rooms are provided.

Reference

Sec. 2.1 Ground and Floor Surfaces

Sec. 2.8 Seating, Tables, and Work Surfaces

Sec. 4.3 Interior Accessible Routes

Sec. 5.1 Controls and Operating Mechanisms

Sec. 5.7 Lighting

6.5.1 Design and Layout

a. ensure floor surface is slip-resistant and has a non-glare finish;
b. provide a minimum clear floor space of 920 mm wide by 1525 mm depth, for either a forward or side approach by users of mobility aids, directly in front of kitchen amenities and appliances, and to the one side where drawers or doors open;
c. ensure all controls and operating mechanisms are mounted no higher than 1100 mm from floor; and
d. ensure lighting level is evenly distributed and provided as required, with task lighting options (e.g., under cabinet / above counter) also available (**Refer to Section 5.7, Lighting**).

Best Practice

A turning circle of 2500 mm (98½ in) is preferred for users of larger mobility aids, including. powered scooters and wheelchairs.

6.5.1.1 Pass-through or Galley Kitchens

For kitchens where counters, appliances or cabinets are on two opposing sides or opposite a parallel wall: (**Figure 149)**

a. provide a minimum clear width of 1100 mm, or preferred 1830 mm, between all opposing base cabinets, countertops, or walls within kitchen work areas; and
b. ensure two doorways or openings are provided, with one at each end and with a minimum clear width of 950 mm

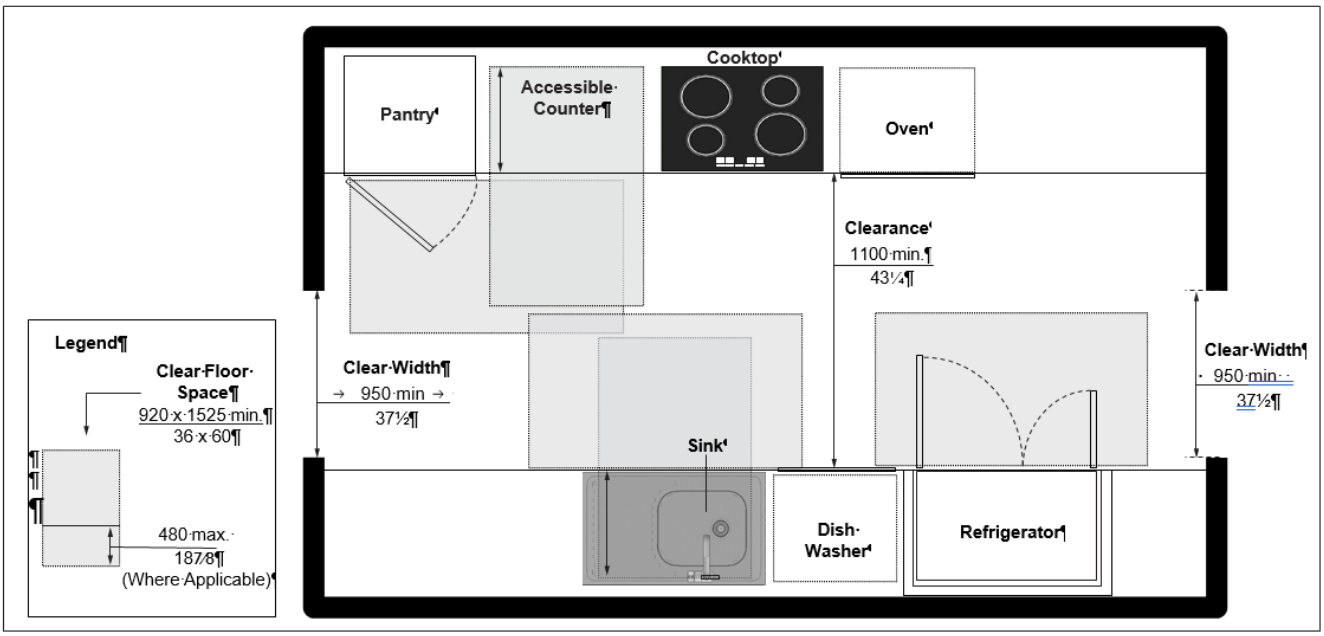


Figure 149 Pass-Through or Galley Kitchen - Plan View

6.5.1.2 U-shaped Kitchens

Where kitchens are enclosed on three continuous sides: (**Figure 150**)

a. provide a clear turning circle of 2500 mm diameter between all opposing base cabinets, countertops, or walls within kitchen work areas, or in a retrofit condition where providing this space is technically infeasible, this space may be reduced to 2130 mm and
b. ensure minimum entrance / exit clear width is at least 950 mm.

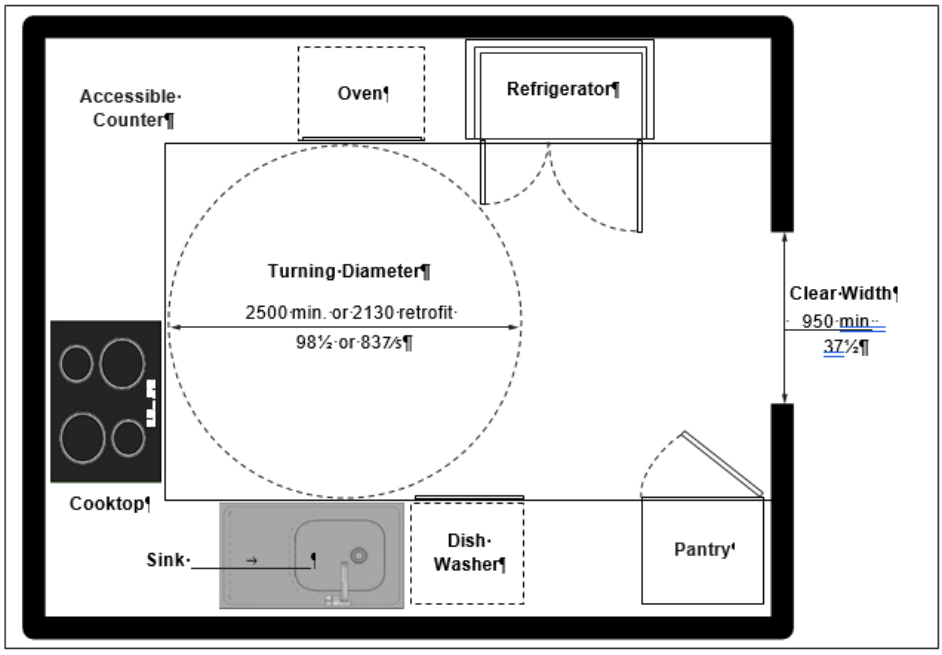


Figure 150 U-Shaped Kitchen - Plan View

6.5.1.3 L-shaped Kitchens

Where kitchens are L-shaped: (**Figure 151**)

a. provide a minimum clear width of 1100 mm or preferred 1830 mm, between all opposing base cabinets, countertops, or walls within kitchen work areas.

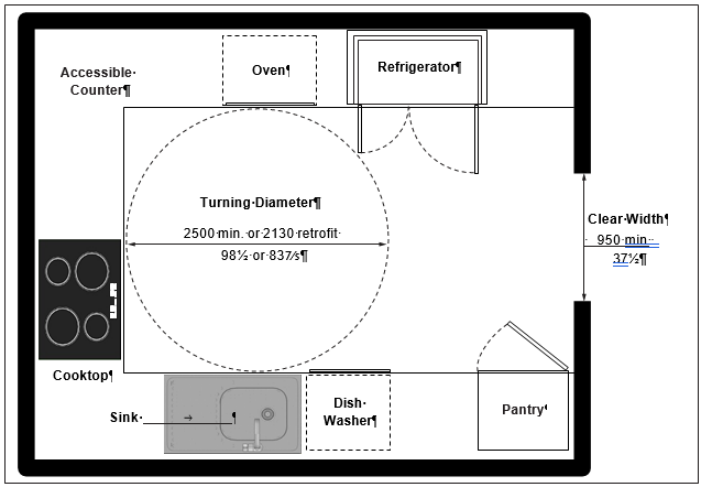


Figure 151 L-Shaped Kitchen - Plan View

6.5.2 Counters and Work Surfaces

For accessible food preparation counters and work surfaces: (**Figure 152**)

a. provide a high colour / tonal contrast between all cabinets, countertops, appliances, and adjacent wall surfaces;
b. ensure there are no sharp or abrasive surfaces underneath counter and work surfaces or as part of front edges of counters (e.g., rounded edges are recommended);
c. ensure at least one (1) counter / work surface is accessible with:
    i. dimension a minimum of 760 mm wide by 600 mm depth;
    ii. top surface between 730 mm and 865 mm high;
    iii. a centered knee clearance at a minimum of least 480 mm depth, 760 mm wide and 685 mm high;
    iv. a minimum clear floor space of 920 mm wide by 1525 mm depth, which may extend to a maximum of 480 mm underneath the counter / work surface; and
    v. electrical outlets installed at the side or front.

Best Practice

Colour / tonal contrasted front edges on the counters help define the user space.

Provide a portable, accessible side counter unit for frequently used appliances and related amenities. This can also be an option for existing facilities.

An additional pull-out workboard below the standard counter surface is recommended.

Continuous countertops are recommended.

6.5.3 Kitchen Storage

Kitchen storage includes but is not limited to shelves, storage cabinets, and drawers. Where provided: (**Figures 153 & 154**)

a. ensure at least one (1) storage unit shelf surface is a maximum of 1100 mm high from floor where it is mounted above a counter / work surface and that at least 50% of all shelf space is accessible;
b. provide accessible cabinet door hardware (e.g., D-type door pull) mounted:

Note

Where kitchen islands are provided, consider providing lowered counter with knee clearance.

i. no higher than 1100 mm from floor; and
ii. close to the bottom for upper cabinets and close to the top for base cabinets;

c. ensure a minimum toe space of 150 mm depth by 230 mm high is provided at base cabinets, where provided.

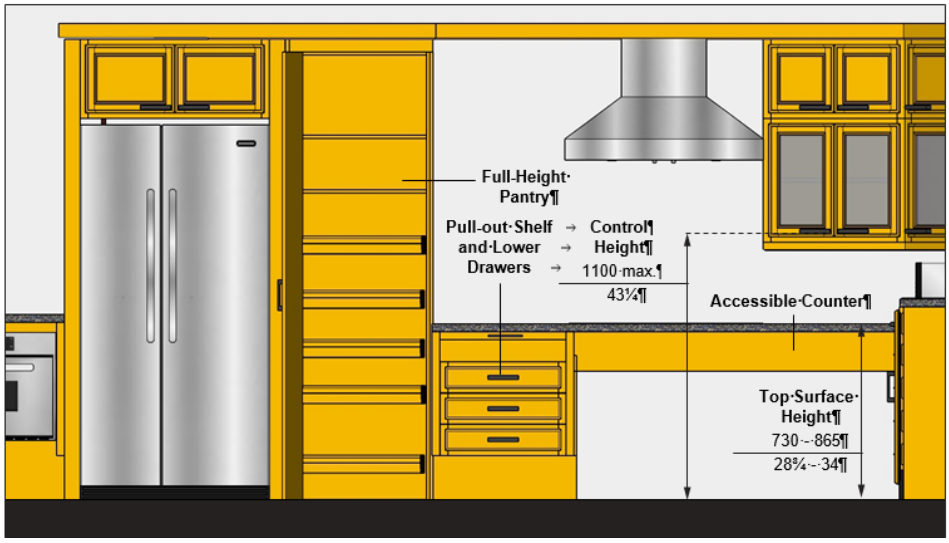


Figure 153 Kitchen Storage - Elevation View

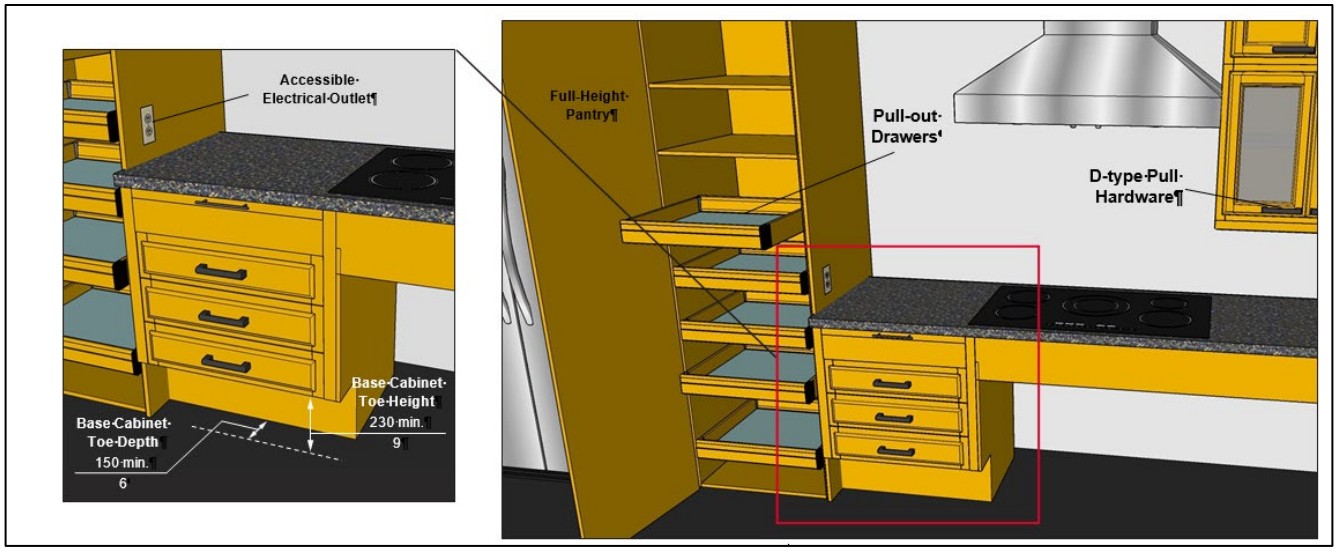


Figure 154 Kitchen Storage

6.5.4 Sinks

Where accessible sinks are provided: (**Figures 155 & 156**)

a. install sink with its centerline at a minimum of 460 mm from a side wall;
b. ensure the rim height of sink is located between 810 mm to 860 mm high above floor;
c. provide a minimum clear floor space in front at 920 mm wide by 1525 mm depth, which may extend to a maximum of 480 mm

Best Practice

Faucets with a flexible hose attachment benefit a wider range of users.

d. provide knee clearance centered on the sink a minimum of 920 mm wide by 685 mm high by 200 mm depth, with toe space clearance a minimum of 230 mm high by 230 mm depth;
e. provide automatic faucet or lever-type controls that can be operated with a closed fist (**Refer to Section 5.1, Controls and Operating Mechanisms**);
f. ensure no sharp or abrasive surfaces underneath;
g. ensure hot water and drainpipes underneath sink are offset to the rear and do not obstruct the knee clearance; and
h. where hot water and drainpipes about the knee clearance, ensure pipes are insulated or covered to protect users.

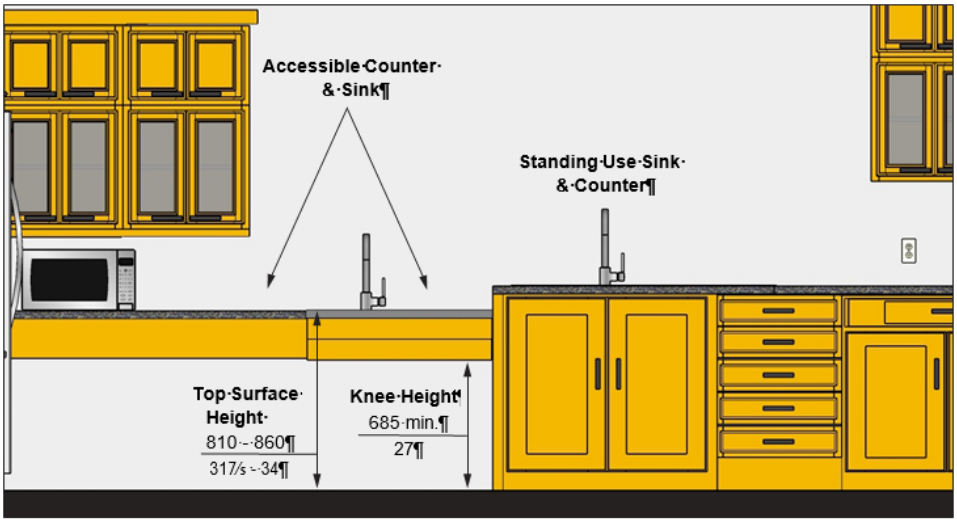


Figure 155 Sink - Elevation View

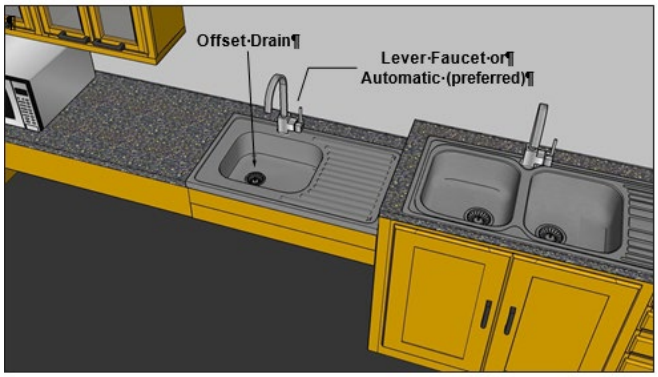


Figure 156 Accessible Sink with Offset Drain

6.5.5 Kitchen Appliances

Kitchen appliances include but are not limited to cooktops / ranges, microwaves, ovens, refrigerators, and freezers (**Figure 152**).

RECOMMENDATION

Kitchen appliances should accommodate visually impaired users including the exclusion of appliances with digital touch screen interfaces that do not provide voice feedback.

Best Practice

Consider using induction cooktops (e.g., where there is no flame, surface does not heat up when activated and only the cookware gets heated), which can provide enhanced safety and accessibility, especially for users with vision loss. Portable units are also available to supplement any existing appliances.

Note

In facilities with children's programs, cooktops / ranges, or ovens to be equipped with a safety switch to de-activate appliance controls.

6.5.5.1 Cooktops or Ranges

Where accessible cooktops or ranges are provided: (**Figures 157 & 158**)

a. use appliance models where controls are located away from the burners (e.g., they do not require reaching across heating surface to operate);
b. provide a minimum clear floor space of 920 mm wide by 1525 mm depth, centered and which may extend up to 480 mm underneath the cooktop;
c. ensure top surface height is located between 810 mm and 860 mm from the floor;
d. provide a knee clearance centered on the cooktop of a minimum of 920 mm wide by 685 mm high by 200 mm depth, with additional toe clearance of a minimum of 230 mm depth by 230 mm high;
e. provide insulation or other protection on the underside of cooktops where there is knee clearance to prevent abrasions, burns or electric shock; and
f. provide a work surface on each side and at the same height as the cooktop:
   i. with a minimum width of 400 mm; and
   ii. ensure surface is heat resistant.

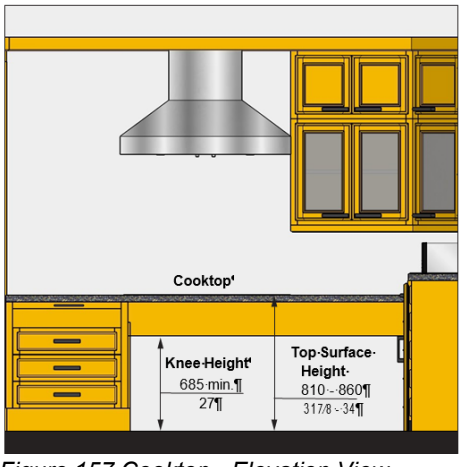


Figure 157 Cooktop - Elevation View

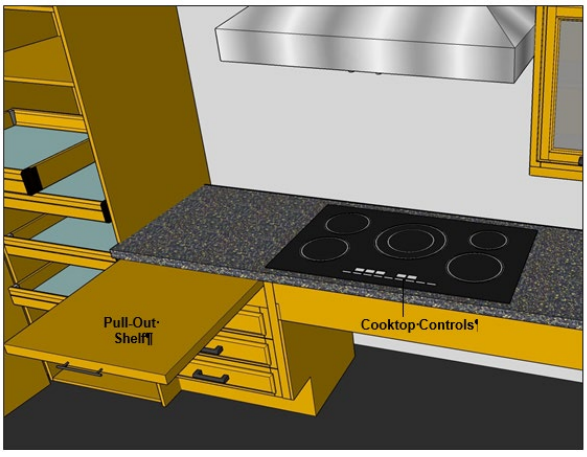


Figure 158 Cooktop with Operating Controls at Front

6.5.5.2 Ovens and Microwaves

Where provided: (**Figure 95**)

a. ensure oven operating controls are located on the front panels;
b. where ovens with side-hinged doors are provided:
   i. provide heat resistant accessible work surfaces with knee space below, adjacent to the latch side of oven door; or
   ii. incorporate a heat resistant pull-out shelf that pulls out a minimum of 250 mm below the oven;
c. where ovens with bottom-hinged doors are provided, provide an accessible work surface on one side of the door; and
d. where microwave ovens are provided, mount at counter height and close to the front edge of the counter.

6.5.5.3 Refrigerators and Freezers

Where accessible refrigerators and freezers are provided: (**Figure 159**)

a. provide a self-defrosting freezer;
b. provide a vertical side-by-side type refrigerator / freezer or where an over-and-under type refrigerator is used, ensure the freezer shelf space is a maximum of 1100 mm high from the floor; and
c. provide clear floor space in front of refrigerators / freezers a minimum of 920 mm wide by 1525 mm depth, positioned for parallel approach immediately adjacent to the refrigerator / freezer, with the centerline of the clear floor space offset a maximum of 610 mm from the front face.

6.5.5.4 Dishwashers

Where accessible dishwashers are provided: (**Figure 159**)

a. provide a minimum clear floor space of 920 mm wide by 1525 mm depth at both sides of the door, when in the open position; and
b. ensure that the door opening does not obstruct any required clear floor spaces for using all adjacent appliances or accessible sinks.

Best Practice

Lowered wall ovens with a side-opened door are recommended.

Roll-out shelves or drawers improve access to the refrigerator contents.

Note

Models with freezers at the bottom are recommended, if. an over-and-under refrigerator type is provided.

Additionally, floor space should be provided to pull up to the refrigerator / freezer in a mobility aid. This allows. opening and closing of the door and ensures space to open the door.

Recessed, door mounted ice and water dispensers are convenient for many users.

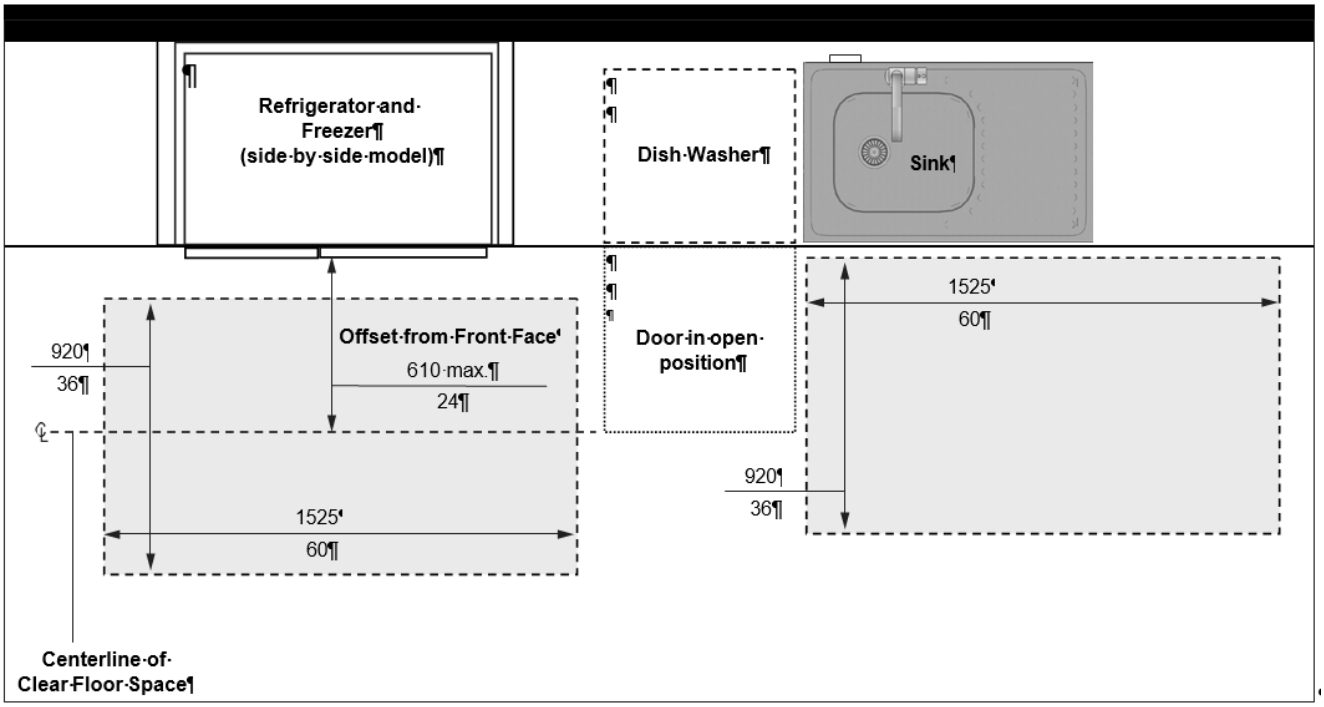


Figure 159 Clear Floor Space at Accessible Refrigerator / Freezer and Dishwasher

6.6 Libraries

Application

This section applies to libraries or a designated room in a facility that is used for the same purpose.

It is recognized that libraries have unique space requirements in order to accommodate book stacks and reference materials at both high and low shelving heights. Shelving heights in collection areas with book stacks is unrestricted where City staff are available to assist users when requested. Ensure staff availability is coordinated as part of a formal accessible customer service policy, practice or procedure that is in place for all library facilities.

Reference

Sec. 2.8 Seating, Tables and Work Surfaces

Sec. 4.3 Interior Accessible Routes

Sec. 5.1 Controls and Operating Mechanisms

Sec. 5.7 Lighting

Sec. 5.8 Signage and Wayfinding

Sec. 6.10 Service Counters

Sec. 6.11 Waiting and Queuing Areas

Refer to AODA Customer Service Standard, Ontario Regulation 429 / 07.

6.6.1 Design and Layout

For typical library design features and layout: (**Figures 160, 161 & 162)**

a. provide a consistent accessible path of travel a minimum of 1100 mm wide throughout spaces for circulation, or preferred 1830 mm wide;
b. provide a minimum clear turning circle of 1525 mm diameter, or preferred 2500 mm, for approach, maneuverability and turning by users of mobility aids, at key features such as service counters, study carrel areas, and computer workstations;
c. where required, provide security gates with a minimum clear width of 950 mm;
d. provide at least one accessible service counter at circulation, information, or self-service checkout areas (Refer to Section 6.10, Service Counters);
e. where computer workstations / catalogue desks are provided, ensure all are accessible or 50% (minimum);
f. ensure acoustic quality is free of unnecessary background noise;
g. provide informational and directional signage where any services or amenities for users with disabilities are available on different floor levels (e.g., Information or Customer Service Desks);
h. ensure library staff are provided with disability awareness / sensitivity training; and
i. ensure lighting level is evenly distributed, at a minimum of: (Refer to Section 5.7, Lighting)
    i. 300 lux (30 ft. candles), at any study carrel, work, or reading surface; and
    ii. 200 lux (20 ft. candles), at book stacks, with illumination directly over the aisle space, at a nominal working height of 920 mm (36 in.)

Best Practice

Clear width of 1830 mm is preferred at main circulation routes to accommodate higher volumes of traffic.

Where space is available, clear floor space of 2500 mm is recommended to allow users of mobility aids to make a 180° turn within the aisle configuration.

Provide alternative formats for key resources based on user requests and through development of partnerships with other organizations (e.g., CNIB, Canadian Hearing Society). This includes considerations related to the availability of Audio Books on CD-ROM for users with low literacy or who have a vision loss, as well as Closed Captioning options.
for any audio / visual media, for users with hearing loss.

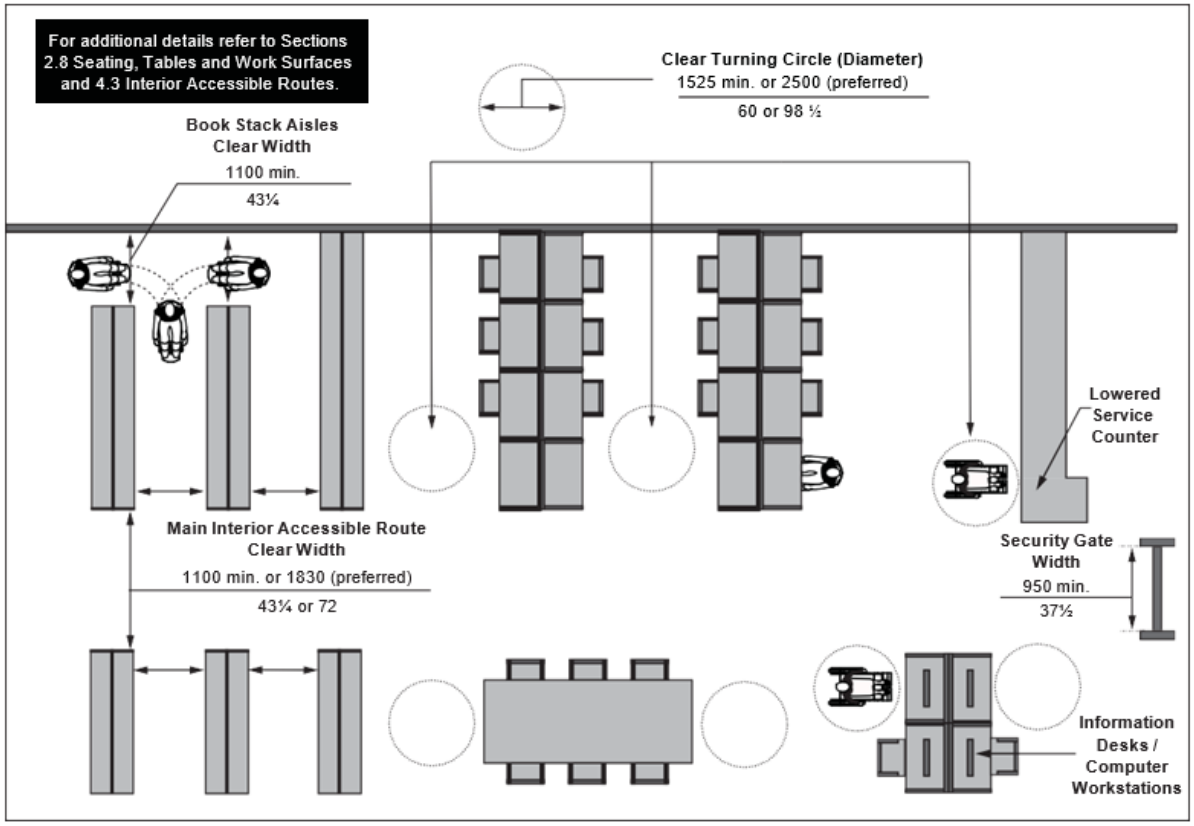


Figure 160 Library Design and Layout - Plan View

6.6.2 Book Drop Slots

Where book drop slots are provided: (**Figure 161**)

a. locate on an accessible path of travel;
b. provide a minimum clear turning circle of 2500 mm (98 1/2 in) diameter in front, or 1525 mm by 1525 mm (60 in by 60 in) clear floor or ground space in retrofit condition, where it is technically infeasible to provide the required clear turning circle;
c. ensure a high colour / tonal contrast between drop slot and mounting surface;
d. locate slot between 900 mm and 1100 mm (35 in and 43 ¼ in) above the floor or ground; and
e. ensure slot controls are usable with a closed fist and operable with one hand.

6.6.3 Book Stacks or Carousels

For book stacks or carousels: (**Figure 162**)

a. provide an accessible path of travel with a minimum width of 1100 mm (43 ¼ in) between aisles or 1830 mm (72 in) preferred;
b. ensure library policy is in place to provide assistance for users to access items that are too high or too low; and
c. ensure large print collection and heavier materials are placed on lower shelves for easy access.

6.6.4 Reading Lounges and Study Areas

For reading lounges and study areas that consist of seating and study carrels / work surfaces: (**Figure 162**)

a. provide a variety of flexible seating options;
b. ensure a high colour / tonal contrast is provided between furniture and their surroundings;
c. ensure all study tables, study carrels and work surfaces provide suitable knee and toe clearances with at least 10%, and a minimum of one of each surface type fully accessible (Refer to Section 2.8, Seating, Tables and Work Surfaces); and
d. incorporate an electric outlet.

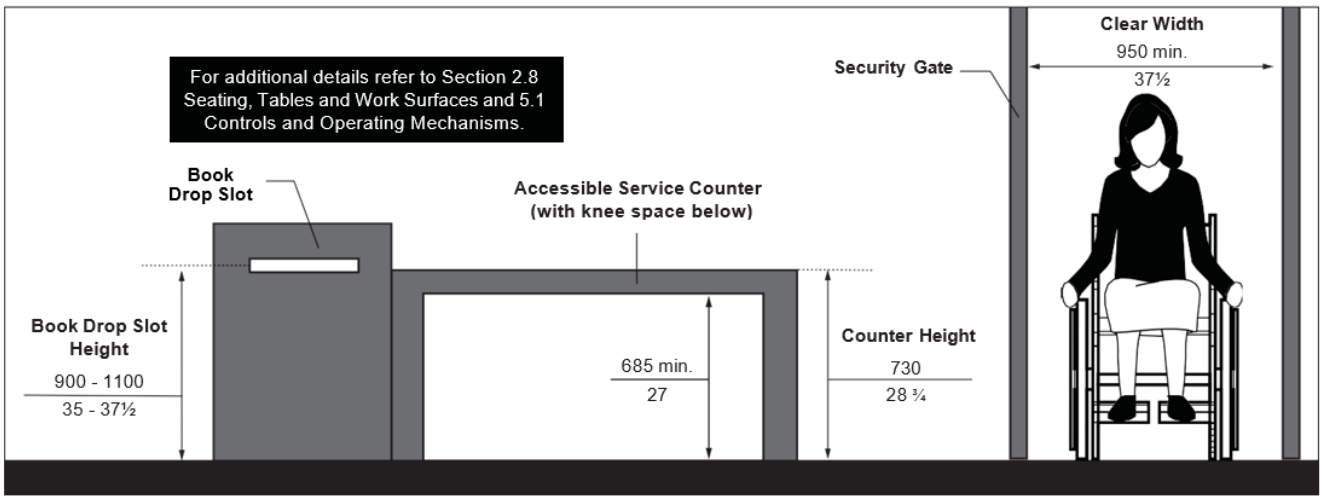


Figure 161 Library Security Gate, Service Counter and Book Drop Slot

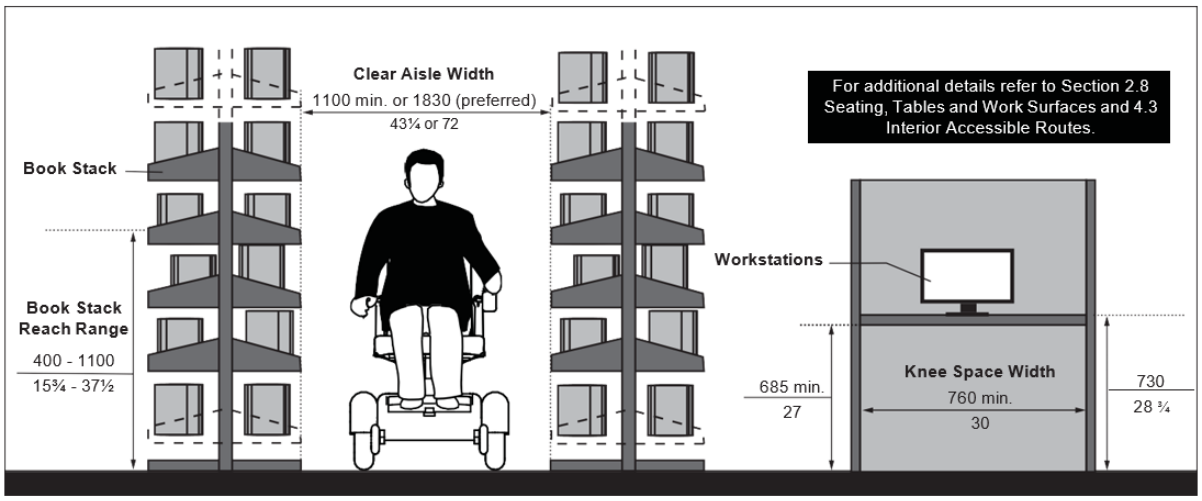


Figure 162 Book Stacks and Workstations (Typical)

6.7 Recreational and Community Facilities

Application

This section applies to recreational and community facilities, whether indoor or outdoor, used by spectators, participants, volunteers, coaching staff, and facility employees. Recreational and community facilities include, but are not limited to:

- courts (e.g., basketball, volleyball, tennis);
- fields (e.g., baseball, soccer, football);
- arenas (e.g., ice pad, skating rinks);
- aquatic facilities (e.g., swimming pools, spas, wading pools, splash pads, saunas);
- gymnasiums; and
- exercise and fitness facilities.
-

Criteria in this section requires detailed review and application based on the type of facility, level of use and number of features or elements provided (e.g., total number of change rooms).

Reference

Sec. 2.1 Ground and Floor Surfaces
Sec. 2.2 Ramps
Sec. 2.3 Stairs
Sec. 2.4 Guards and Handrails
Sec. 2.7 Tactile Walking Surface Indicators
Sec. 2.8 Seating, Tables and Work Surfaces
Sec. 5.2 Assistive Listening Systems
Sec. 5.8 Signage and Wayfinding
Sec. 6.1 Assembly Areas
Sec. 6.8 Change Rooms

6.7.1 Design and Layout

The design and layout of recreational and community facilities typically consists of the following elements. As part of detailed design, ensure direct accessible routes are provided to connect all key components and spaces, including from: (Refer to Section 4.3, Interior Accessible Routes)

i. any main entrance lobby to change rooms;

ii. change rooms to any pool deck, ice surface, or exercise / fitness rooms; and

iii. viewing areas to public washrooms or any other amenities (e.g., gymnasium, auditorium, performer areas, meeting rooms etc.).

6.7.1.1 Change Rooms

a. for each type of recreational facility (e.g., arena, pool, gymnasium etc.), provide a minimum of one accessible change room, or 50% of the total provided is preferred, with at least one universal change room or stall integrated, for each type of use in each cluster, to accommodate parents with children, companions or care givers of the opposite sex (Refer to Section 6.8, Change Rooms).

6.7.1.2 Viewing Areas

a. provide level accessible seating spaces to accommodate users of mobility aids (Refer to Section 6.1, Assembly Areas); and

b. integrate assistive listening systems as required, with the type of system dependent on the type of venue and seating capacity (Refer to Section 5.2, Assistive Listening Systems).

6.7.2 Arenas

For access to ice pads and skating rinks in arenas:

a. locate on an accessible path of travel;

b. provide access panels to ice surface with clear width of at least 950 mm and

c. provide level or beveled threshold access to ice surface.

Best Practice

Refer to the Canadian Recreation Facilities Council (CRFC) “Sledge Hockey Accessibility: Design Guidelines for Arenas,” as recognized by Hockey Canada (current edition).

Where space is available, provide a clear turning circle of 2500 mm for transfer to exercise equipment.

6.7.3 Exercise and Fitness Facilities

a. ensure accessibility features are provided, if available, for at least one of each type of equipment or machine; and

b. provide a minimum clear floor space of 920 mm by 1525 mm for either a front or side approach on one side of exercise equipment to allow transfer for users of mobility aids.

6.7.4 Aquatic Facilities

For aquatic facilities, ensure a direct, accessible route is provided from any lobby with the following features or amenities: (**Figure 163**)

a. ensure pool deck perimeter surfaces are firm, stable and slip-resistant, with a matte finish provided that is non-abrasive and easy to clean;

b. ensure deck surface has running or cross-slope gradient no steeper than 1:50 (2%) for drainage of water;

c. provide recessed drainage tiles with openings no greater than 13 mm wide;

d. provide an accessible path of travel around the perimeter of pool deck at a minimum width of 1100 mm or preferred 1830 mm;

e. provide tactile attention indicators (TAI) 610 mm wide to clearly delineate the perimeter of the pool deck and locate where any area contiguous to the pool deck may be confused with the deck;

f. provide high colour / tonal contrast on pool lane markers, related tie-off devices, starter blocks and any other permanent or temporary equipment (e.g., life-guard chairs, diving boards or platforms, safety equipment);

g. ensure safety equipment and other accessories are stored properly in order to prevent any potential tripping or bumping hazard;

h. where diving boards or platforms are provided, ensure they are clearly marked and protected with an overhead clearance of 2100 mm or suitable guard protection; and

i. where pool-depth indicator markings are provided, ensure that the depth-indicator markings, as well as the ‘SHALLOW AREA’ and ‘DEEP AREA’ markings, have a high colour / tonal contrast and that there is sufficient sizing of lettering / numbering for high visibility (e.g., as required by applicable Health Protection and Promotion Act Regulations).

Best Practice

Provide an area for mobility aids or assistive devices to be stored so they do not obstruct circulation around pool deck.

Where possible, provide sloped entry or ramp with running slope of no more than 1:20 (5%).

Note

Extensions are not required on bottom landing as they can be a bumping hazard for swimmers.

For new construction, ensure sloped entry or ramp is provided. Transfer lifts are permitted as an option for existing facilities that cannot be retrofitted to provide a sloped entry or ramp.

6.7.4.1 Entry and Exit Point

Provide at least one accessible entry and exit point:

a. located away from any designated swimming lanes.

6.7.4.2 Sloped Entry or Ramp

Where either a sloped entry or ramp is provided, ensure: (**Figure 163**)

a. running slope is no more than 1:12 (8.33%);

b. handrails are mounted between 865 mm and 965 mm (34 in and 38 in) high from surface, extending at top landing only;

c. the minimum clear width between handrails is 1100 mm (43¼ in);

d. a top and bottom landing of at least 1670 mm by 1670 mm is provided;

e. a curb or other means to prevent a wheelchair from falling off the side is provided;

f. provision of an anti-slip surface finish, capable of being kept clean and sanitary;

g. water depth at the bottom of the ramp is a minimum of 600 mm (235/8 in) and a maximum of 900 mm (35½ in);

h. provision of a hard-surfaced area capable of accommodating a movable barrier separating the area from the deck, and is a minimum of 750 mm (29½ in) wide that is contiguous to the entire length of the part of the submerged ramp that pierces any part of the deck;

i. the finishes in the submerged portions of the ramps and curbs are different in colour or shade from each other and from that of the pool walls and bottom;

j. Where the ramp is not submerged:

   i. provide a landing at the bottom of the ramp that is at least 450 mm and 550 mm (17¾ in and 21¾ in) below the top of the wall;

   ii. ensure width at the top of the wall between the pool and ramp of 250 mm and 300 mm (10 in and 11¾ in);

   iii. ensure water depth at the landing is clearly marked in figures at least 100 mm (4 in) high on the top of the wall;

   iv. ensure a running slope of 1:12 (maximum); and

   v. equip with a floor drain at the lowest point;

k. where the ramp is submerged:

   i. provide a maximum running slope of 1:9; and

   ii. provide a water resistant wheelchair at each facility for use in transferring into the water (e.g., it may also be used for shower facilities).

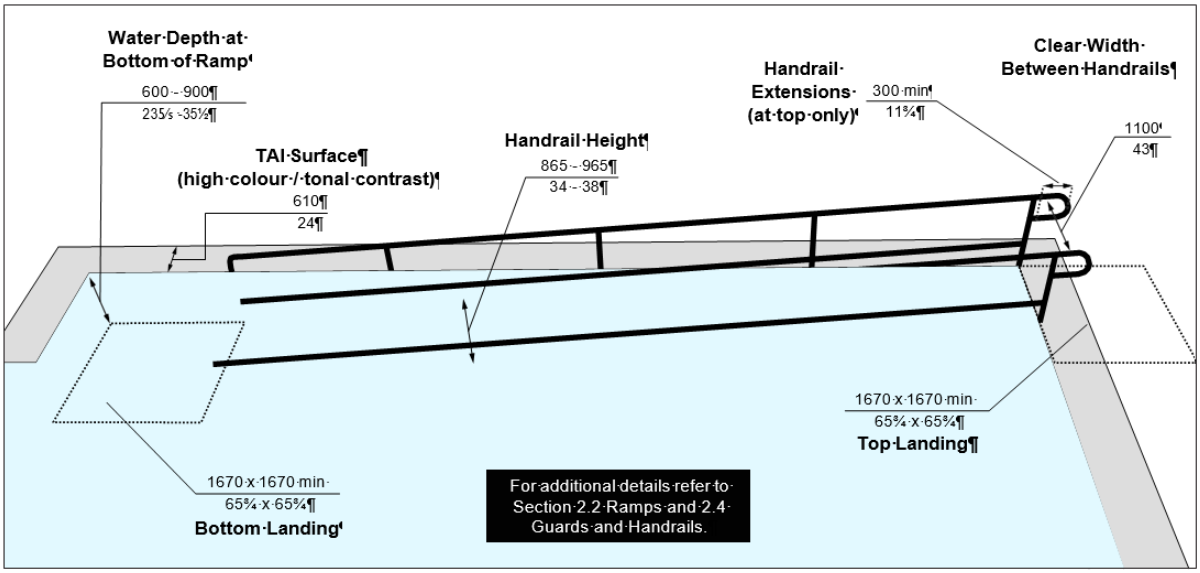


Figure 163 Sloped Entry or Ramp to Swimming Pool

6.7.4.3 Transfer Systems

For existing facilities without ramps, provision of a fixed transfer lift is required to support diverse user needs. Transfer lifts can be used as a means of assisted entry and exit point where an accessible entry / exit point cannot be provided.

6.7.4.4 Transfer Lifts

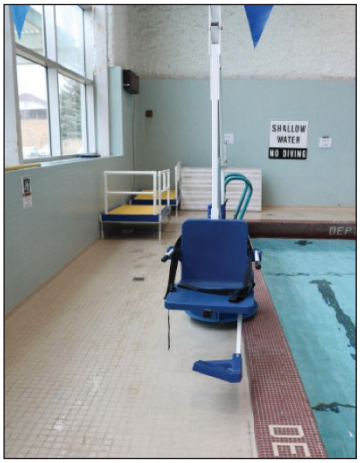


Photo 16 Example of Transfer Lift

a. locate transfer lifts on an accessible path of travel and in shallow end, where water level does not exceed 1200 mm high;

b. ensure the centerline of the seat for the transfer lift is located over the deck and at a minimum of 400 mm from the edge of the pool when in the raised position;

c. ensure seat is firm with suitable padding, with a minimum width of 400 mm;

d. provide a clear deck space, located parallel with the seat for the pool lift and on the side of the seat opposite the water (e.g., transfer side of the lift), a minimum of 920 mm wide, extending forward a minimum of 1525 mm in length, from a line located 305 mm behind the rear edge of the seat;

e. ensure lift is designed:

   i. to be operable without assistance from both the deck and water; and

   ii. when in use, its controls and operating mechanisms are unobstructed, mounted no higher than 1100 mm from pool deck or water surface and / or are activated via remote control.

f. ensure lifts have a minimum weight capacity of 135 kilograms (300 pounds) and capable of sustaining a static load of at least 1.5 times the rated load.

6.7.4.5 Steps

Where steps are provided into the pool:

a. mark both riser and tread with a high colour / tonal contrasted strip of at least 50 mm wide; and

b. provide handrails on both sides of the steps with:

   i. high colour / tonal contrast; and

   ii. extensions at least 300 m beyond the pool edge.

6.7.5 Therapeutic Pools / Spas

6.7.5.1 General

a. ensure water temperature is heated to between 33-34 Degrees Celsius (92 - 94 Degrees Fahrenheit);

b. ensure temperature or other controls (e.g., submerged water jets) comply with applicable accessible operating control requirements, as identified in other sections of these standards;

c. provide therapy pool with exercise portion between 1050 mm and 1200 mm depth;

d. provide submerged benches, as identified in other sections of these standards;

e. incorporate exercise bars (below water level) into the design of a therapy pool;

f. ensure the slope of the bottom of any portion of a public spa does not exceed 1:12 (8.33%);

g. ensure the maximum depth of water to a seat or bench in a public spa is 600 mm and

h. provide at least one accessible access point, via an accessible ramp or transfer wall, as identified in this section.

6.7.5.2 Deck Features

Any public spa provided to be surrounded by a hard-surfaced deck with:

a. minimum clear deck space width of 1830 mm, at the main entrance point; and

b. minimum clear deck space with a width of 1100 mm, on all sides.

6.7.5.3 Steps

Where a set of steps is provided for entry into and egress from a public spa, ensure steps are designed with:

a. required handrails;
b. a non-slip surface; and
c. a high colour / tonal contrasted band, integrated along the entire juncture of the side and top of the edges.

6.7.5.4 Transfer Walls

Where transfer walls are provided, ensure:

a. height of 405 mm to 485 mm above pool deck;

b. depth between 300 mm and 400 mm);

c. slip-resistant surface with rounded edges;

d. minimum of one grab bar is provided:

   i. that is slip-resistant, mounted perpendicular to pool and extending the full depth of transfer wall;

   ii. located between 100 mm and 150 mm above transfer wall;

   iii. with a clearance of at least 610 mm on both sides;

   iv. with a high colour / tonal contrast provided between grab bar and mounting surface; and

   v. with a grasping surface that is circular in shape and has a diameter between 30 mm and 40 mm

e. provision of adjacent clear deck area for lateral transfer to the transfer wall that:

   i. is outside of and adjacent to the accessible route;

   ii. has no obstructions at side of transfer wall;

   iii. has clear space of 900 mm by 2200 mm; and

   iv. has a slope a minimum of 2% at base of transfer wall surface;

f. provision of adjacent clear deck area centered on the grab bar where one grab bar is provided, or centered on the clear space between grab bars where more than one grab bar is provided.

6.7.6 Emergency Systems

6.7.6.1 Communications

At least one emergency telephone is to be provided:

a. with direct connection to emergency services; and

b. installed within 30 m of a public spa.

6.7.6.2 Safety Control

All pumps provided in a public spa to be equipped with safety control:

a. capable of being deactivated by an emergency stop button that is clearly labeled and visible, located in close proximity and readily accessible within 15 m) of persons using the public spa; and

b. that is separate from the timing device, activates an audible and visual signal when used, and is identified with emergency signage.

6.8 Change Rooms

Application

This section applies to change rooms, which may also be referred to as dressing / locker rooms or fitting areas, used by the public or staff. These spaces share common elements and design features. Typically, change rooms are provided in arenas, pools, fitness centers, and related recreation / community centers.

Reference

Sec. 2.1 Ground and Floor Surfaces

Sec. 2.8 Seating, Tables and Work Surfaces

Sec. 4.2 Doors and Doorways

Sec. 4.3 Interior Accessible Routes

Sec. 4.5 Washrooms

Sec. 4.6 Showers

Sec. 5.1 Controls and Operating Mechanisms

Sec. 5.7 Lighting

Sec. 5.8 Signage and Wayfinding

Note

The provision of universal change rooms or stalls as part of change rooms and related areas is dependent upon the type of facility. For a pool facility, often a combination of shared and private spaces is provided for change areas, which often also integrate washroom and shower facilities as part of the overall design. The total number of universal change rooms or stalls should be identified based on the size and occupancy of each facility, and the required fixture counts for washrooms and showers.

6.8.1 Provision and Location

For universal change rooms or stalls that are intended for private use in addition to other public or staff change rooms that may be available:

a. provide at least one universal change room or stall for each type of other regular change room facility that is provided (e.g., Male, Female); and

b. ensure universal rooms or stalls are located along an accessible route.

Note

In a retrofit situation, 10% of change rooms, and never less than one, should be universal, for each other regular change room facility that is provided.

6.8.2 Design and Layout

a. where doors are provided at the change room entrance, provide a minimum clear width of 950 mm and equip with power door operators;

b. provide a consistent accessible path of travel a minimum of 1100 mm clear width, or preferred 1830 mm with required turning spaces, throughout circulation areas (**Refer to Section 4.3, Interior Accessible Routes**);

c. ensure a minimum clear turning diameter of 2440 mm is provided inside change room circulation area for users of mobility aids;

d. ensure the floor surface is firm, level and slip-resistant, with required drainage integrated where applicable;

e. where washroom facilities are provided as part of a change room, provide accessible design requirements, as identified in Section 4.5, Washrooms;

f. where shower facilities are provided as part of a change room, provide accessible design requirements, as identified in Section 4.6, Showers;

g. provide an emergency call system with the following features:

i. includes an emergency sign containing the words

“IN THE EVENT OF AN EMERGENCY PUSH EMERGENCY BUTTON AND AUDIBLE AND VISUAL SIGNAL WILL ACTIVATE”

letters at least 25 mm high with a 5 mm stroke, which is posted above the emergency button;

ii. consists of visual and audible signal devices both inside and outside of the change room that are activated by a control device inside the change room; and

iii. where facilities have the capacity and where staff is available, ensure the call system is linked to a display panel at a reception / information counter or to a centrally monitored station (e.g., security desk).

6.8.3 Change Room Amenities

Change room amenities typically include, but are not limited to benches, lockers, showers, and washrooms.

6.8.3.1 Permanent Benches

Where permanent benches are provided:

a. provide seat height of 480 mm to 520 mm above finished floor to allow users of mobility aids to transfer;

b. ensure seat depth between 510 mm to 610 mm, with back support, unless seat surface is permanently positioned against a wall; and

c. provide high colour / tonal contrast finishes to assist with distinguishing bench surfaces from surroundings.

6.8.3.2 Lockers

Where lockers are provided inside change rooms:

a. ensure a minimum of 10% of the total number of lockers but never less than one is designated as accessible;

b. identify accessible lockers clearly with signage (e.g., International Symbol of Accessibility);

c. provide a minimum clear floor space in front of accessible lockers:

i. 920 mm wide by 1525 mm depth for a forward approach;

ii. 1525 mm wide by 920 mm depth for a side approach; and

iii. ensure any fixed benches do not overlap this clear space;

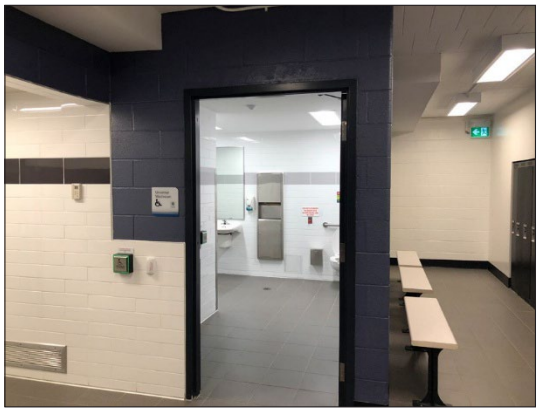


Photo 17 Example of a universal washroom integrated as part of an accessible change room.

d. mount at least one shelf between 400 mm and 1200 mm high above finished floor;

e. ensure locking mechanism is mounted between 900 mm and 1100 mm high above floor; and

f. ensure identification / number signage for all lockers:

i. is mounted no higher than 1525 mm (center);

ii. provides lettering or number print size between 13 mm and 19 mm high, with either raised or recessed lettering; and

iii. provides a high colour / tonal contrast with the background.

6.8.4 Universal Change Rooms or Stalls

Where universal rooms or stalls are provided: (**Figures 164, 165 and 166**)

a. identify clearly with signage (e.g., International Symbol of Accessibility);

b. provide a minimum clear turning diameter of 2440 mm inside of the change room or stall;

c. ensure floor surface is firm, level and slip-resistant, preventing accumulation of any standing water where required for any expected wet areas / conditions (e.g., showers, swimming pools etc.);

d. provide an entrance door or stall door with required accessible door hardware, as identified in other sections of these standards, as well as: (Refer to Section 4.5, Washrooms)

   i. a minimum clear width of 950 mm, when door is in an open position;

   ii. a locking mechanism that can be locked from the inside and released from the outside, in case of emergency;

   iii. gravity hinges in the case of a stall door, so that door closes automatically, where the door swings outwards; and

   iv. a power door operator, where an entrance door is required for a private universal change room;

e. provide a fixed change bench:

   i. a minimum of 1830 mm length by 810 mm width / depth;

   ii. mounted with top surface between 450 mm and 500 mm

   iii. with clear floor space in front, at a minimum of 920 mm wide the full length of the bench, for either a forward or parallel transfer;

   iv. designed to carry a minimum load of 1.33 kilonewtons (300 pounds); and

   v. with a high colour / tonally contrasted surface compared to surroundings, which is slip resistant to prevent water accumulation, where required in wet areas / conditions;

f. provide one L-shaped grab bar as follows:

   i. installed at one end of the bench with the vertical component a minimum of 150 mm from front edge and a minimum clearance of 150 mm above the bench seat; and

   ii. with additional specifications, as identified in Section 4.5.7, Grab Bars;

g. provide a motion sensor for automatic illumination of the interior, with a lighting level that is evenly distributed at a minimum of 300 lux (30 ft. candles) (Refer to Section 5.7, Lighting); and

h. include a full length mirror, a minimum of 460 mm wide by 1370 mm high, with lower edge mounted at a maximum of 175 mm above finished floor, for seated or standing users.

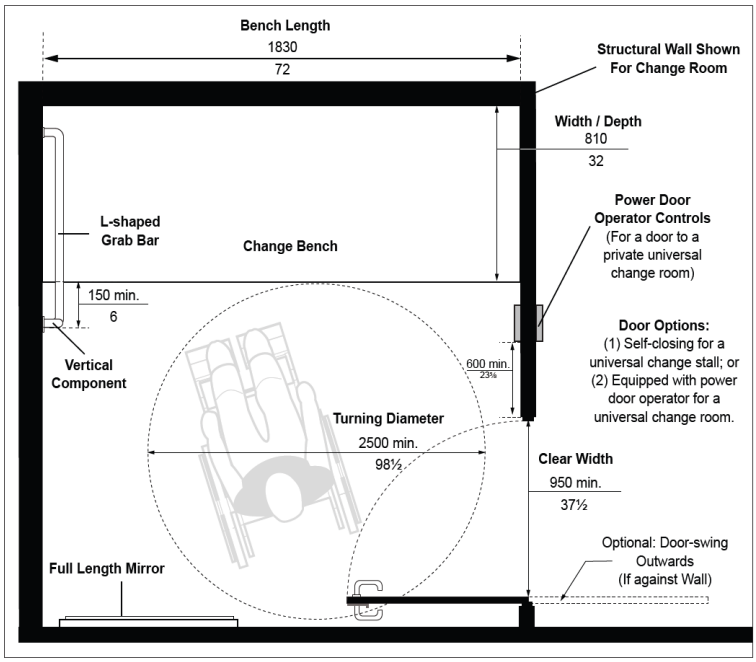


Figure 164 Universal Change Room or Stall (Conceptual)- Plan View

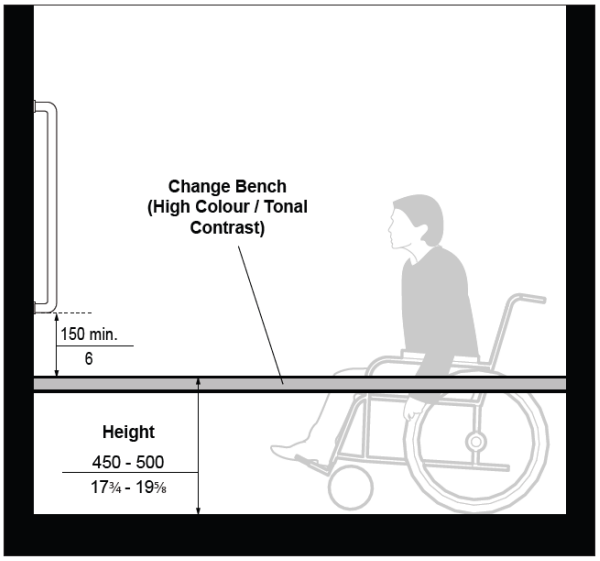


Figure 165 Universal Change Room or Stall – Front Elevation

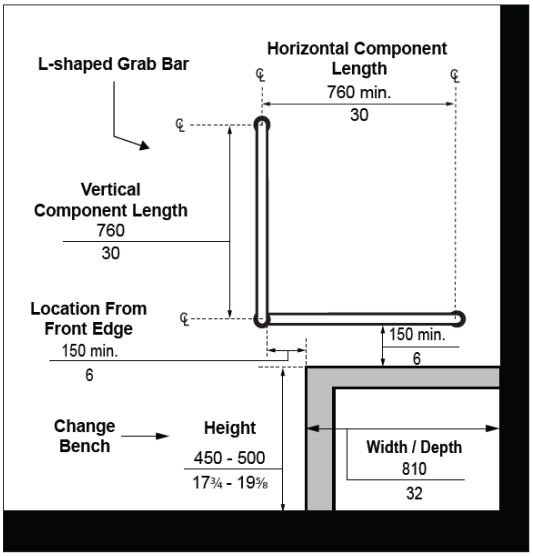


Figure 166 Universal Change Room or Stall – Side Elevation -

6.9 Balconies and Terraces

Application

This section addresses spaces that may be used for recreation as part of public facilities, such as common use areas including balconies, porches, terraces, and patios used by the general public, staff or other visitors.

Reference

Sec. 2.1 Ground and Floor Surfaces
Sec. 2.4 Guards and Handrails
Sec. 3.3 Exterior Paths of Travel
Sec. 4.2 Doors and Doorways

Exception

This section does not address balconies and terraces within private residences.

6.9.1 Design and Layout

Where an accessible balcony, porch, terrace, or patio is provided: **(Figure 167).** Refer to Section 2.4 Guards and Rails

a. locate on an accessible path of travel;
b. ensure ground or floor surfaces are firm and slip-resistant, with maximum gradient of 1:50 (2%) to permit drainage;
c. provide minimum depth of 2500 mm or for a retrofit condition where this depth is technically infeasible, provide a minimum depth of 1525 mm
d. ensure threshold is beveled at a maximum slope of 1:2 (50%), where transition is between 6 mm to 13 mm;
e. ensure door stops and door sweeps do not prevent maneuverability;
f. where doors open directly into a path of travel, provide colour / tonal contrasted (e.g., compared to ground / floor surface) and cane detectable guards or other protective barriers (e.g., a side wall or rail system) located perpendicular to the door; and
g. where guards are provided, and where elevation change is 600 mm or higher, designed to facilitate visibility from a seated position.

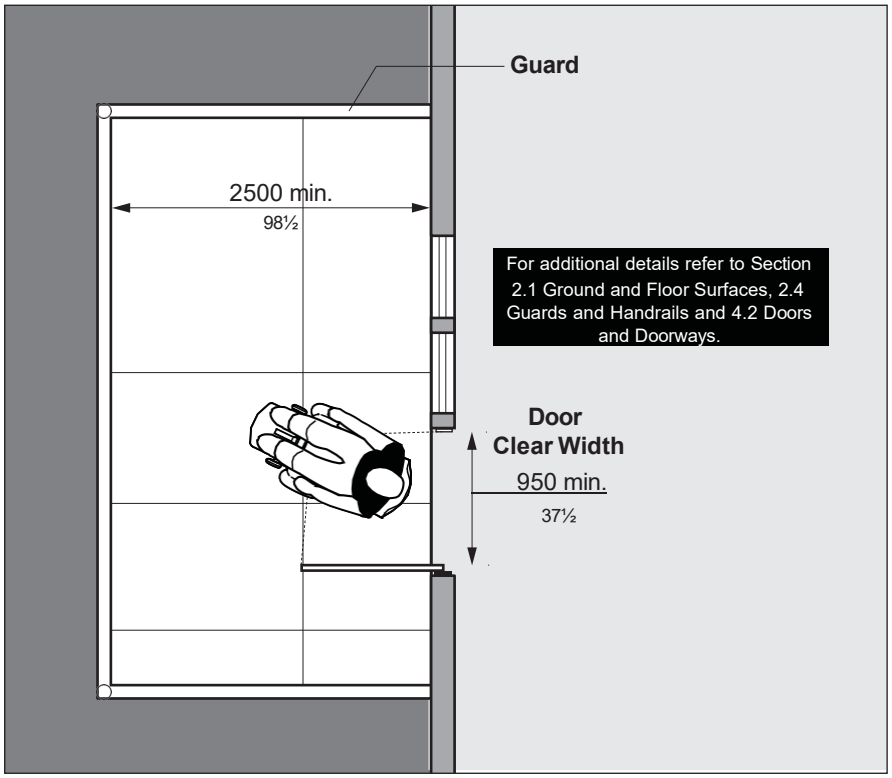


Figure 167 Balcony, Porch, Terrace, or Patio - Plan View

Note

Where spacers for drainage are provided, on ground surface, ensure maximum width of 6 mm (¼ in) between each.

Guards at balconies and terraces may consist of vertical pickets or glass.

Where large expanses of glazing are used, provide required markings to increase visibility, as identified in these standards.

6.10 Service Counters

Application

This section applies to service counters used by both the public and staff, whether the services are obtained in a facility or outdoors (e.g., concession stand). Service counters may include, but are not limited to:

- reception desks;
- check-out counters;
- teller counters;
- security counters;
- information desks or kiosks; and
- food service counters / concession stands.

Reference

Sec. 2.8 Seating, Tables and Work Surfaces

Sec. 4.3 Interior Accessible Routes

Sec. 5.7 Lighting

Sec. 5.8 Signage and Wayfinding

Note

A variety of service counter applications are provided in the built environment, with numerous options for accessible design.

6.10.1 Provision

For accessible service counters: (**Figures 163, 164 & 165)**

a. where a single queueing line serves a single or multiple counters, ensure each service counter is accessible; and

b. where there are multiple queuing lines and service counters, ensure at least one (1) service counter is accessible for each type of service provided.

6.10.2 Design and Layout

Where provided: (**Figures 168, 169 & 170**)

a. locate on an accessible path of travel;

b. where there is a single or there are multiple queuing lines and service counters, provide signage (e.g., International Symbol of Accessibility) to clearly identify the accessible service counter(s);

c. provide clear floor space in front of service counters for users of mobility aids at a minimum of 920 mm wide by 1525 mm depth, where a maximum of 480 mm may be below counter, for either a front or side approach;

d. ensure service counter surface provides a high colour / tonal contrast compared with adjacent surfaces to identify counter when approaching;

e. ensure lighting level is evenly distributed at top surface of counter, at a minimum of 500 lux (50 ft. candles) (Refer to Section 5.7, Lighting); and

f. provide a lowered counter usable from a seated position:

   i. with top surface at a minimum of 920 mm wide and mounted between 730 mm and 865 mm high above floor;

   ii. ensure a clear knee space under the counter a minimum of 480 mm depth by 920 mm wide by 685 mm high; and

   iii. ensure maximum forward grasp or touch reach range, between 510 mm and 610 mm depth, across top surface where interaction is required (Refer to Section 1.3, Space and Reach Requirements).

Best Practice

Ensure sources of light (natural or artificial) are not positioned directly behind service counters as they place people in silhouettes, which is a problem for people who lip read and people with vision loss.

Where service counters are accessible on both sides for public and staff use, width of counter surface should allow seating positions to be diagonal from each other to allow suitable reach across counter for transactions.

Ensure accessible service counter surfaces are not used as storage space.

6.10.3 Communication Systems

Where communication systems are provided at service counters:

a. ensure counter areas are well-lit to assist staff and visitors with hearing loss who may communicate by lip reading;

b. where speaking ports are provided, provide at least one speaking port with open portion centered at a maximum 1000 mm high above finished floor;

c. where no staff person is available, provide an information phone or call bell with information signage, with controls mounted between 900 mm to 1100 mm high;

d. integrate TTY service or alternate devices for visitors who are Deaf, deafened, or hard of hearing;

e. provide at least one assistive listening system and ensure signage with International Symbol for Hearing Loss is provided to indicate device is available for use;

f. where staff communicate from an enclosed counter behind glass, ensure the glazing does not reflect glare. Where appropriate, install sliding windows that open fully to allow communication, whether verbal, through lip reading or use of sign language; and

g. where required, provide additional visual and auditory signals to indicate when service is available and at what location.

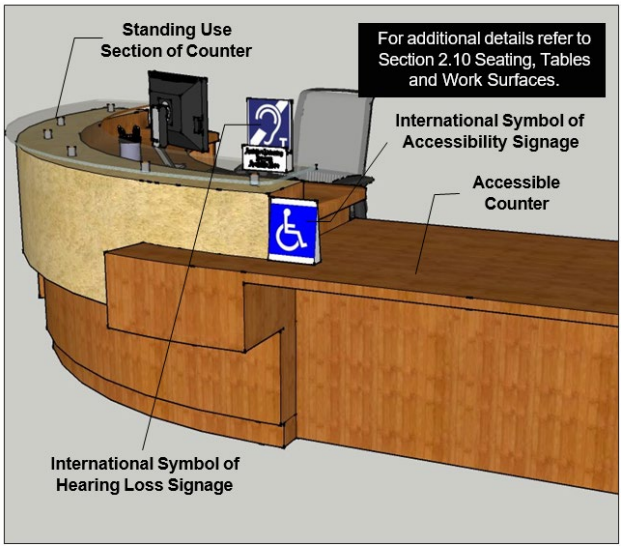


Figure 168 Example of Accessible Service Counter

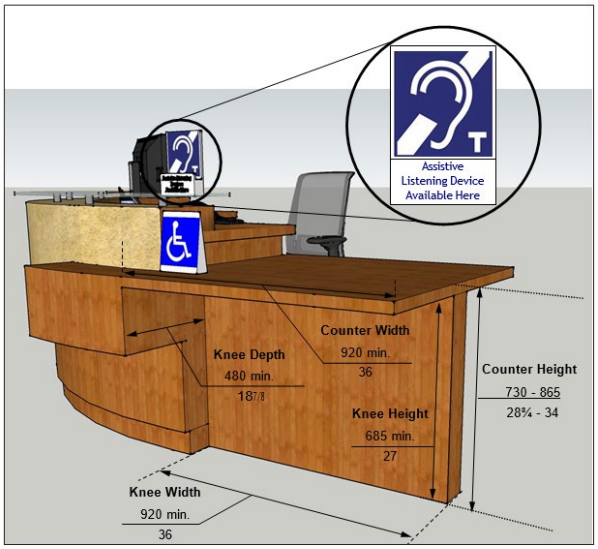


Figure 169 Dimensions of Accessible Service Counter

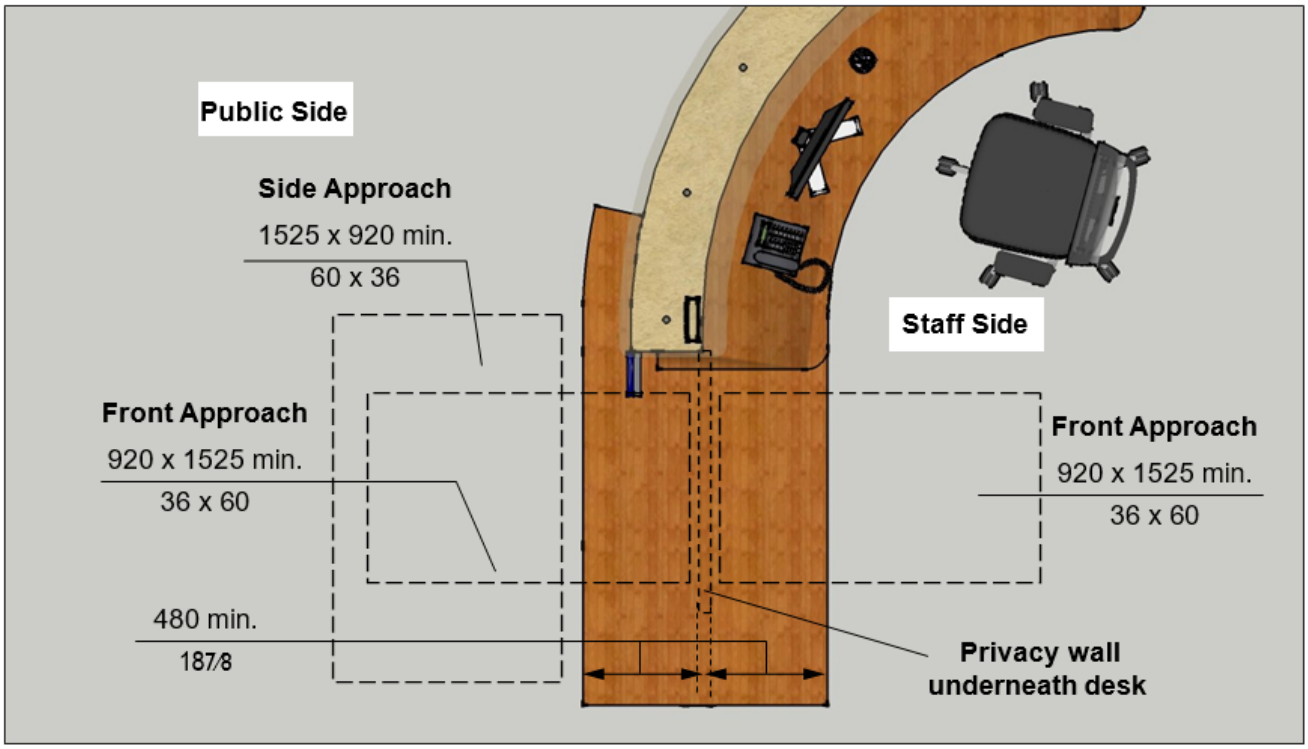


Figure 170 Clear Floor Space Requirements at Accessible Service Counters -

6.11 Waiting and Queuing Areas

Application

This section applies to waiting and queuing areas in both interior and exterior environments.

Reference

Sec. 2.8 Seating, Tables and Work Surfaces

Sec. 4.1 Entrances

Sec. 4.3 Interior Accessible Routes

Sec. 5.8 Signage and Wayfinding

Sec. 6.1 Assembly Areas

Sec. 6.10 Service Counters

6.11.1 Waiting Areas

Where waiting areas are provided: (**Figure 171**)

a. position the waiting area so that it is clearly visible when entering the facility;
b. provide directional and informational signage to identify and guide users to waiting areas, where they may not be clearly visible when entering a facility;
c. ensure a lowered counter with suitable knee clearance for users of mobility aids is provided, where there is a service counter (Refer to Section 6.10, Service Counters);
d. where fixed seating is provided, ensure at least 3% of the seating is accessible but in no case fewer than one accessible seating space;
e. where accessible seating is provided:
    i. provide a minimum clear floor space of 920 mm wide and 1525 mm depth, adjacent to fixed seating / waiting area and away from the main path of travel, for users of mobility aids to position themselves (e.g., shoulder alignment with adjacent users), their equipment, a service animal, or maneuver throughout the space;
    ii. locate adjacent and connected to an accessible path of travel;
    iii. provide a variety of seating options, including back and arm supports for various users; and
    iv. ensure accessible seating is integrated with the overall layout of other seating that is provided;
f. provide a building directory for large facilities, especially where no rooms are assigned; and
g. where lower coffee or telephone tables are provided adjacent to seating / waiting areas, ensure the top surface is a minimum of 510 mm high, for reach from a seated position.

Best Practice

Provide companion seating immediately adjacent to the accessible seating spaces.

Provide a tactile floor plan / directional map to assist users with vision loss with wayfinding throughout complex facilities.

Provide a range of seating options such as wider seats.

Note

Clear floor space for designated accessible seating spaces must be positioned to allow shoulder alignment for the user of a mobility aid and person in adjacent seat.

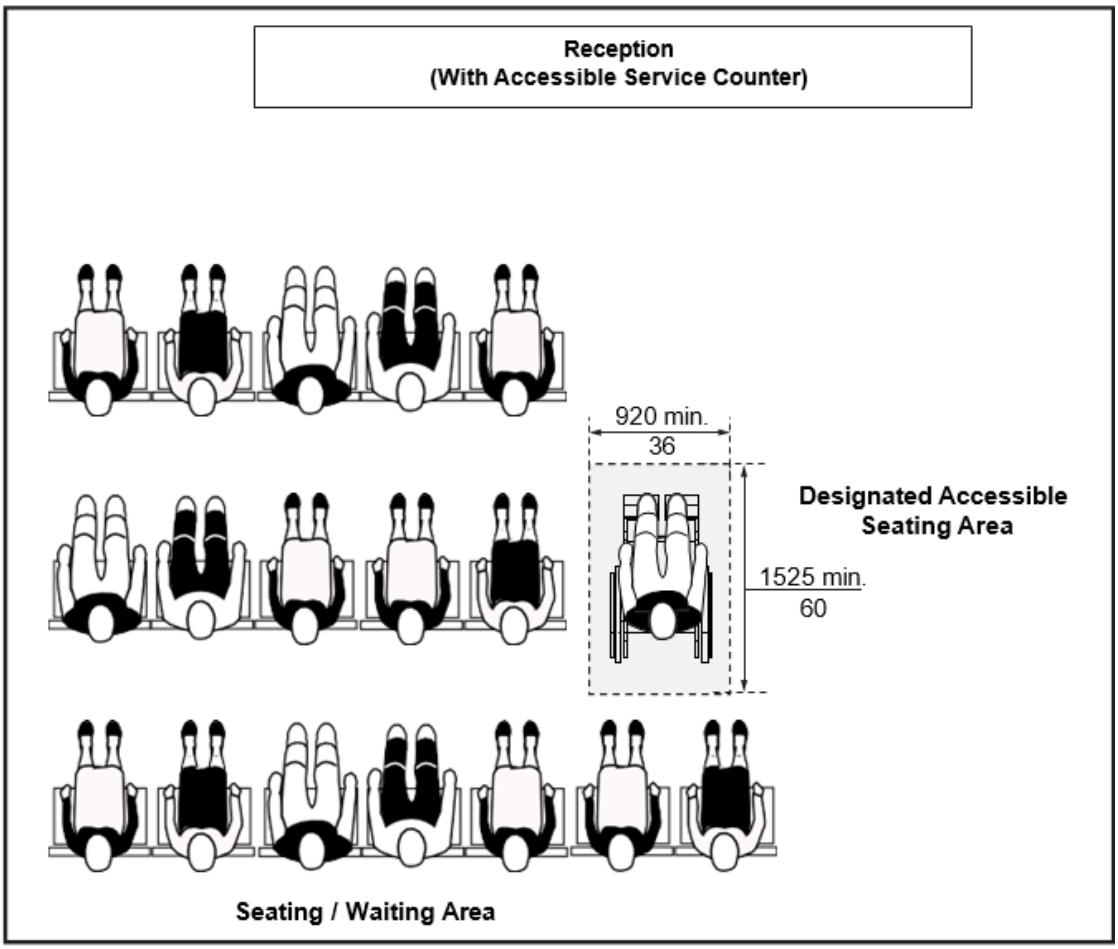


Figure 171 Waiting Area - Plan View

6.11.2 Queuing Areas

Where queuing areas are provided to streamline pedestrian movement: (**Figure 172**)

a. locate on an accessible path of travel; and
b. provide directional and informational signage to identify location of queuing area entry.
c. ensure minimum clear width of 1100 mm between guides, laid out in parallel, logical lines and with the floor / ground consisting of a tactile directional indicator surface (TDI), as identified in other sections of these standards;
d. provide a minimum clear floor space of 1700 mm by 1700 mm, or preferred 2500 mm by 2500, where queue guides change direction and where they begin and end;

Best Practice

Consider including rest areas with accessible seating along the queueing system, where queues are longer than 10.
Additionally, provide a rest area at the end of the queuing system for people to wait for companions who are queuing.

e. ensure lower edges or the base of guides are cane-detectable, mounted at or below 680 mm from floor, with supports that are firmly mounted with rigid rails that can be used to assist with balance or stability;
f. provide a high colour / tonal contrast between guide surfaces and adjacent surroundings (e.g., for enhanced visibility); and
g. ensure guides have a glare-free finish.

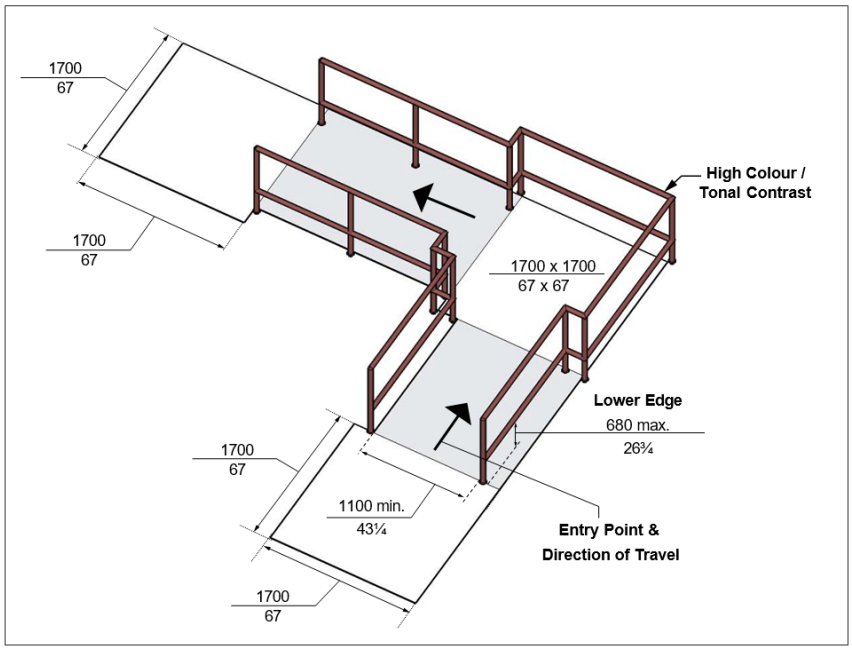


Figure 172 Fixed Queuing Guides

Note

Rope or flexible banding is not recommended for permanent queuing systems because they are more difficult to detect with a long cane and are unstable. When temporary queuing guides are provided, ensure they are cane detectable, stable and where floor.
slots / pockets are used to receive supports; ensure they are level with floor finish and have an integral cover to prevent any potential tripping hazards.

6.12 Elevated Platforms or Stages

Application

This section applies to elevated platforms or stages for both interior and exterior environments, provided for use by the general public, clients, customers, or staff. Stages are typically provided in auditoriums, theatres and lecture halls used for performances and presentations.

Reference

Sec. 2.2 Ramps

Sec. 2.3 Stairs

Sec. 2.4 Guards and Handrails

Sec. 2.6 Tactile Walking Surface Indicators

Sec. 5.2 Assistive Listening Systems

Best Practice

Providing both stair and ramp access increases the flexibility for the use of stages by people with varying disabilities.

Note

Other considerations may include accessibility features for podiums and electronic equipment (e.g., microphone systems), that are provided.

6.12.1 Design and Layout

For elevated platforms or stages: (**Figure 168**)

a. locate on an accessible path of travel sized to accommodate all types of mobility aids including powered wheelchairs and scooters, with both stair and ramp access that are designed based on other requirements identified in these standards (e.g., can vary based on whether exterior or interior design context);

b. ensure at least one accessible route is provided to both audience seating and backstage areas for public or staff use via a sloped walkway (preferred), ramp or lift;

c. where stairs and steps are included in the design, ensure handrails and edge protection are provided as required;

d. provide minimum lighting of 100 lux (10 foot candles) at platform or stage level and at the darkest point, including provision of secondary task lighting sources that can be used as required (Refer to Section 5.7, Lighting); and

e. provide a tactile attention indicator (TAI), where the change in level is 250 mm or greater and where there is no guard protection:

   i. positioned parallel to, flush with and extending the full width of any open edges of the platform or stage; and

   ii. with a minimum depth of 610 mm and a maximum depth of 920 mm.

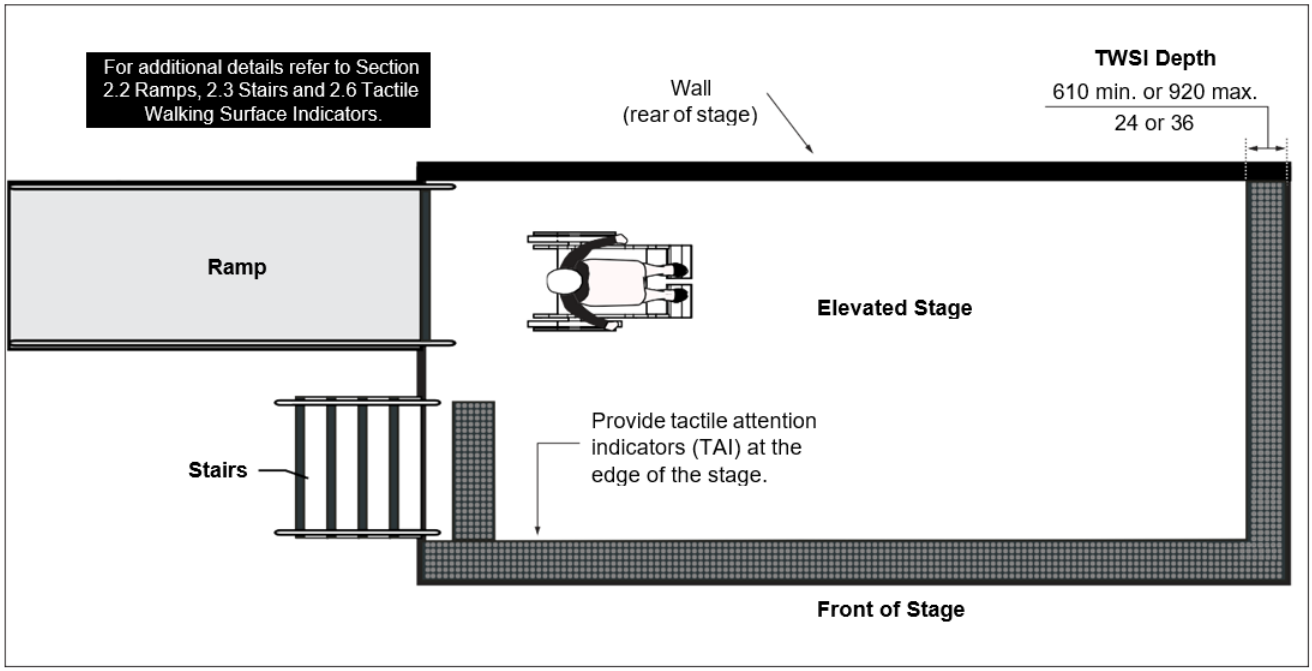


Figure 173 Elevated Platform or Stage - Plan View

6.13 Office Environments

Application

This section applies to accessible offices and related accessible work areas or workstations that are provided for staff and visitors and used for public services / programs. Offices and related work areas are typically included, but are not limited to:

- office systems furniture (e.g., modular partitions that separate work areas);
- private offices;
- printing equipment and supply rooms; and
- storage rooms or related millwork (e.g., cabinetry).

Generally, detailed design and review is required to identify the overall provision of accessible workstations and / or offices that need to be provided for staff, visitor or public use, based on the size of the facility (e.g., total occupancy) and the types of services or programs that are offered.

Reference

Sec. 2.10 Seating, Tables and Work Surfaces
Sec. 4.2 Doors and Doorways
Sec. 4.3 Interior Accessible Routes
Sec. 5.1 Controls and Operating Mechanisms
Sec. 5.4 Acoustics
Sec. 5.7 Lighting
Sec. 5.8 Signage and Wayfinding
Sec. 6.2 Meeting and Multi-purpose Rooms

Best Practice

Adaptive equipment for workstations and any assistive listening systems / devices to be provided for staff based on formal requests for accommodations.

Examples of accommodations may include:

- Telephone equipment, visual alarms, and prevention of background noise for users with hearing loss;
- Accessible workstations and adaptive equipment for diverse users, including adjustable height work surfaces or desks, with required knee and toe space clearances below;
- Accessible seating options, with adjustable height, armrests and back support;
- Suitable floor and circulation space for users of larger wheeled mobility aids, such as power wheelchairs and scooters; and
- Task lighting for diverse users, and the provision of blinds for any adjacent glazing, allowing the ability to control and prevent glare from natural lighting sources (e.g., which may be reflected off flooring or other surfaces), for users with vision loss.

6.13.1 Design and Layout

Typical features for accessible offices and related work areas include: **(Figure 169)**

a. provide accessible identification signage (e.g., tactile / braille);
b. ensure a consistent accessible route, aisle space and path of travel is provided, a minimum of 1100 mm clear width, or 1830 mm preferred), with required turning spaces, throughout circulation areas **(Refer to Section 4.3, Interior Accessible Routes)**;
c. ensure all doors within offices and common-use work areas have a minimum clear width of 950 mm; and
d. ensure acoustic environment is free of background noise.

6.13.2 Common-Use Work Areas

For accessible work and common activity areas: **(Figure 174)**

e. ensure the clear width of the entry is a minimum of 950 mm;
f. provide an accessible work surface (e.g., height-adjustable), with knee and toe space clearances below, as identified in other sections of these standards and / or based on staff requests for accommodations (e.g., customized to individual needs);
g. provide a minimum clear turning circle of 2440 mm or 2500mm preferred diameter adjacent to accessible work area (e.g., surface or desk);
h. provide minimum clear turning circle of 2440 mm diameter for all common activity areas (e.g., at equipment / storage or work) and at key locations for turning around;
i. ensure lighting, cabinet and storage unit controls are mounted no more than 1100 mm high from floor; and
j. provide minimum clear floor space of 920 mm wide by 1525 mm. depth in front of office systems furniture (e.g., modular partitions that separate work areas) and adjacent to any storage equipment (e.g., related millwork / cabinetry), storage for forward approach and 1525 mm wide by 920 mm depth for side approach.

Note

Suitable aisle spaces are to be maintained along routes leading to accessible workstations and work areas.

Accessible routes and clear aisle spaces require ongoing maintenance that connect all primary activity elements. within office and work areas, to prevent temporary barriers. to accessibility (e.g., placement of equipment or other items that reduce clear width or may be potential tripping hazards).

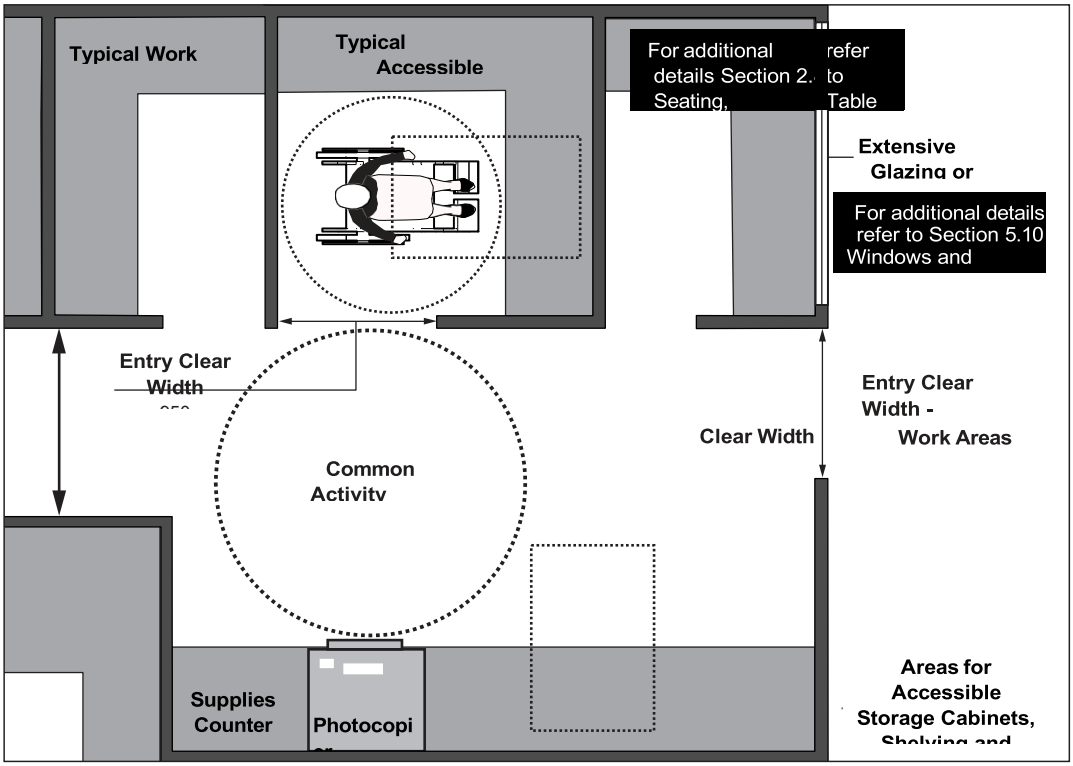
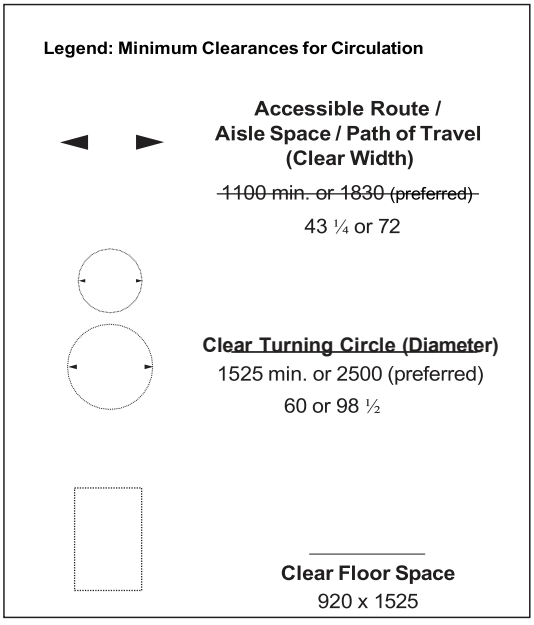


Figure 174 Common-Use Work Areas - Plan View



RECOMMENDATION

Provide clear turning circle of 2500 mm diameter for adjacent to accessible work area (e.g., surface or desk) to accommodate the full range of mobility devices where it is feasible.

6.14 Training & Teaching Spaces

Application

This section applies to all areas of training and teaching spaces where users with disabilities may be students, staff, or volunteers, including where they are provided in classroom portables.

Typical areas that require accessibility features include:

- public, visitor, student, and staff amenities in common use areas, such as waiting / queuing areas, service counters, lounges, and washrooms; and
- common spaces and elements specifically used by staff or students, such as classrooms, meeting rooms, demonstration and work areas with kitchens and related amenities (e.g., appliances for preparation and cooking).

Reference

Sec. 2.8 Seating, Tables and Work Surfaces
Sec. 4.3 Interior Accessible Routes
Sec. 5.1 Controls and Operating Mechanisms
Sec. 5.2 Assistive Listening Systems
Sec. 5.7 Lighting
Sec. 5.8 Signage and Wayfinding
Sec. 6.1 Assembly Areas
Sec. 6.5 Kitchens and Kitchenettes
Sec. 6.13 Office Environments

Best Practice

Additional detailed accessibility standards may be available and are typically prepared by other organizations that represent the educational sector and that may also be applicable to training and teaching spaces.

Individual staff with a disability may require additional accommodations beyond those identified within this section. Typical accommodations include the ability to enter and move freely throughout the space, as well as use the various built-in elements within
(i.e., blackboards, whiteboards, computer workstations, switches, benches, sinks, etc.).

6.14.1 Design Requirements

Ensure entrances to training and teaching spaces include: (Refer to Section 4.2, Doors, and Doorways)

a. at least one accessible entrance/egress door (e.g., clear width and door hardware); and
b. a power door operator, where the occupancy of space exceeds 60 people.

Ensure that the overall design addresses detailed and context-specific accessible design requirements, as specified in other sections of these standards, for:

a. provision of any common-use area / amenities (e.g., work surfaces / tables / counters), storage areas, as well as public and staff accessible washrooms / change rooms and related spaces, including universal washrooms;

b. floor surfaces and the use of high colour / tonal contrast throughout, for applicable materials and finishes;

c. primary accessible circulation routes with required clear width, linking all functional areas and elements within the space

d. secondary accessible circulation routes, with minimum clear width of 1100 mm wide;

e. accessible reach ranges, operating controls, and related mechanisms (e.g., includes shelving and storage elements);

f. windows, glazed screens, and sidelights, where provided; and

g. assistive learning devices such as screen reading software or adapted keyboards on an as-needed basis.

RECOMMENDATION

Ensure there are no cables from laptops or other devices obstructing the accessible path, turning areas, or present any hazard to persons with disabilities.

Note

Additionally, staff, teachers, students, or volunteers with varying types of disabilities frequently use learning aids and other assistive devices that require a power supply. The provision of additional electrical outlets throughout training and teaching spaces will enhance the use of such equipment.

Fixtures, fittings, furniture, and equipment specified for training / teaching spaces require a flexible design for use by teachers, and staff with a wide range of abilities.

Adjustable height tables and chairs, removable armrests, and the provision of rolling / locking casters on furniture allows an individual to make any adjustments needed.

6.14.2 Built-in Elements

Where built-in elements such as fixed seating, work surfaces, tables, or benches are provided, ensure:

a. 10% (minimum), but no less than one is accessible, including one of each type of element, where they are duplicated throughout space;

b. all work areas / tables incorporate access to data and electrical outlets within close proximity and easy reach to accessible seating spaces;

c. 2% (minimum) of the seating includes wider seats with a load capacity of at least 227 kilograms (500 pounds);

d. 2% (minimum) of tables and chairs are height adjustable, with accessible operating controls or automatic push button control preferred;

e. 50% (minimum) of shelf space in storage facilities are accessible;

f. 10% (minimum), but no less than one, of writing surfaces that are integrated into training / teaching space seating, accommodates the needs of persons who are left-handed;

g. 3% (minimum) of the total seating capacity is accessible and identified for use by persons who use a mobility device, with the International Symbol of Accessibility (ISA);

h. all work areas and tables have a glare-free surface finish, with high colour / tonal contrast compared to surroundings; and

i. all accessible work areas / tables are positioned to allow a personal assistant, service animal and / or extra equipment to be accommodated at each accessible seating location.

6.14.3 Assembly Areas (Fixed Seating)

Where classrooms, auditoria, assembly areas and other related training and teaching spaces have fixed seating:

a. provide at least two options for accessible seating spaces and viewing locations, integrated as part of the overall seating plan, as part of an accessible route and in close proximity to main entrances and exits; and

b. ensure that the design allows users with varying types of disabilities to access the primary presentation area via an accessible route.

Note

Refer to all other relevant sections of these standards that apply to exterior and interior design features and amenities for assembly areas with fixed seating, including accessible and adaptable seating, as part of the detailed planning, design and review process for new construction or retrofit projects.

6.14.4 Displays

Where bulletin boards, white boards, smart boards (e.g., interactive displays), or other display systems are provided, ensure:

a. a minimum of one of each type is accessible:

i. located on an accessible route with adjacent required clear floor space; and

ii. has its lowest edge located no higher than 760 mm, above finished floor.

6.14.5 Demonstration Areas

Where there are areas intended for demonstration purposes, including work areas, cooking preparation areas or computer workstations, ensure:

a. provisions are made to facilitate viewing from a variety of eye levels, through:

i. the installation of mirrors over the demonstration area(s); or
ii. the use of cameras and a monitor screen for image display;

b. where any sinks are incorporated, a minimum of one of each type is accessible; and

c. where any kitchens and / or related amenities are provided, including appliances, ensure:

i. overall design, for a minimum of one of each type, addresses detailed requirements for kitchens and appliances, including dishwashers, ranges and / or cooktops, ovens, and refrigerators / freezers;

ii. the integration of a minimum one accessible work surface, a minimum 920 mm wide, located a maximum 865 mm high, with knee space below a minimum of 920 mm wide, 480 mm depth, and 685 mm high; and iii. for detailed requirements, Refer to Section 6.5, Kitchens, and Kitchenettes

6.14.6 Additional Requirements

Ensure spaces / elements intended for general training, teaching and study have:

a. a background noise level no higher than 30 decibels above ambient (dBA);

b. a lighting level at a minimum of 500 lux (50 foot candles) and 750 lux (75 foot candles), where any accessible podium is provided; and

c. alternate mounting heights and reach ranges accommodating children, as identified in Table 14, where intended primarily for use by children.

Table 14 Alternate Reach Requirements for Children

Forward or Side Reach	Age 3 to 4	Age 5 to 8	Age 9 to 12
High (maximum)	915 (36)	1015 (40)	1120 (44)
Low (minimum)	510 (20)	455 (18)	405 (16)
Note: Children over the age of 12 have the same reach requirements as adults.			

6.15 Municipal Courts

Application

This section applies to municipal courts and members of the judiciary, court clerks or other officials, defendants, members of counsel and members of the public.

Typical areas that require detailed accessibility features include:

- spectator, press and other areas with fixed seats or flexible furniture (e.g., seating, tables, serveries);
- jury boxes and witness stands;
- judges' benches; and
- courtroom stations (e.g., clerk / bailiff, court reporter, litigant, counsel).

The design of municipal courts is typically complex due to unique spaces and elements that are provided. Therefore, it is important to refer to all other relevant sections of these standards that apply to exterior and interior design features and amenities for municipal courts, as part of the detailed planning, design and review process for new construction or retrofit projects.

Reference

Sec. 2.8 Seating, Tables and Work Surfaces

Sec. 2.9 Drinking Fountains

Sec. 4.3 Interior Accessible Routes

Sec. 5.1 Controls and Operating Mechanisms

Sec. 5.2 Assistive Listening Systems

Sec. 5.7 Lighting

Sec. 5.8 Signage and Wayfinding

Sec. 6.1 Assembly Areas

Sec. 6.5 Kitchens and Kitchenettes

Sec. 6.13 Office Environments

Note

Refer to additional detailed accessibility standards prepared by the Province of Ontario that may be applicable (e.g., Ministry of the Attorney General).

6.15.1 General Provisions

6.15.1.1 Entrances

Provide all required accessibility features, including an accessible route leading to:

a. one restricted entrance (minimum);
b. one secured entrance (minimum); and
c. any fixed security barrier systems at all required accessible entrances.

6.15.2 Other Features

For existing conditions, where security barriers incorporate equipment such as metal detectors, fluoroscopes, or other similar devices which cannot be made accessible:

a. provide an accessible route adjacent to such security screening devices, to facilitate an equivalent circulation path; and

b. ensure two-way communication systems, where provided to gain admittance into restricted areas within a facility, are accessible with both visual and audible signals.

6.15.3 Assembly Areas - Fixed Seating

Where fixed seating is provided, ensure:

a. accessible seating spaces and viewing locations are integrated as part of the overall seating plan, as part of an accessible route; and

b. provide accessible seating spaces for users of mobility aids and adaptable seating based on design requirements and the total number of fixed seats (Refer to Section 6.1, Assembly Areas).

6.15.4 Jury Boxes and Witness Stands

Where a jury box and witness stand are provided:

a. provide an accessible route and level access into seating areas, with required minimum clear floor space within its defined area of 920 mm by 1525 mm; and

b. ensure any related features or equipment are accessible (e.g., evidence shelf, work surface, and communication equipment such as a microphone etc.).

6.15.5 Judges' Benches and Courtroom Stations

Where a judges' bench and workstations (e.g., used by clerk / bailiff / court reporter / legal counsel etc.) are provided as part of an accessible route:

a. ensure floor space and related millwork (e.g., tables / work surfaces) are designed based on the requirements identified in these standards.

6.15.6 Additional Considerations

Ensure that the overall design addresses detailed and context specific accessible design requirements, as specified in other sections of these standards, for:

a. the provision of any common-use areas / amenities (e.g., work surfaces/ tables / counters), storage areas, as well as public and staff accessible washrooms / change rooms and related spaces, including universal washrooms;

b. assistive listening systems (e.g., including a suitable number of receivers based on expected occupancy of rooms / spaces), with required informational signage indicating the availability and locations of the system(s), marked with the international symbol for hearing loss; and

c. other key elements and spaces, including those provided in areas for jury assembly or deliberation, such as refreshment areas, kitchenettes, and any built-in refreshment dispensers or drinking fountains.

6.16 Fire Stations

Application

This section applies to fire stations, where persons with disabilities may be members of the public or fire station staff (e.g., including employees who may have a temporary disability or injury and require accommodations) and where fire stations may be used for diverse public programming space and events.

Typical areas that require accessibility features include:

- public, visitor, and staff amenities in common use areas, such as waiting / queuing areas and service counters;
- common spaces and elements such as meeting rooms, kitchen, lounge, public washrooms; and
- areas used frequently by visitors during site visits and tours (e.g., apparatus bay for school visits and educational seminars), emergency events, elections (e.g., space used for a polling station), safety training or other municipal functions and special events.

Reference

All other relevant sections of these standards that apply to exterior and interior design features and amenities for fire stations, as part of the detailed planning, design and review process for new construction or retrofit projects.

Best Practice

Additional detailed accessibility standards may be available and are typically prepared by the Province of Ontario that may also be applicable to fire stations and related spaces.

Exception

Accessible design compliance is not required for existing fire facilities and spaces that are for the exclusive use of firefighters such as hose towers, fitness rooms, 2nd floor offices or other spaces (e.g., dormitories), as well as any basement level storage areas.

6.16.1 General Design Features

6.16.1.1 Main Entrance

Provide all required accessibility features, including an accessible route leading to:

a. the main public entrance; and

b. one secure entrance (minimum) used by staff / firefighters.

Exception

Accessible door hardware is not required for secured entrances, doors and doorways operated only by fire personnel.

6.16.2 Emergency Communications System

Ensure an accessible two-way emergency call system (with visual and audible notification) is provided at the main accessible public entrance, with this entrance providing level access and equipped with a power door operator.

6.16.3 Common Areas

a. provide at least one universal washroom, located on the main floor level, as part of an accessible route and in close proximity to the primary accessible entrance to the facility; and

b. ensure an accessible route, doorways and related features are provided, leading to key / centralized spaces including the apparatus bay, dispatch / communications office, and meeting / office areas.

Note

Space for an adult-sized change table is required, with provision of an adult-sized change table with automatic height adjustment recommended but not required. An accessible baby change table is required.

Additional universal washrooms / showers / Changerooms for use by staff and public to be provided based on detailed review during the design of new fire stations based on occupancy requirements, the overall size of the facility, and other requirements identified in these standards.

6.16.4 Additional Considerations

Ensure that the overall design addresses detailed and context-specific accessible design requirements, as specified in other sections of these standards, for:

a. provision of any common-use area / amenities (e.g., work surfaces / tables / counters), storage areas, as well as public and staff accessible seating areas, kitchens / kitchenettes, and key spaces such as washrooms, change rooms and related spaces, including universal washrooms;

b. floor surfaces and the use of high colour / tonal contrast throughout, for applicable materials and finishes;

c. primary accessible circulation routes for public and staff with required clear width, linking all functional areas and elements within the space;

d. secondary accessible circulation routes, with minimum clear width of 1100 mm (43¼ in);

e. accessible reach ranges, operating controls, and related mechanisms (e.g., includes shelving and storage elements);

f. windows, glazed screens, and sidelights, where provided; and

g. any other space, element or feature that applies.

6.17 Police Stations

Application

This section applies to police stations, where persons with disabilities may be members of the public (including those providing witness statements/information), detainees, members of counsel or police staff.
Typical areas that require accessibility features include:

- Public, visitor, and staff amenities in common use areas, such as waiting / queuing areas, washrooms.
- interview rooms, and service counters; and
- Secured areas such as holding cells and any common
  use areas for detainees.

Reference

All other relevant sections of these standards that apply to exterior and interior design features and amenities for police stations, as part of the detailed planning, design and review process for new construction or retrofit projects.

Best Practice

Additional detailed accessibility standards may be available and are typically prepared by the Province of Ontario that may also be applicable to police facilities and related spaces.

6.17.1 General Provisions

6.17.1.1 Entrances

Provide all required accessibility features, including an accessible route leading to:

a. all public entrances;
b. all public reception counters;
c. one secured entrance (minimum) used by the public; and
d. any fixed security barrier systems that are provided at all required accessible entrances.

6.17.2 Security Features

For existing conditions, where security barriers incorporate equipment such as metal detectors, fluoroscopes, or other similar devices which cannot be made accessible:

a. provide an accessible route adjacent to such security screening devices, to facilitate an equivalent circulation path; and

b. ensure two-way communication systems, where they are provided to gain admittance into restricted areas within a facility, are accessible with both visual and audible signals.

6.17.3 Specialized Areas

6.17.3.1 Visiting Areas

Where there are secured, non-contact visiting areas (e.g., detainees are separated from visitors), that serve accessible holding cells or related rooms / spaces, provide features and elements as part of an accessible route as follows:

a. ensure the overall design, related millwork (e.g., work surfaces, tables, counters) and clear floor space that is required for circulation by users of mobility aids is provided, on both the visitor and detainee side and as identified in these standards, for:

    i. 5%, but not less than one cubicle / counter work surface; and
    ii. 5% but not less than one service / information counter.

b. incorporate accessible communications systems (e.g., hands-free type speaker, with push button activation), mounted at dual height, for both individuals who use mobility aids and individuals who have difficulty bending, where solid partitions or security glazing separates visitors from detainees (Refer to Section 5.2, Assistive Listening Systems).

6.17.3.2 Holding Cells

Where holding cells are provided for detainees, ensure:

a. 2% (minimum), but not less than one, of the total number of cells are designed with accessibility features (e.g., specialized toilet, lavatory, grab bars, lower height bench, and other amenities for secured environments);

b. one cell (minimum) of each type of specialized cell is designed with accessibility features, where provided (e.g., orientation, protective custody, disciplinary, segregation, detoxification, or medical isolation); and

c. 2% (minimum), but not less than one, of general cells are equipped with audible and visual emergency alarm systems.

6.17.4 Additional Considerations

Ensure that the overall design addresses detailed and context specific accessible design requirements, as specified in other sections of these standards, for:

a. the provision of any common-use area / amenities (e.g., work surfaces / tables / counters), storage areas, as well as public and staff accessible seating areas, and key spaces such as washrooms, change rooms and related spaces, including universal washrooms;
b. floor surfaces and the use of high colour / tonal contrast throughout, for applicable materials and finishes;
c. primary accessible circulation routes for public, staff, and detainees with required clear width, linking all functional areas and elements within the space;
d. secondary accessible circulation routes, with minimum clear width of 1100 mm (43¼ in) (e.g., this includes clear width around any furniture such as beds in accessible holding cells);
e. accessible reach ranges, operating controls, and related mechanisms (e.g., includes shelving and storage elements);
f. windows, glazed screens, and sidelights, where provided; and
g. any other space, element or feature that applies.

6.18 Business, Mercantile and Civic

Application

This section applies to areas used to conduct business transactions, including public areas (e.g., as customer / consumer), as well as staff work areas. Typical facilities include:

- city service departments;
- retail areas and spaces; and
- sales and distribution centers.
- The types of transaction and service counters may vary but commonly are related to:
- customer service areas;
- information desks or counters;
- ticketing counters;
- teller stations;
- registration counters; and
- box office counters.

Reference

All other relevant sections of these standards that apply to interior and exterior design features and amenities for business, mercantile, and civic facilities, as part of the detailed planning, design and review process for new construction or retrofit projects.

Sec. 5.2 Assistive Listening Systems
Sec. 6.10 Service Counters
Sec. 6.11 Waiting and Queuing Areas

Sec. 6.13 Office Environments

6.18.1 Design Requirements

In areas used for business transactions and related services, as well as where service counters have cash registers / point of sale devices (POS), ensure:

a. all accessible service counters / aisles are provided as part of an accessible route, with minimum clear width of 1100 mm or preferred 1830mm and are marked overhead and at other strategic locations with the International Symbol of Accessibility (ISA) (e.g., in the same location where the checkout number or type of checkout is displayed);
b. at least one of each type of service counter has a portion of the counter that is accessible, a minimum of 920 mm wide, with:
   i. required clear floor space in front;
   ii. clear knee / toe space below, for both frontal / parallel approach and use;
   iii. where required, provide any point of sale devices that are flexible and not affixed to any counter / work surface, either with wireless capability or attached with a coil / chord for suitable reach within 600 mm of the front edge; and
   iv. an overall design that addresses all other applicable accessible design requirements identified in these standards;
c. where counters are dispersed throughout the facility, ensure that the accessible counters are also dispersed;
d. where public counters have solid partitions or glazing to separate personnel from the public, ensure:
   i. one of each type (minimum) provides an accessible method to facilitate voice communication (e.g., assistive listening system such as a counter loop system, grills, slats, talk-through baffles, intercoms, or handsets); and
   ii. the method to facilitate voice communication is accessible (e.g., mounted at dual heights) for both seated and standing users (e.g., people who have difficulty bending);
e. provide the number of accessible checkout aisles, as identified in **Table 15**.

Recommendation

Be sure to include signage that provides guidance on navigation and the purpose of a kiosk, desk, services offered, and directions.

Best Practice

All work areas and spaces require flexible design and considerations for ongoing and future adaptations or accommodations that may be required for addressing the needs of users with diverse disabilities and based on the type of spaces, individual equipment. or assistive devices that may be used.

Table 15 Required Number of Accessible Check-out Aisles

Total Number of Check-out Aisles Provided for Each Type / Design	Minimum Number of Accessible Check-out Aisles Required, For Each Type / Design
1 to 4	1
5 to 8	2
9 to 15	3
Over 15	3 plus 20% of additional aisles

6.19 Storage, Shelving and Display Units

Application

This section applies to typical fixed or built-in storage, shelving and display units, including millwork, which are part of the design of interior environments related to facilities in general, as well as other special facilities and spaces, including but not limited to assembly areas, offices, meeting and multi-purpose rooms, and libraries.

Key considerations include:

- mounting heights need to address a full range of vantage points including the lower sightlines of children or users of mobility aids, including when in a seated position. ;
- upper and lower reach ranges are designed to accommodate diverse users, including a minimum lower reach range to assist users who may have difficulty bending down. ;
- strategic use of high colour / tonal contrast and suitable lighting levels to assist with identifying their location, allow users to position themselves properly when approaching and using these elements, as well as to prevent any potential bumping hazards; and

- where possible, use recessed shelving or alternate options (e.g., design related millwork to be cane detectable at sides) to ensure there are no projections into any adjacent accessible routes.

6.19.1 Design Requirements

Where fixed or built-in storage facilities, such as cabinets, closets, shelves and drawers, are integrated as part of the design of interior accessible rooms or spaces: (**Figure 175)**

a. ensure that these types of features and elements are located as part of an accessible route, with a minimum clear floor space of 920 mm by 1525 mm to allow either a frontal or side approach.

b. provide a minimum of one of each type that is accessible, with suitable reach ranges, allowing independent use and approach, as identified in this and other sections of these standards (Refer to Section 1.3, Space and Reach Requirements);

c. for an unobstructed frontal approach, reach and use, mount:

   i. clothes rods at a maximum of 1200 mm high; or

   ii. shelves between 230 mm to 1200 mm, where a range of shelving heights is provided;

d. for a side approach, reach and use, mount clothes rods, or shelves:

   i. when unobstructed, at a maximum 1370 mm high above the floor; or

   ii. when obstructed, at a maximum 1170 mm high above the floor, for a side approach where there is a required reach distance between 255 mm and 535 mm, for example, closets without accessible doors;

e. mount coat hooks, where provided, at a maximum 1200 mm high above the floor, with collapsible type design that does not project more than 50 mm from mounting surface; and;

f. provide accessible hardware, to be determined based on the type of storage, cabinetry and / or millwork design, with high colour / tonal contrast and suitable grasping dimension and operating forces, which may include D-shaped handles / pulls or other hardware systems activated by push or touch of the surface, such as sliding drawers or cabinet doors (**Refer to Section 5.1, Controls and Operating Mechanisms**).

Recommendation

Shelves should be rounded or beveled and should not have sharp edges to prevent potential injury and be high enough from the floor to permit cane detection.

Note

Mounting coat hooks on the back side of accessible benches
is not permitted, as it will be a bumping hazard and obstructs the use of the bench when transferring or seated.

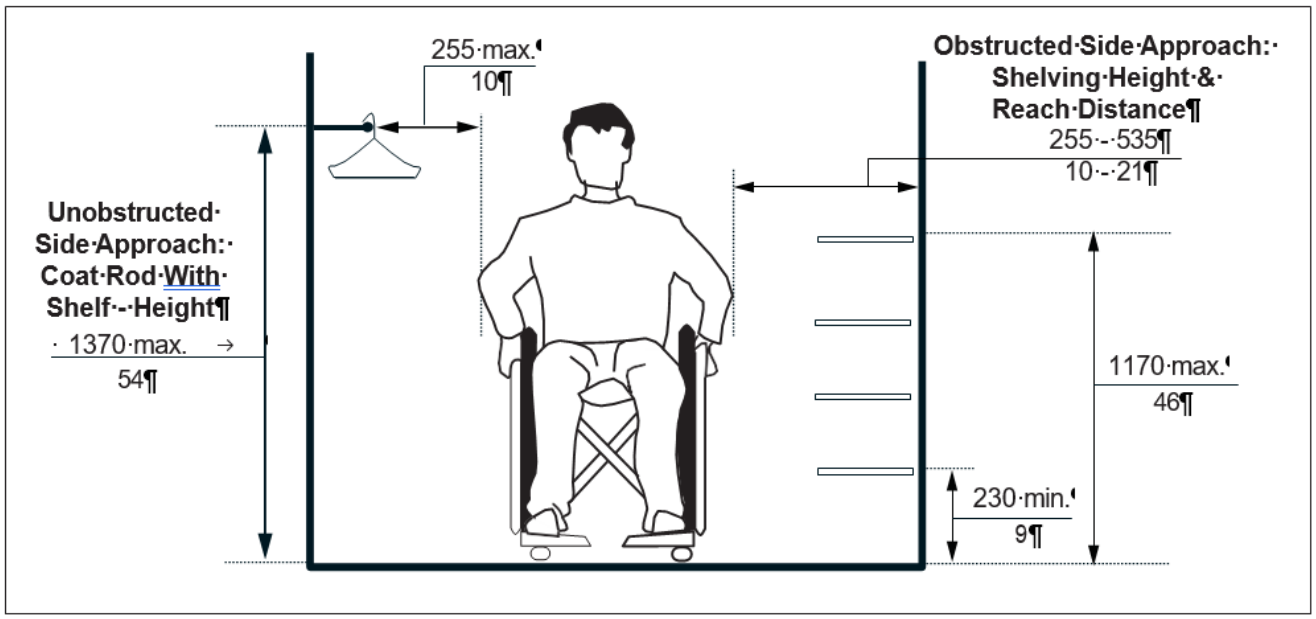


Figure 175 Reach Limits for Storage (Side Approach): Clothes Rods and Shelving

7.0 Appendices

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7.4 Table of Changes

All dimensions are in millimeters unless otherwise specified.

Many sections or dimensions may not have equivalent provisions in the earlier FAD or OBC. Sections with no equivalent OBC or earlier FAD sections do not include a comparison table OBC references are limited to Division B, Section 3.8 barrier-free design provisions only.

CHAPTER 1

New FAD	Value	Old FAD	Value	OBC/AODA Section	VALUE
1.3.1(a) Min clear space	920 x 1525	5.2.2	720 x 1370	-	-
1.3.1(b) Turning radius	2440	5.2.1	2440	-	-
Fig. 1-4	920 x 1525 Depth < 380	Fig. 5.2-E	760 x 1370 Depth > 380	-	-
Fig. 1-5	1525 Gap 305 Depth	Fig. 5.2F	1370 Gap 305	-	-
Fig. 1.6	1525 x 920 Depth < 610	Fig. 5.2G	1370 x 760 Depth < 610	-	-
Fig. 1.7	920 Gap 150 Depth > 610	Fig. 5.2H	760 Gap 150 Depth > 610	-	-
1.3.3.1(a)	1200	5.3.1	1200mm	-	-
1.3.3.1(b)	400	5.3.1	400	-	-
1.3.3.2(a)	1100 Dept 610	5.3.1	Formula Based	-	-
1.3.3.2(b)	1100 Depth 510	5.3.1	Formula Based	-	-
1.3.3.3(a)	1370	5.3.2.1	1370	-	-
1.3.3.3(b)	230	5.3.2.1	230	-	-
1.3.3.4(a)	1170 Depth 610	5.3.2.2	1170 Depth 610	-	-
1.3.3.4(b)	1170 Depth 510	5.3.3.2	1170 Depth 610	-	-

CHAPTER 2

New FAD	Value	Old FAD	Value	OBC/AODA Section	VALUE
2.1.1(c) drainage	NEW	N/A	-	-	-
2.2.1(a). clear width	1100mm	8.1.7	950mm	OBC 3.8.3.4(1)(a)	900mm
2.2.1(g) Over ramps	50 Lux	13.8.4	30 Lux	-	-
2.2.1.1(b) retrofit slope	1:12 / 1.15	8.14	retrofit 1:12	OBC 3.8.3.4(1)(b)	1:12
2.2.1.4(a) curb min	100mm	8.1.9.3(a)	50mm	OBC 3.8.3.4(1)(g)(i)	50mm
2.2.1.3(b) strip width	50 ± 10 mm	N/A	NEW	-	-
2.2.1.4(b) barrier to ramp surface	Max 75mm	8.1.9.3(b)	<50mm	OBC 3.8.3.4(1)(g)(ii)	50mm
2.2.2(b) top/bot landing	2440x2440 Pref 2500x2500; retrofit 1700x1700	8.1.8.2	2440x2440 retrofit 1525x1525	OBC 3.8.3.4(1)(c)	1670 x 1670
2.2.2(c) Landing in-line	1700 Long	8.1.8.5	1525	3.8.3.4(1)(d)(i)	1670 Long
2.2.2(c) 90° landing	1700x1700	8.1.8.4 L-shaped	1525 x 1525	3.8.3.4(1)(d)(ii)	Required
2.2.2(e)(i) latch side ext. in	600	8.1.8.2	Included only	OBC 3.8.3.4(1)(c)	600
2.2.2(e)(ii) latch side ext. out	300	8.1.8.2	300	OBC 3.8.3.4(1)(c)	300
2.3.2 (c) tread depth	280-355	8.2.2.3	280	OBC 3.4.6.8(2)	280-355

2.3.3(d)(i)	50mm +/- 10	NEW	NEW	-	-
2.3.3(d)(ii)	MAX 25mm	NEW	NEW	-	-
2.3.4(b)(iii) Landing TAI	> 2500mm	NEW	NEW	-	-
2.3.4(c)	610	13.5.5.2	920	-	-
2.3.4(d) Mounting TAI	3mm	NEW	NEW	-	-
2.3.5.1 guards change of level	>=600mm	NEW	NEW	-	-
2.3.5.2(a) 3 Step Trigger3	3 Steps	NEW	NWQ	-	-
2.3.5.2(b) Both sides	865-965	8.3.9.2	865-920	-	-
2.3.5.2(d) Continuous	<=2100	8.3.9.2	Continuous	-	-
2.3.5.2(f)	> 2200 Wide	NEW		-	-
2.3.5.2(g)(ii) handrail depth	1 depth + 300	8.3.9.4	300	-	-
2.4.2(d)	30-40mm	8.3.4.1	30-40mm	3.4.6.5(3)(a)	30-43mm
2.4.2(e)	100-125 Cross 45	8.3.4.1	100-155 Cross 57	3.8.3.4(1) (e) (ii)	100-125 Cross 45
2.5.1(b) leading edge	>100mm	9.5.12	>100,mm	CSA B651-	>100mm
2.6.1(d) Bevel	3mm +/-	6.6.5.4	FLUSH No value	ISO 23599	-
2.6.1(e) Hi tonal contrast	70%	6.6.5.3	General, no value	ISO 23599	-
2.6.2(a) Height	4-5mm	13.11.10.2	Description	ISO 23599	-
2.6.2(b) Top Diameter	12-25mm	13.11.10.2	Description	ISO 23599	-
2.6.2 (c) Lower Diameter	10+/1	13.11.10.2	Description	ISO 23599	-
2.6.3 (b) Height	4-5mm	6.6.5.4	NEW	ISO 23599	-
2.6.3 (c) Top Width	17-30mm	6.6.5.4	NEW	ISO 23599	
2.6.3(d) Lower Base	10 +/- 1	6.6.5.4	NEW	ISO 23599	-
2.6.3 (e) Top/base Length	$270/10^{+/-1}$	6.6.5.4	NEW	ISO 23599	-
2.6.3 (g) Max Space Bars	30	6.6.5.4	NEW	ISO23599	-
2.6.3 (h) drainage gap 2	20-30	6.6.5.4	NEW	ISO 23599	-
2.6.4 (a) From edge	920	N/A	-NEW	-	-
2.7.2 Para Distance rest areas	< 100m	6.9.2.2	100-200m	-	-
2.7.2 (c) Clear space	920 x 1525	6.9.2.3 6.9.3.5	1200 adjoining; 915 x 1370 adj. space	-	-
2.7.2(d)(i) stable; set back	600	6.9.2.1	NEW	-	-
2.7.2(f) curb/barrier at rear	100	NEW	NEW	-	-
2.7.2(f)(i)	300	NEW	NEW	-	-
2.8.1(b) Seat depth	330-510	6.9.3.3	NEW	-	-
2.8.1(c) back support	320	6.9.3.3	NEW	-	-
2.8.1(d) arm rest	220-300	6.9.3.3	NEW (expanded)	-	-
2.8.2(b) (i)	920 x 1525	12.4.5	760 x 1370	-	-
2.8.2 (c)	350mm	NEW	NEW	-	-
2.8.2(e)(i) Clear Space – Forward	920 x 1525	12.4.4	760 x 1370	-	-
2.8.2 (e)(ii) Clear Space – Side	1525 x 920	12.4.4	1370 x 760	-	-
2.8.3 (c) Clear Space	920 x 1370	12.4.4	760 x 1370	-	-
2.8.3 (d)(i) Knee Wide space	920	12.5.5	760	-	-
2.9.2(a) Clear space - front	920 x 1525	Fig12-2B	760 x 1370	3.8.3.16(3)	810X1370
2.9.2(B) Clear space - side	1525x 920	Fig 12-2A	1370 x 760	3.8.3.16(3)	810x1370

2.9.3(a) Knee & Toe Space	920x200 735 Depth	12.2.21	-wx200Dx740H	3.8.3.16(2)(f)(ii)-(iv)	760wx450dx735h
2.10.1.1(d) non-abrasive wall surface	2000mm	13.10.9 / 13.10.13	Textual description but no value	-	-

CHAPTER 3

New FAD	Value	Old FAD	Value	OBC/AODA	VALUE
3.1.4.1(b) Running slope	1.5%	NEW	-	-	-
3.1.4.1(c) Cross slope	1%	NEW	-	-	-
3.1.4.1(d) Height Clearance	2750	NEW	-	-	-
3.1.4.1(g) Lighting	30 Lux	13.8.5	30 Lux	-	-
3.1.4.2(a)(i) Type A Width	3400	NEW	-	IASR 80.34(1)	3400
3.1.4.2(a)(ii) Type B Width	3400	NEW	-	IASR 80.34(2)	2400
3.1.4.2(b) Access Aisle	1500	NW	-	IASR 80.35(2)1	1500
3.1.4.2(b) Bollard Clearance	122-	NEW	-	-	-
3.1.4.2(c) Length of Space	5500	NEW	-	-	
3.1.5.1(b) Min sign size	300 x 450	NEW	-	IASR 80.37 /	300 x 450
3.1.5.1(c) Mounting height	1500-2000	NEW	-	-	-
3.2.1(a) Distance to entrance	< 30m	7.2.1	Description only	-	-
3.2.1(c) Overhead	3600	7.4.5	3350	-	-
3.2.1(d)(ii) Access aisle	7400x 2440	7.4.3	7000 x 2440	-	-
3.2.1(d)(iii) Clearance	3600	7.4.5	3350	-	-
3.3.1(c) headroom	2100	6.2.3.1	2100	OBC 3.8.3.3	1980
3.3.1(d) Lighting	50 lux	NEW	-	Sec 5.7 CSA (2018)	50
3.3.1(g) Rest Area Spacing	100m	6.9.2.2	100-200	80.8	Consult Only
3.3.2(a) Clear width	1500mm	6.2.2.1 6.2.2.2	1830 Preferred 1060 Min.	IASR 80.23(1)1	1500
3.3.2(b) Min. Passing Area	1830x 1830	6.2.3.3	1600	-	-
3.3.2(b) Interval	30m	6.2.2.3	30m	-	-
3.3.2(d)	950mm	NEW	-	IASR 80.23(1)9	850
3.3.3.1(a)	1:20 (5%)	8.1.4	1:20-1.249	IASR 80.23(6)	1:20
3.3.3.1(b) Sidewalk slope[1]	1:20	NEW	-	80.23(6)	1:20
3.3.3.2(a) Cross slope	1:50	NEW	-	-	-
3.3.3.4(a)(i) Curb height	100	9.5.7.1	75mm	-	-
3.3.3.4(a)(i) Level trigger	200-600	9.5.7.1	200-600	-	-
3.3.3.4(a)(ii) Guard	1070	8.1.9.1	1070	-	-
3.3.3.4(a)(ii) Trigger	>600	9.5.7.2	>600	-	-
3.3.3.4(a)(ii) Adj Trigger	1200 Slope > 1:2	NEW	-	-	-
3.4.3(a) Running slope	1:50-1:20	6.5.2.1	1:10-1:12 150 1:8 – 1:10 75	IASR 80.26(1)(2)	1:8 < 75
3.4.3(b) Retro fit slope	8%	NEW	-	-	-
3.4.3(c) Cross slope	1:50	NEW	-	IASR 80.26(1)3	1:50
3.4.3(d) (ii) Length	600	NEW	-	-	-

[1] may exceed 1:20 if not steeper than adjacent roadway

3.4.3(d)(iii) Counter slope	Slope 150	NEW	-	-	-
3.4.4(c) Cross slope	8-10%	6.5.2.4	10%	IASR 80.26(1)4	10% Max
3.4.4(d) Min. Clear width	1500	6.5.2.1	1220 mm min	IASR 80.26(1)1	1220
3.4.5(a) Landing	1220/1400	NEW	-	-	-
3.4.5(c) Running/Cross	2%	NEW	-	-	-
3.4.6(a) Setback	150-200	NEW	-	-	-
3.4.6(b) Border	150	NEW	-	-	-
3.4.6(e) Depth	610	Fig 6.5A	1370	IASR 80.26(1)5	No Value
3.4.6(g) Min. Width	1525	NEW	-	NEW	-
3.5.1.1(a) Amenity Width	600/300	6.9.1.3	610mm	-	-
3.5.1.1(b)(iii) Placement	1800	6.2.2.1	1830mm	IASR 80.23(1)	1500mm
3.5.1.1(b)(v)Clear Space	920 x 1525	6.9.2.5	915 x 1370	-	-
3.5.1.1(c)(iii) Optional Lid	900-1100	6.9.4.3	Max 1060	-	-
3.6.1.2(a) Accessible route	1500/1800	6.2.2.1 6.2.2.2	18030mm 1060mm	IASR 80.23(1)	1500
3.6.1.2(b) Raised base	400-460	6.8.4	460mm	-	-
3.6.1.2(c)(ii) Edge	100	6.8.3	75mm	-	-
3.6.1.2(d) Shrubs	920	6.8.2.2	915	-	-

CHAPTER 4

New FAD	Value	Old FAD	Value	OBC/AODA	VALUE
4.2.1(a) Door clear width	950	9.3.11	950 /810 Retrofit	3.8.3.3(1)	850
4.2.1(b) Projection into clear opening	100 max/ 865	N/A	-	N/A	-
4.2.1(c) Retrofit clear width	860mm	9.3.11	810	3.8.3.3(1)	850 mm
4.2.2.2(b) Door closer closing	3 sec, from 70°-75 from closed	9.3.17	3 sec from 90° to approx. 12° open	3.8.3.3(9)	3 sec,from 70° - 75 from closed position
4.2.4 Thresholds	Bevel at slope 1:2 where transition 6 - 13 mm high	9.3.15.2	Threshold over 6mm for 1:2	3.8.3.3(3) Threshold height maximum 13 mm	13 mm 1:2 max Bevel
4.2.5(a) Door Hardware mount	900-1100	9.3.16.3	400-1200mm	OBC 3.8.3.3 (3)(b)	900-1100mm
4.2.6(a) Control gate width	950mm/680 Cane	9.3.7	No values	-	-
4.2.8(c) Doors remain open	5 second	NEW	-	-	-
4.2.8(e)(iv) Projection	100mm	NEW	-	3.8.3.3(17)(c)(i)	900-1100
4.2.8(e)(vii) Center	900-1100	NEW	-	3.8.3.3(17)-	
4.2.8(e)(viii) Extended Operator	200–900 mm AFF	NEW	-	3.8.3.3.(17)(c)(ii)	Extends <= 200 to >=900 AFF
4.2.8(e)(ix) Beyond door swing	600-1500	9.3.21.1	No values	-	-
4.2.8(e)(x) Clear floor space	920 × 1525 mm (forward) / 1525 × 920 mm (side)	9.3.21.1	No values	-	-
4.2.9(b) Cane detectable guards	300 Same Cane-guard new. Low rail 680 new	9.3.21.3	300mm No 680 value	-	-
4.2.11(a) Doors in Series	1525 mm + width	9.3.14	1370 + door width	3.8.3.3(11)(b)(i)	1500mm+Width
4.2.11(b) Door in Series	1525	NEW	-	3.8.3.3(11)(b)(ii)	1500 turning dia.
4.2.12(b) Glazed Doors	1350–1525 mm	9.3.23.1	1475-1525	3.8.3.3.(15)(c)	1350–1500 mm
4.3.2(a) Clear Width	800 mm	9.5.4	1060mm	3.8.1.3(1)	1100 mm
4.3.2(b) lower pedestrian areas	1370 1100	9.5.4 9.5.4	1060 mm 1060	3.8.1.3(1) 3.8.1.3(1)	1100 1100

4.3.2(c) Route under	1830 <=; passing 1830 × 1830; max30 m apart	9.5.6	1830 <=; passing 1830 × 1830; max30 m apart	3.8.1.3(4)	1600 <=; passing 1800 × 1800; max30 m apart
4.3.2(d) Short indentation	950 for max 610 mm; 1100	NEW	-	-	-
4.3.2(e) Obstacle under 1220	< 1220 mm; 1100 mm approach / exit; 1220 mm	9.5.4 and 9.5.4.3	1060 mm approach and exit; 1220 mm at turn	3.8.1.3(1)	1100 mm
4.3.2(f) Obstacle over 1220	> 1220 mm; 1100	9.5.4	1060 mm	3.8.1.3(1)	1100
4.3.3.1(a) Running slope	> running slope 1:20 (5%)	8.1.2 / 8.1.4	> than 1:25 are ramps; ramp slope 1:20–1:24.9	3.8.3.2.(1)(c)	Maximum gradient 1:20
4.3.3.1(b) Running slope	> 1:20	8.1.2	> 1.25	3.8.3.2.(1)(d)	> 1.20
4.3.3.2(a) Cross slope	Maximum cross slope 1:50 (2%)	8.1.5	Maximum cross slope 1:50	-	-
4.3.4(a)	<200 mm;	NEW	-	-	-
4.3.4(b)	200–600 mm; / 100 mm high	9.5.7.1	> 200-600, 75mm	-	-
4.3.4(c)	Change in level >600 mm	9.5.7.2	-	-	-
4.4.1.1(a) Hall buttons	895–945 mm	10.1.19	895-945	3.5.2.2(1)	Appendix CSA B44
4.4.1.2(b) Door clear width	950 mm	10.1.7	950 mm (910 mm retrofit)	-	-
4.4.1.2(d) Reopening device	125 ±25 mm; 735 ±25 mm; 20 s	10.1.8	125 ±25 mm; 735 ±25 mm; 4 s hall / 3 s car	-	-
4.4.1.2(e) Door hold-open time	8 s minimum	10.1.8	4 s hall / 3 s car	-	-
4.4.1.3(a) Interior dimensions	1525 × 1725 mm	10.1.9	1725 × 1525 mm; 2030 × 1525 mm in high- -use facilities	-	-
4.4.1.4(a) Car operating control push buttons	19 mm;	10.1.10, 10.1.11.1	19 mm; raised/flush/recessed;	3.5.2.2	Appendix E ASME B44;
4.4.1.4(b)(iii) Highest centerline (>16 openings)	1370 mm maximum	NEW	—	-	-
4.4.1.4(e) Tactile markings	16 mm high; raised 0.75 mm	10.1.12	16 mm high; raised 0.75	3.5.2.2	A17.1/CSA B44;
4.4.1.2(d) Reopening device	125 ±25 mm; 735 ±25 mm; 20 s	10.1.8	125 ±25 mm; 735 ±25 mm; 4 s hall / 3 s car	No equivalent found	—
4.4.1.2(e) Door hold-open t	8 s minimum	10.1.8	4 s hall / 3 s car	-	-
4.4.1.2(d) Reopening device	125 ±25 mm; 735 ±25 mm; 20 s	10.1.8	125 ±25 mm; 735 ±25 mm; 4 s hall / 3 s car	-	—
4.4.1.2(e) Door hold-open t	8 s minimum	10.1.8	4 s hall / 3 s car	-	—
4.4.1.6(b) Clearance between handrail and wall	35–45 mm	10.1.18	40–45 mm	-	-
4.4.1.7(d) Audible position indicators	10–80 dBA above ambient; 300–3000 Hz;	10.1.16	20 dBA above ambient;	-	-
4.5.4(a) Ambulatory stall depth	1525 mm min	11.2.3	1830 × 1830 mm (1525 × 1525 mm	3.8.3.8.(10)(a)	1500 mm minimum
4.5.4(a) Ambulatory stall width	890–940 mm	11.2.3	1830 mm	3.8.3.8.(10)(a)	890–940 mm
4.5.4(b)(i) Door clear width	810 mm minimum	11.2.4.2	950 mm (810 mm retrofit)	3.8.3.8.(10)(b)(ii)	810 mm
4.5.4(b)(v) Door pull	900–1000 mm AFF	11.2.4.5 Toilet stall door pull	D-type sides; inside pull 200–300 mm from hinge side	3.8.3.8.(10)(b)(v)	900–1100 mm AFF
4.5.4(f) Coat hook height	1200 mm maximum	11.6.2 Washroom accessories	1200 mm maximum	3.8.3.8.(10)(e) → 3.8.3.8.(1)(e)	1200 mm maximum
4.5.4(f) Coat hook projection	50 mm maximum	11.6.2 Washroom accessories	50 mm maximum	3.8.3.8.(10)(e) → 3.8.3.8.(1)(e)	50 mm maximum

4.5.5(b) Clear turning diameter	1525 mm minimum	11.2.3 Accessible toilet stall	1830 × 1830 (1525 × 1525 retrofit);	3.8.3.8.(1)(a)	Clear turning space >= 1500 diameter
4.5.5(b) Overall stall size	1830 × 1830 mm minimum	11.2.3 Accessible toilet stall	1830 × 1830 mm (1525 × 1525 mm retrofit)	No equivalent found	—
4.5.5.1(a) Door clear width (open position)	900 mm minimum	11.2.4.2 Toilet stall door	950 mm (810 mm retrofit)	3.8.3.8.(1)(b)	950 mm minimum
4.5.5.1(e) Hardware / lock	22.2 N (5 lb)	11.2.4.3 Toilet stall door lock	22 N	3.8.3.8.(1)(b)	-
4.5.5.1(g)(ii) D-pull dimensions	Mi. Length 140 mm; grasp depth 30–50 mm	11.2.4.5 Toilet stall door pull	Minimum length 140 mm	3.8.3.8.(1)(b)	Minimum length 140 mm
4.5.5.1(g)(iii) D-pull mounting height	800–1000 mm	11.2.4.5	-	3.8.3.8.(1)(b)	900–1100 mm
4.5.6(c)(ii) Transfer space both sides	920 × 1525 mm each side	No equivalent found	—	No equivalent found	—
4.5.7(d) Wall clearance	38–50 mm	11.2.7 Grab bars	38–50 mm	3.8.3.8.(7)(b)	35–45 mm
4.5.8(c) Top of lavatory	820–865 mm AFF	11.3.3(b)	820–840 mm AFF	3.8.3.11.(1)(b)	≤865 mm AFF
4.5.8(d)(i) Knee clearance width	≥920 mm	11.3.3(c)	≥760 mm	3.8.3.11.(1)(c)(i)	≥920 mm
4.5.8(d)(iv) Toe clearance	≥350 mm between 280–430 mm back	11.3.3(c)	≥230 mm between 280–420 mm back	3.8.3.11.(1)(c)(iv)	≥350 mm between 280–430 mm back
4.5.8(f) Soap dispenser height	≤1100 mm AFF	No equivalent	—	3.8.3.11.(1)(g)(ii)	≤1100 mm AFF, within 500 mm of front edge
4.5.8(f) Soap dispenser location	Within 500 mm of front edge	No equivalent	—	3.8.3.11.(1)(g)(ii)	Within 500 mm
4.5.8(f) Soap dispenser operation	22.2 N	No equivalent	—	3.8.3.11.(1)(g)(i)	≤22.2 N
4.5.8(g) Clear floor space width	920 mm	11.3.2	780 mm	No equivalent (width not specified)	—
4.5.8(g) Clear floor space depth	1525 mm	11.3.2	1370 mm	3.8.3.11.(1)(f)	1370 mm minimum
4.5.8(g) Maximum space under lavatory	500 mm	11.3.2	480 mm	3.8.3.11.(1)(f)	500 mm maximum
4.5.8.1(a) Shelf height	≤1100 mm AFF	11.6.5 Shelves	Top of shelf/vanity ≤840 mm AFF	3.8.3.11.(4)(a)	≤1100 mm AFF and ≤200
4.5.8.1(b) Shelf projection	≤100 mm	NEW	—	3.8.3.11.(4)(b)	≤100 mm
4.5.8.1(c) Shelf above lavatory	≤200 mm above top of lavatory	NEW	—	3.8.3.11.(4)(a)	≤200 mm
4.5.8.1(a) Shelf height	≤1100 mm AFF	11.6.5 Shelves	Top of shelf/vanity ≤840 mm AFF	3.8.3.11.(4)(a)	≤1100 mm AFF and ≤200
4.5.8.1(b) Shelf projection	≤100 mm	NEW	—	3.8.3.11.(4)(b)	≤100 mm from wall
4.5.8.1(c) Shelf above lavatory	≤200 mm	NEW	—	3.8.3.11.(4)(a)	≤200 mm
4.5.9(a) Recessed or max projection	Recessed (preferred) or ≤100 mm projection	NEW	—	3.8.3.11	≤100 mm

4.5.9(b) Colour / tonal contrast	Required	11.6.5	Partial	-	-
4.5.9(c) Operating control height	900–1100 mm AFF	11.6.2	900–1200 mm AFF	3.8.3.11	900–1100
4.5.9(c) Operation	≤22.2 N	NEW	—	3.8.3.11	≤22.2 N
4.5.9(d) Dispensing height	900–1100 mm AFF	11.6.2	900–1200 mm	Partial	-t
4.5.9(e) Amenities at lavatory	≤1100 mm AFF; 500–610 mm	NEW	—	3.8.3.11	500 mm/ 610 mm
4.5.9(f) Clear floor space	920 × 1525 mm	NEW	—	-	
4.5.9(g)(i) Sanitary napkin disposal location	Located in WC transfer space for frontal approach	NEW	—	-	-
4.5.9(g)(ii) Operating component height	400–610 mm AFF	NEW	—	-	-
4.5.9.2(b) Clear floor space	920 × 1525 mm for forward or side approach	11.5.3.5(c)	760 × 1370 mm	-	-
4.5.9.2(d) Highest edge/component height	730–865 mm AFF	11.5.3.5(b)	Change surface ≤865 mm AFF	-	-
4.5.9.2(e) Knee clearance	685 mm high × 480 mm deep	NEW	—	-	-
4.5.9.2(f) Folded projection	≤100 mm from wall when folded	NEW	—	-	-
4.5.9.2(g)(i) Operating control height	900–1100 mm AFF	11.5.3.5(e)	Operable portions ≤1200 mm AFF	-	-
4.5.9.2(g)(ii) Operating force/operation	≤22.2 N	NEW	—	-	-
4.5.9.3(a) Change table surface	≥810 mm × 1830 mm	11.5.3.5(a)	≥760 mm × 1830 mm	3.8.3.12.(3)	810 mm × 1830 mm
4.5.9.3(a) Clear floor space	≥920 mm × 1830 mm,	11.5.3.5(c)	≥760 mm × 1370 mm	3.8.3.12.(5)(c)	≥760 mm × 1500 mm,
4.5.9.3(b) Adjustable height	450–500 mm low; 850–900 mm high	NEW	—	3.8.3.12.(5)(a)	450–500 mm low; 850–900 mm high
4.5.9.3(c)(ii) Operating mechanism height	900–1100 mm AFF	11.5.3.5(e)	≤1200 mm AFF	3.8.3.12.(5)(d)(ii)	≤1200 mm AFF
4.5.9.3(c)(iii) Operating mechanism	≤22.2 N	NEW	-	-	-
4.5.9(b) Lower urinal rim	≤430 mm AFF,	11.2.6.1	488–512 mm AFF,	3.8.3.10.(1)	≤430 mm AFF,
4.5.9(c) Upper urinal rim	≥860 mm AFF	NEW	—	-	—
4.5.9(f) Flush control height	900–1100 mm AFF	11.2.6.5	≤1120 mm AFF	3.8.3.10.(3)	
4.5.9(f) Flush control operation	Lever/automatic, closed fist, ≤22.2 N	11.2.6.5	Hand-operated or automatic	-	-
4.5.9(g) Clear floor space	920 × 1525 mm	11.2.6.2	760 × 1370 mm in front of urinal	-	-
4.5.9(h)(iii) Grab bar length	≥600 mm	11.2.6.4	≥300 mm	3.8.3.10.(2)	≥300 mm
4.5.9(h)(iv) Grab bar colour contrast	High colour /tonal contrast	NEW	-	-	-
4.5.9(i)(i) Centreline indicator width	≤50 mm	NEW	-	-	-
4.5.9(i)(ii) Centreline indicator height	≥1300 mm AFF and ≥150 mm	NEW	-	-	-

4.5.9(i)(iv) Centreline indicator at urinal	Required	NEW	-	-	-
4.5.9(j)(i) Privacy screen clearance	≥920 mm between screens	11.2.6.3	≥800 mm	-	-
4.5.9(j)(ii) Clearance from grab bars	50 mm	NEW	-	-	-
4.6.2(a) Shower interior floor space	1525 mm wide × 920 mm deep	11.4.3.1	920 mm deep)	3.8.3.13.(2)(a)	≥1500 mm wide × 900
4.6.2(b) Clear floor space at shower entrance	1525 mm wide × 920 mm	11.4.3.1	≥920 mm	3.8.3.13.(2)(b)	≥900 mm
4.6.3.1(a) Control type and operation	; ≤22.2 N	11.4.4 / 11.4.5	No value	No equivalent	.
4.6.3.1(a) Control mounting height	1000 mm AFF	NEW	-	-	-
4.6.3.1(b) Controls and shower head location	≤500 mm	11.4.4 / 11.4.5	Reachable from seated position	3.8.3.13.(2)(f)(iv)	500 mm
4.6.3.1(c) Pressure-equalizing or thermostatic mixing valve	≤1000 mm AFF	11.4.4	No value	Partial	.
4.6.3.1(d) Soap holder mounting height	900–1100 mm AFF	NEW	-	-	-
4.6.3.2(b) Adjustable shower head height	1200	NEW	-	-	-
4.6.3.3(b) Seat height	460–480 mm AFF	11.4.3.2	450–480 mm AFF	3.8.3.13.(2)(f)(i)	450–480 mm AFF
4.6.3.3(b) Front edge from controls/shower head	≤500 mm	NEW		3.8.3.13.(2)(f)(iv)	≤500 mm
4.6.4.1(a)(i) Grab bar length	≥1000 mm	11.4.3.4	900 mm	-	
4.6.4.1(a)(i) Clearance from adjacent clear floor space	50–80 mm	NEW	-	-	
4.6.4.1(a)(ii) Bottom of grab bar	600–650 mm AFF	NEW	-	-	
4.6.4.2(a)(i) Horizontal component length	≥1000 mm	NEW	-	-	-
4.6.4.2(a)(i) Horizontal component height	750–870 mm AFF	NEW	-	3.8.3.13	750–850 mm
4.6.4.2(a)(ii) Vertical component length	≥760 mm	NEW	-	-	
4.6.4.2(a)(ii) Distance from side wall	400–500 mm	NEW	-	-	-
4.7.2(a) Bathtub length	1525 mm	NEW	-	-	
4.7.2(a) Clear floor space (turning)	1525 mm diameter	NEW	-	-	-
4.7.2(b) Clear floor space width	920 mm	11.4.2.1	760 mm	3.8.3.14	750 mm
4.7.2(b) Clear floor space length	1525 mm	11.4.2.1	-	3.8.3.14	1500 mm
4.7.3.1(d) Operating force	≤22.2 N	NEW	-	3.8.3.13.(7)(d)(i)	≤22.2 N
4.7.3.2(a) Flexible hose length	≥1800 mm	11.4.5	≥1525 mm	3.8.3.13.(7)(g)	≥1800 mm
4.7.3.2(b) Fixed shower-head height	≤1200 mm	NEW	-	3.8.3.13.(7)(g)	1200 mm and 2030 mm
4.7.4.1(b) Distance from outer edge of bathtub rim / clear floor space	≤150 mm	NEW	-	-	-

4.7.4.1(c) Height above bathtub rim	80–280 mm	11.4.2.4	180–200 mm	3.8.3.13.(7)(e)(iii)	80–280 mm
4.7.4.2(a) Minimum length	≥1220 mm	11.4.2.3	≥900 mm	3.8.3.13.(7)(e)(ii)	≥1200 mm
4.7.4.2(b) Height above bathtub rim	80–280 mm	11.4.2.3	150–200 mm	3.8.3.13.(7)(e)(iv)	80–280 mm

CHAPTER 5

New FAD	Value	Old FAD	Value	OBC/AODA Section	VALUE
5.1.1(c) Max operating force	22 N	13.2.9.3	<22 N	3.8.1.5.(1)(c)	22.2 N
5.1.1(d) Push-button surface	13 mm	NEW	-	-	-
5.1.1(g)(iii) Other controls –	900 mm	13.2.7	400 mm	3.8.1.5.(1)(a)(ii)	900 mm
5.1.1(g)(iii) Other controls – maximum height	1100 mm	13.2.7	1200 mm	3.8.1.5.(1)(a)(ii)	1100 mm
5.1.1(g)(iv) Vertical power-door-operator lower extent	200 mm			3.8.3.3.(17)(c)(ii)	200 mm
5.1.1(g)(iv) Vertical power-door-operator upper extent	900 mm			3.8.3.3.(17)(c)(ii)	900 mm
5.1.2.1(a)(i) Forward-approach clear floor space	920 × 1525 mm	13.2.6 Clear floor	760 × 1370 mm	3.8.1.5.(1)(b) Clear floor space	810 × 1370 mm
5.1.2.1(a)(ii) Side-approach clear floor space	1525 × 920 mm	13.2.6 Clear floor	1370 × 760 mm	3.8.1.5.(1)(b) Clear floor space	1370 × 810 mm
5.1.2.2(a)(iii) Maximum height for other controls	1100 mm	13.2.7	1200 mm	3.8.1.5.(1)(a)(ii) Other controls	1100 mm
5.1.2.2(b) Maximum obstruction depth for touch reach	610 mm	5.3.1	635 mm		
5.1.2.2(b) Max obstruction depth for grasp reach	510 mm	5.3.1	635 mm		
5.1.2.2(b)(i) Maximum forward reach over obstruction	1100 mm	5.3.1	1120 mm		
5.1.2.2(b)(ii) Maximum side-obstruction height	865 mm	NEW	-	-	-
5.1.3(a) Charge-receptacle minimum height	400 mm	NEW	-	-	-
5.1.3(a) Charge-receptacle maximum height	1100 mm	NEW	-	-	-
5.1.3(b)(ii) Charge-station sign minimum height	1200 mm	NEW	-	-	-
5.1.3(b)(ii) Charge-station sign maximum height	1500 mm	NEW	-	-	-
5.5.1(a) Mini control height	900 mm	NEW	-	3.8.1.5.(1)(a)(ii)	900 mm
5.5.1(a) Max control height	1100 mm	13.7.5.1 / 13.7.6.1	1060 mm	3.8.1.5.(1)(a)(ii)	1100 mm
5.5.1(b) Minimum clearance from door-swing arc	600 mm	13.7.5.1 / 13.7.6.1	No value	-	-
5.6.1(ii) Maximum height of evacuation-plan base	1200 mm	NEW	-	-	-
5.6.1(iii) Minimum evacuation-plan font size	14 pt	NEW	-	-	-

5.6.2(a)(i) Min height	900 mm	13.2.7	400 mm	3.8.1.5.(1)(a)(ii)	900 mm
5.6.2(a)(i) Maximum height	1100 mm	13.2.7	1200 mm	3.8.1.5.(1)(a)(ii)	1100 mm
5.6.2(b)(i) Clear floor-	920 mm	13.2.6	760 mm	3.8.1.5.(1)(b) Clear	810 mm
5.6.2(b)(i) Clear floor-space depth at manual fire-alarm pull station	1525 mm	13.2.6 Clear	1370 mm	3.8.1.5.(1)(b) Clear floor-space length	1370 mm
5.6.2(b)(ii) Maximum operating force	22.2 N	13.2.9.3	<22 N	3.8.1.5.(1)(c)	22.2 N
5.6.3.2(b) Minimum visual-alarm mounting height above floor	2100 mm	13.3.4.5	2030 mm	-	-
5.6.3.2(b) Max visual-alarm distance below ceiling	150 mm	13.3.4.5	152 mm	-	-
5.6.3.2(c) Maximum visual-alarm spacing	15 m	13.3.4.6 / 13.3.4.7	15 m	-	-
5.6.3.2(e)(iii) Maximum pulse duration	0.2 s	13.3.4.3	0.2 s	-	-
5.6.3.2(e)(iii) Maximum duty cycle	40%	13.3.4.3 Maximum duty cycle	40%	-	-
5.6.3.2(e)(v) Min flash intensity	75 cd	13.3.4.3	75 cd	-	-
5.6.3.2(e)(v) Min flash rate	1 Hz	13.3.4.4	1 Hz	-	-
5.6.4.2(d) Minimum area-of-refuge clear-space width	920 mm	13.1.8.2	850 mm	-	-
5.6.4.2(d) Minimum area-of-refuge clear-space depth	1525 mm	13.1.8.2	1370 mm	-	-
5.6.4.2(d) Minimum adjacent turning-circle diameter	1525 mm	NEW	-	--	-
5.6.4.2(d) Preferred adjacent turning-circle	2500 mm	NEW	-	--	-
5.7(f) Min clear headroom	2100	New	-	-	-
5.8.2.2(e) Maximum approach distance to sign	100 mm	NEW		-	-
5.8.2.2(f) Minimum clear floor-space width	455 mm	NEW	-	-	-
5.8.2.2(f) Minimum clear floor-space depth	455 mm	NEW	-	-	-
5.8.2.2(g) Minimum clear wall area around sign	75 mm	NEW	-	-	-
5.9.2(a)(ii) Side approach clear floor space – width	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
5.9.2(a)(ii) Side approach clear floor space – depth	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
5.9.2(b) Knee clearance – width	760 mm	NEW	-	-	-
5.9.2(b) Knee clearance – depth	480 mm	NEW	-		
5.9.2(b) Knee clearance – height	680 mm	NEW	-	3.8.3.11 Lavatories (knee clearance)	685 mm
5.9.2(c) Minimum toe clearance height	350 mm	NEW	-	3.8.3.11 Lavatories (toe clearance)	350 mm
5.9.3(c)(ii) Maximum display panel height	1380 mm	NEW	-	-	-

5.9.3(d) Minimum vertical display information height	750 mm	NEW	-	-	-
5.9.3(d) Maximum vertical display information height	1750 mm	NEW	-	-	-
5.9.4(a) Maximum operating-control height	1100 mm	13.2.7	1200 mm	3.8.1.5.(1)(a)(ii)	1100 mm
5.9.4(b) Maximum operating force	22 N	13.2.9.3	<22 N	3.8.1.5.(1)(c)	22.2 N
5.10.1(a) Forward approach clear floor space – width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
5.10.1(a) Forward approach clear floor space – depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
5.10.1(a) Side approach clear floor space – width	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
5.10.1(a) Side approach clear floor space – depth	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
5.10.1(c) Maximum operating control height	1100 mm	13.2.7 Controls and operating mechanisms	**1200 mm**	**3.8.1.5.(1)(a)(ii)**	**1100 mm**
5.10.1(d) MiN height to bottom	900 mm	NEW	**-**	**-**	**-**
5.10.1(d) Max height to top	1300 mm	NEW	**-**	**-**	**-**

CHAPTER 6

New FAD	Value	Old FAD	Value	OBC/AODA Section	VALUE
6.1.1(a) Minimum lighting along accessible routes	150 lux	9.5.9	50 lux	-	-
6.1.1(b) Min accessible-route clear width	1100 mm	9.5.4 Minimum	1060 mm	-	-
6.1.2.2(d) Accessible seating-space depth for front or rear approach	1525 mm	12.8.4.4	1370 mm	3.8.3.6.(1)(b)(ii)	1220 mm
6.1.2.2(e) Minimum turning-circle diameter	1525 mm	NEW	-	-	-
6.1.2.2(e) Preferred turning-circle diameter	2440 mm	NEW	-	-	-
6.1.2.4(a) Minimum storage spaces where fewer than 200 fixed seats are provided	1	NEW	-	3.8.3.6.(3)(a) d	1
6.1.2.4(a) Fixed-seat threshold for one storage space	200	NEW	-	3.8.3.6.(3)(a)	200
6.1.2.4(a) Minimum storage spaces where more than 200 fixed seats are provided	2	NEW	-	3.8.3.6.(3)(a)	2
6.1.2.4(b) Minimum mobility-aid storage-space width	920 mm	NEW	-	3.8.3.6.(3)(a)	810 mm

6.1.2.4(b) Minimum mobility-aid storage-space depth	1525 mm	NEW	-	3.8.3.6.(3)(a)	1370 mm
6.2.1(c) Min accessible-route clear width	1100 mm	9.5.4	1060 mm	-	-
6.2.1(d) Preferred turning-circle diameter adjacent to main entrance	2440 mm	NEW	-	-	-
6.2.1(g) Minimum clear floor-space width at servery/millwork	920 mm	13.2.6	760 mm	3.8.1.5.(1)(b)	810 mm
6.2.1(g) Minimum clear floor-space depth at servery/millwork	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.2.1(h) Max height	1000 mm	NEW	-	-	-
6.2.1(k) Min illumination at work surfaces	375 lux	9.3.1	200 lux	-	-
6.3.1(a) Min accessible-route clear width	1100 mm	9.5.4	1060 mm	-	-
6.3.1(e)(i) Maximum display-case height	920 mm	NEW	-	-	-
6.3.1(e)(ii) Minimum clear floor-space width in front of exhibits	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.3.1(e)(ii) Minimum clear floor-space depth in front of exhibits	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.3.1(e)(v) Maximum height of controls and operating mechanisms for interactive displays	1100 mm	13.2.7 Controls and operating mechanisms	1200 mm	3.8.1.5.(1)(a)(ii)	1100 mm
6.3.1(e)(vi) Maximum illumination at exhibits	200 lux	NEW	-	-	-
6.4.1(a) Minaccessible-route clear width	1100 mm	9.5.4	1060 mm	-	-
6.4.1(a) Prefaccessible-route clear width	1830 mm	9.5.1	1830 mm	-	-
6.4.1(b)(i) Forward approach clear floor space – width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.4.1(b)(i) Forward approach clear floor space – depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.4.1(b)(ii) Side approach clear floor space – width	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.4.1(b)(ii) Side approach clear floor space – depth	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.4.2(a) Min clear aisle width between tray slide	1100 mm	NEW	-	-	-
6.4.2(a) Preferred clear aisle width	1830 mm	NEW	-	-	-
6.4.2(b) Minimum tray-slide height	730 mm	NEW	-	-	-
6.4.2(b) Maximum tray-slide height	865 mm	NEW	-	-	-

6.4.2(c) Max mounting height accessible shelves	1370 mm	NEW	-	-	-
6.4.2(c) Min proportion of accessible shelves	50%	NEW	-	-	-
6.4.2(d) Maximum side reach depth	500 mm	NEW	-	-	-
6.4.3(a)(i) Forward approach clear floor space	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.4.3(a)(i) Forward approach clear floor space	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.4.3(a)(ii) Side approach clear floor space – width	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.4.3(a)(ii) Side approach clear floor space – depth	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.4.4(a) Min proportion accessible dining/seating a	20%	NEW	-	-	-
6.5.1(b) Clear floor space – width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.5.1(b) Clear floor space – depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.5.1(c) Maximum control height	1100 mm	13.2.7 Controls and operating mechanisms	1200 mm	3.8.1.5.(1)(a)(ii)	1100 mm
6.5.1.1(a) Minimum galley kitchen width	1100 mm	NEW	-	-	-
6.5.1.1(a) Preferred galley kitchen width	1830 mm	NEW	-	-	-
6.5.1.1(b) Minimum doorway clear width	950 mm	9.2.2 Door clear width	860 mm	3.8.3.6.(1)(a)	950 mm
6.5.1.2(a) Preferred U-shaped kitchen turning circle	2500 mm	NEW	-	-	-
6.5.1.2(a) Retrofit U-shaped kitchen turning circle	2130 mm	NEW	-	-	-
6.5.1.2(b) Minimum entrance/exit clear width	950 mm	9.2.2 Door clear width	860 mm	3.8.3.6.(1)(a)	950 mm
6.5.1.3(a) Minimum L-shaped kitchen work-area width	1100 mm	NEW	-	-	-
6.5.1.3(a) Preferred L-shaped kitchen work-area width	1830 mm	NEW	-	-	-
6.5.2(i) Minimum work surface width	760 mm	NEW	-	-	-
6.5.2(i) Minimum work surface depth	600 mm	NEW	-	-	-
6.5.2(ii) Minimum work surface height	730 mm	NEW	-	-	-
6.5.2(ii) Maximum work surface height	865 mm	NEW	-	-	-
6.5.2(iii) Knee clearance width	760 mm	NEW	-	-	-

6.5.2(iii) Knee clearance depth	480 mm	NEW	-	-	-
6.5.2(iii) Knee clearance height	685 mm	11.4.3 Knee clearance	685 mm	3.8.3.11	685 mm
6.5.2(iv) Clear floor space width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.5.2(iv) Clear floor space depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.5.2(iv) Maximum under-counter projection	480 mm	NEW	-	-	-
6.5.3(a) Maximum shelf height above counter	1100 mm				
6.5.3(a) Minimum accessible shelf proportion	50%				
6.5.3(b)(i) Maximum cabinet hardware height	1100 mm				
6.5.3(c) Toe space depth	150 mm				
6.5.3(c) Toe space height	230 mm				
6.5.4(a) Sink centreline from side wall	460 mm	11.4.1 Sink centreline	460 mm	3.8.3.11	460 mm
6.5.4(b) Minimum sink rim height	810 mm	NEW	-	3.8.3.11	840 mm
6.5.4(b) Maximum sink rim height	860 mm	NEW	-	3.8.3.11	840 mm
6.5.4(c) Clear floor space width	920 mm	11.4.1 Clear floor space	760 mm	3.8.3.11	760 mm
6.5.4(c) Clear floor space depth	1525 mm	11.4.1 Clear floor space	1370 mm	3.8.3.11	1370 mm
6.5.4(c) Maximum under-sink projection	480 mm	NEW	-	-	-
6.5.4(d) Knee clearance width	920 mm	NEW	-	3.8.3.11	920 mm
6.5.4(d) Knee clearance height	685 mm	11.4.3 Knee clearance	685 mm	3.8.3.11	685 mm
6.5.4(d) Knee clearance depth	200 mm	NEW	-	-	-
6.5.4(d) Toe clearance height	230 mm	NEW	-	3.8.3.11	350 mm
6.5.4(d) Toe clearance depth	230 mm	NEW	-	-	-
6.5.5.1(b) Cooktop clear floor space width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.5.5.1(b) Cooktop clear floor space depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.5.5.1(b) Maximum under-cooktop projection	480 mm				
6.5.5.1(c) Minimum cooktop height	810 mm				
6.5.5.1(c) Maximum cooktop height	860 mm				
6.5.5.1(d) Knee clearance width	920 mm			3.8.3.11	920 mm
6.5.5.1(d) Knee clearance depth	200 mm				
6.5.5.1(d) Toe clearance depth	230 mm				

6.5.5.1(d) Toe clearance height	230 mm			3.8.3.11	350 mm
6.5.5.1(f)(i) Minimum adjacent work-surface width	400 mm				
6.5.5.2(b)(ii) Minimum pull-out shelf extension	250 mm				
6.5.5.3(b) Maximum freezer shelf height	1100 mm				
6.5.5.3(c) Refrigerator clear floor space width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.5.5.3(c) Refrigerator clear floor space depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.5.5.3(c) Maximum centreline offset	610 mm	NEW	-	-	-
6.5.5.4(a) Dishwasher clear floor space width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.5.5.4(a) Dishwasher clear floor space depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
New Provision	Value	Old FADS Provision	Value	OBC Provision	Value
6.5.1(b) Clear floor space – width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.5.1(b) Clear floor space – depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.5.1(c) Maximum control height	1100 mm	13.2.7 Controls and operating mechanisms	1200 mm	3.8.1.5.(1)(a)(ii)	1100 mm
6.5.1.1(a) Minimum galley kitchen width	1100 mm	NEW	-	-	-
6.5.1.1(a) Preferred galley kitchen width	1830 mm	NEW	-	-	-
6.5.1.1(b) Minimum doorway clear width	950 mm	9.2.2 Door clear width	860 mm	3.8.3.6.(1)(a)	950 mm
6.5.1.2(a) Preferred U-shaped kitchen turning circle	2500 mm	NEW	-	-	-
6.5.1.2(a) Retrofit U-shaped kitchen turning circle	2130 mm	NEW	-	-	-
6.5.1.2(b) Minimum entrance/exit clear width	950 mm	9.2.2 Door clear width	860 mm	3.8.3.6.(1)(a)	950 mm
6.5.1.3(a) Minimum L-shaped kitchen work-area width	1100 mm				
6.5.1.3(a) Preferred L-shaped kitchen work-area width	1830 mm	NEW	-	-	-
6.5.2(i) Minimum work surface width	760 mm	NEW	-	-	-
6.5.2(i) Minimum work surface depth	600 mm	NEW	-	-	-
6.5.2(ii) Minimum work surface height	730 mm	NEW	-	-	-

6.5.2(ii) Maximum work surface height	865 mm	NEW	-	-	-
6.5.2(iii) Knee clearance width	760 mm	NEW	-	3.8.3.11	920 mm
6.5.2(iii) Knee clearance depth	480 mm	NEW	-	-	-
6.5.2(iv) Clear floor space width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.5.2(iv) Clear floor space depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.5.2(iv) Maximum under-counter projection	480 mm	NEW	-	-	-
6.5.3(a) Maximum shelf height above counter	1100 mm	NEW	-	-	-
6.5.3(a) Minimum accessible shelf proportion	50%	NEW	-	-	-
6.5.3(b)(i) Maximum cabinet hardware height	1100 mm	NEW	-	-	-
6.5.3(c) Toe space depth	150 mm	NEW	-	-	-
6.5.3(c) Toe space height	230 mm	NEW	-	-	-
6.5.4(b) Minimum sink rim height	810 mm	NEW	-	3.8.3.11	840 mm
6.5.4(b) Maximum sink rim height	860 mm	NEW	-	3.8.3.11	840 mm
6.5.4(c) Clear floor space width	920 mm	11.4.1 Clear floor space	760 mm	3.8.3.11	760 mm
6.5.4(c) Clear floor space depth	1525 mm	11.4.1 Clear floor space	1370 mm	3.8.3.11	1370 mm
6.5.4(c) Maximum under-sink projection	480 mm	NEW	-	-	-
6.5.4(d) Knee clearance width	920 mm	NEW	-	3.8.3.11	920 mm
6.5.4(d) Knee clearance height	685 mm	11.4.3 Knee clearance	685 mm	3.8.3.11	685 mm
6.5.4(d) Knee clearance depth	200 mm	NEW	-	-	-
6.5.4(d) Toe clearance height	230 mm	NEW	-	3.8.3.11	350 mm
6.5.4(d) Toe clearance depth	230 mm	NEW	-	-	-
6.5.5.1(b) Cooktop clear floor space width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.5.5.1(b) Cooktop clear floor space depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.5.5.1(b) Maximum under-cooktop projection	480 mm	NEW	-	-	-
6.5.5.1(c) Minimum cooktop height	810 mm	NEW	-	-	-
6.5.5.1(c) Maximum cooktop height	860 mm	NEW	-	-	-
6.5.5.1(d) Knee clearance width	920 mm	NEW	-	3.8.3.11	920 mm
6.5.5.1(d) Knee clearance depth	200 mm	NEW	-	-	-
6.5.5.1(d) Toe clearance depth	230 mm	NEW	-	-	-

6.5.5.1(d) Toe clearance height	230 mm	NEW	-	3.8.3.11	350 mm
6.5.5.1(f)(i) Minimum adjacent work-surface width	400 mm	NEW	-	-	-
6.5.5.2(b)(ii) Minimum pull-out shelf extension	250 mm	NEW	-	-	-
6.5.5.3(b) Maximum freezer shelf height	1100 mm	NEW	-	-	-
6.5.5.3(c) Refrigerator clear floor space width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.5.5.3(c) Refrigerator clear floor space depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.5.5.3(c) Maximum centreline offset	610 mm	NEW	-	-	-
6.5.5.4(a) Dishwasher clear floor space width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.5.5.4(a) Dishwasher clear floor space depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.6.1(a) Minimum accessible path width	1100 mm	9.5.4	1060 mm		
6.6.1(b) Turning circle	2500 mm	NEW	-	-	-
6.6.1(c) Minimum security-gate clear width	950 mm	9.2.2 Door /	860 mm	3.8.3.3	950 mm
6.6.1(i)(i) Minimum illumination at study carrels, work and reading surfaces	300 lux	9.3.1	200 lux	-	-
6.6.1(i)(ii) Minimum illumination at book stacks	200 lux	9.5.9	50 lux	-	-
6.6.1(i)(ii) Nominal working height	920 mm	NEW	-	-	-
6.6.2(b) Preferred turning circle at book drop	2500 mm	NEW	-	-	-
6.6.2(b) Retrofit clear floor space width	920 mm	13.2.6 Clear floor area	760 mm	3.8.1.5.(1)(b)	810 mm
6.6.2(b) Retrofit clear floor space depth	1525 mm	13.2.6 Clear floor area	1370 mm	3.8.1.5.(1)(b)	1370 mm
6.6.2(d) Minimum book-drop slot height	900 mm	13.2.7	400 mm	3.8.1.5.(1)(a)(ii)	900 mm
6.6.2(d) Maximum book-drop slot height	1100 mm	13.2.7	1200 mm	3.8.1.5.(1)(a)(ii)	1100 mm
6.6.3(a) Min aisle width between book stacks/carousels	1100 mm	9.5.4	1060 mm	-	-
6.7.3(b) Equipment floor space	920 × 1525 mm	13.2.6	760 × 1370 mm	3.8.1.5(1)(b)	810 × 1370 mm
6.7.4(b) Pool deck slope	1:50 (2%)	NEW	-	-	-
6.7.4(c) Drainage opening	13 mm	NEW	-	-	-
6.7.4(d) Pool route width	1100 mm	9.5.4	1060 mm	-	-
6.7.4(h) Diving overhead clearance	2100 mm	14.3.2.13	2030 mm	-	-
6.7.4.2(a) Running slope	1:12	8.1.4	1:12	3.8.3.4	1:12
6.7.4.2(b) Handrail height	865–965 mm	8.3.8.2	865–920 mm	3.8.3.8	865–965
6.7.4.2(c) Clear Widthh	1100 mm	8.1.7	950 mm	3.8.3.4	1100 mm
6.7.4.2(d) Landing size	1670 × 1670	NEW	-	-	-

6.7.4.2(g) Bottom water depth	600–900 mm	NEW	-	-	-
6.7.4.2(h) Barrier area width	750 mm	NEW	-	-	-
6.7.4.2(i) Landing wall depth	450–550 mm	NEW	-	-	-
6.7.4.2(ii) Pool wall width	250–300 mm	NEW	-	-	-
6.7.4.2(iii) Depth marking height	100 mm	NEW	-	-	-
6.7.4.2(k)(i) Submerged ramp slope	1:9	NEW	-	-	-
6.7.3(b) Equipment floor space	920 × 1525 mm	13.2.6	760 × 1370 mm	3.8.1.5(1)(b)	810 × 1370 mm
6.7.4(b) Pool deck slope	1:50 (2%)	NEW	-	-	-
6.7.4(c) Drainage opening width	13 mm	NEW	-	-	-
6.7.4(d) Pool route width	1100 mm	9.5.4	1060 mm		
6.7.4(h) Diving overhead clearance	2100 mm	14.3.2.13	2030 mm		
6.7.4.2(a) Ramp running slope	1:12	8.1.4	1:12	3.8.3.4	1:12
6.7.4.2(b) Ramp handrail height	865–965 mm	8.3.8.2	865–920 mm	3.8.3.8	865–965 mm
6.7.4.2(c) Ramp clear width	1100 mm	8.1.7	950 mm	3.8.3.4	1100 mm
6.7.4.2(d) Ramp landing size	1670 × 1670 mm	NEW	-	-	-
6.7.4.2(g) Bottom water depth	600–900 mm	NEW	-	-	-
6.7.4.2(h) Barrier area width	750 mm	NEW	-	-	-
6.7.4.2(i) Landing wall depth	450–550 mm	NEW	-	-	-
6.7.4.2(ii) Pool wall width	250–300 mm	NEW	-	-	-
6.7.4.2(iii) Depth marking height	100 mm	NEW	-	-	-
6.7.4.2(k)(i) Submerged ramp slope	1:9	NEW	-	-	-
6.7.4.4(a) Maximum water level	1200 mm	NEW	-	3.11.3.3(2)	1220 mm
6.7.4.4(c) Minimum seat width	400 mm	NEW	-	-	-
6.7.4.4(d) Deck-space width	920 mm	NEW	-	3.11.3.3(4)(a)	915 mm
6.7.4.4(d) Deck-space length	1525 mm	NEW	-	3.11.3.3(4)(b)	1220 mm
6.7.4.4(d) Rear-seat offset	305 mm	NEW	-	3.11.3.3(4)(b)	305 mm
6.7.4.4(e)(ii) Maximum control height	1100 mm	13.2.7	1200 mm	-	-
6.7.4.4(a) Lift weight capacity	135 kg	NEW	-	3.11.3.3(6)(a)	135 kg
6.7.4.4(a) Static load capacity	1.5 × rated load	NEW	-	3.11.3.3(6)(b)	1.5 × rated load
6.7.4.5(b)(ii) Handrail extension	300 mm	14.3.2.6	300 mm	-	-

6.7.5.1(a) Spa water temperature	33–34 °C	NEW	-	-	-
6.7.5.1(c) Minimum exercise depth	1050 mm	NEW	-	-	-
6.7.5.1(c) Maximum exercise depth	1200 mm	NEW	-	3.12.2.1(2)	1200 mm
6.7.5.2(a) Main-entrance deck width	1830 mm	NEW	-	3.12.2.1(4)(a)	1800 mm
6.7.5.2(b) All-sides deck width	1100 mm	NEW	-	3.12.2.1(4)(b)	900 mm
6.7.5.4(a) Transfer-wall height	405–485 mm	NEW	-	3.12.3.2(3)(a)	405–485 mm
6.7.5.4(b) Transfer-wall depth	300–400 mm	NEW	-	3.12.3.2(3)(b)	300–400 mm
6.7.5.4(d)(ii) Grab-bar height	100–150 mm	NEW	-	3.12.3.2(3)(d)(ii)	100–150 mm
6.7.5.4(d)(iii) Grab-bar side clearance	610 mm	NEW	-	3.12.3.2(3)(d)(iii)	610 mm
6.7.5.4(d)(v) Grab-bar diameter	30–40 mm	NEW	-	3.12.3.2(3)(d)(iv) / 3.8.3.8(7)(a)	30–40 mm
6.7.5.4(e)(iii) Transfer-space size	900 × 2200 mm	NEW	-	3.12.3.2(4)(c)	900 × 2200 mm
6.7.5.4(e)(iv) Transfer-space slope	≥2%	NEW	-	3.12.3.2(4)(d)	<2%
6.7.6.1(b) Emergency telephone distance	30 m	NEW	-	3.12.5.1(2)	30 m
6.7.6.2(a) Emergency-stop distance	15 m	NEW	-	3.12.5.1(3)(b)(ii)	15 m
6.8.2(b) Minimum route width	1100 mm	9.5.4	1060 mm	3.8.1.3	1100 mm
6.8.2(g)(i) Emergency lettering height	25 mm	NEW	-	-	-
6.8.2(g)(i) Emergency lettering stroke	5 mm	NEW	-	-	-
6.8.3.1(a) Bench seat height	480–520 mm	12.9.3.1	450–500 mm	3.8.3.13(5)(e)	480–520 mm
6.8.3.1(b) Bench seat depth	510–610 mm	12.9.3.1	610 mm	3.8.3.13(5)(e)	760 mm
6.8.3.2(c)(i) Forward floor space	920 × 1525 mm	12.6.3	760 × 1370 mm	3.8.1.5(1)(b)	810 × 1370 mm
6.8.3.2(c)(ii) Side floor space	1525 × 920 mm	12.6.3	1370 × 760 mm	3.8.1.5(1)(b)	1370 × 810 mm
6.8.3.2(e) Lock mechanism height	900–1100 mm	12.6.8	≤1060 mm	3.8.1.5(1)(a)(ii)	900–1100 mm
6.8.3.2(f)(i) Locker sign height	≤1525 mm	NEW	-	-	-
6.8.3.2(f)(ii) Locker character height	13–19 mm	NEW	-	-	-
6.8.4(e)(i) Bench dimensions	1830 × 810 mm	12.9.3.1	1220 × 610 mm	3.8.3.13(5)(e)	1830 × 760 mm
6.8.4(e)(iii) Transfer-space width	920 mm	12.9.3.2		3.8.3.13(5)(f)	900 mm
6.8.4(e)(iii) Transfer-space length	Full bench length	12.9.3.2	-	3.8.3.13(5)(f)	Full bench length
6.8.4(f)(i) Grab-bar front offset	≥150 mm	NEW	-	-	-

6.8.4(f)(i) Grab-bar bench clearance	≥150 mm	NEW	-	-	-
6.8.4(g) Minimum illumination	300 lux	NEW	-	-	-
6.8.4(h) Mirror lower edge	≤175 mm	NEW	-	3.8.3.11	≤1000 mm
6.9.1(c) Minimum depth	2500 mm	12.7.1	2440 mm	-	-
6.9.1(g) Guard elevation	≥600 mm	12.7.4	-	3.3.1.18(1)(c)(i)	>600 mm
6.10.2(c) Knee-space overlap	480 mm	NEW	-	-	-
6.10.2(e) Counter lighting	500 lux	13.2.10	100 lux	-	-
6.10.2(f)(i) Counter width	920 mm	13.2.3	760 mm	3.8.3.2(3)(a)	920 mm
6.10.2(f)(i) Counter height	730–865 mm	13.2.3	730–860 mm	3.8.3.2(3)(b)	730–865
6.10.2(f)(ii) Knee-space depth	480 mm	13.2.4	410 mm	3.8.3.2(3)(c)	480 mm
6.10.2(f)(ii) Knee-space width	920 mm	13.2.4	760 mm	3.8.3.2(3)(c)	920 mm
6.10.2(f)(iii) Forward reach depth	510–610 mm	13.2.7	≤510 mm	3.8.1.5	480–635
6.11.1(d) Accessible seating	3% / ≥1	NEW	-	-	-
6.11.1(g) Table surface height	≥510 mm	NEW	-	-	-
6.11.2(c) Queue clear width	1100 mm	9.6.2	1060 mm	3.8.1.3(1)	1100 mm
6.11.2(e) Minimum turning space	1700 × 1700 mm	5.2.1	2440 mm diameter	-	-
6.11.2(e) Preferred turning space	2500 × 2500	5.2.1	2440 mm	-	-
6.12.1(e)(ii) TAI depth	610–920 mm	9.8.5	610 mm	3.8.3.18	600–650
6.13.2(c) Preferred turning diameter	2500 mm	5.2.1 / 12.9.2	2440 mm		
6.13.2(e) Control height	≤1100 mm	13.2.7	≤1200 mm	3.8.1.5(1)(a)	900–1100
6.13.2(f) Forward clear floor space	920 × 1525 mm	13.2.6	760 × 1370 mm	3.8.1.5(1)(b)	810 × 1370
6.13.2(f) Side clear floor space	1525 × 920 mm	13.2.6	1370 × 760 mm	3.8.1.5(1)(b)	1370 × 810 mm
6.14.1(b) Power door threshold	>60 persons	NEW	-	-	-
6.14.1(d) Secondary route width	1100 mm	9.5.4	1060 mm	3.8.1.3	1100 mm
6.14.2(a) Accessible built-in elements	≥10% / ≥1	NEW	-	-	-
6.14.2(c) Wider seating	≥2%	NEW	-	-	-
6.14.2(c) Seat load capacity	227 kg	NEW	-	-	-
6.14.2(d) Adjustable tables/chairs	≥2%	NEW	-	-	-
6.14.2(e) Accessible shelving	≥50%	NEW	-	-	-
6.14.2(f) Left-handed writing surfaces	≥10% / ≥1	NEW	-	-	-
6.14.3(a) Accessible seating options	≥2	NEW	-	-	-
6.14.5(c)(ii) Work surface width	920 mm	11.4.2	760 mm	3.8.3.2(3)(a)	920 mm
6.14.5(c)(ii) Work surface height	≤865 mm	11.4.2	≤860 mm	3.8.3.2(3)(b)	730–865

6.14.5(c)(ii) Knee-space width	920 mm	11.4.2	760 mm	3.8.3.2(3)(c)	920 mm
6.14.5(c)(ii) Knee-space depth	480 mm	11.4.2	410 mm	3.8.3.2(3)(c)	480 mm
6.14.6(a) Background noise	≤30 dBA	NEW	-	-	-
6.14.6(b) General lighting	500 lux	14.5.4	100 lux		
6.14.6(b) Podium lighting	750 lux	NEW	-	-	-
6.18.1(a) Accessible aisle width	1100 mm	9.5.4	1060 mm	3.8.1.3	1100 mm
6.18.1(a) Preferred aisle width	1830 mm	9.5.1	1830 mm		
6.18.1(b) Accessible counter width	920 mm	13.2.3	760 mm	3.8.3.2(3)(a)	920 mm
6.18.1(b)(i) POS device reach	≤600 mm	NEW	-	-	-
6.19.1(a) Clear floor space	920 × 1525 mm	13.2.6	760 × 1370 mm	3.8.1.5(1)(b)	810 × 1370 mm
6.19.1(c)(ii) Reach obstruction depth	255–535 mm	13.2.7	255–510 mm	-	-

7.5 Glossary

Access Aisle - Access aisles refer to an accessible and safe pedestrian space or route used for loading and unloading from the vehicle and safe travel to and from designated accessible parking spaces to the nearest accessible route/entrance. Access aisles include pavement markings for easy identification and are often shared between accessible parking spaces.

Accessible - Refers to any space, feature, element, site, environment, or facility that can be used (e.g., located, approached, entered, exited, or operated) by people with varying disabilities, with or without mobility aids or assistive devices. It can also refer to services, practices, and programs.

Accessible Element - An element specified by this standard (for example, telephone, controls etc.).

Accessible Route - A continuous, unobstructed path (interior or exterior) connecting users to accessible elements, features, amenities, and spaces. Typically, accessible routes include parking access aisles, pedestrian sidewalks and curb ramps, and interior corridors, floors, elevators, and ramps.

Accessible space - Space that complies with this standard

Accommodation - A term used to reflect how an individual's needs are met for unique circumstances where a solution may not be "technically" feasible or practical to implement. Where barriers continue to exist because it is impossible to remove those barriers at a given point in time, then accommodation should be provided to the extent possible, short of "undue hardship." There is no set formula for accommodating people with disabilities. Each person's needs are unique and must be considered afresh when an accommodation request is made. A solution may meet one person's requirements but not another's, although it is also the case that many accommodations will benefit large numbers of persons with disabilities.

Adaptable - The ability of a certain building space or element, such as kitchen counters, sinks, or grab bars, to be added or altered so as to accommodate the needs of individuals with or without disabilities or to accommodate the needs of persons with different types or degrees of disabilities.

Addition - An expansion, extension, or increase in the gross floor area of a facility.

Alteration - A change to a facility that affects or could affect the usability of the facility or part thereof. Alterations include but are not limited to, remodeling, renovation, retrofitting, rehabilitation, reconstruction, historic restoration, resurfacing of circulation paths or vehicular ways, changes or rearrangement of the structural parts or elements, and changes or rearrangement in the plan configuration of walls and full-height partitions. Normal maintenance, painting or wallpapering, or changes to mechanical or electrical systems are not alterations unless they affect the usability of the building.

Ambient Light - The total amount of light in a space, including daylight or artificial light, whether from direct sources or reflected from surfaces in that space.

Amenities - Features or services that are usable by the public that typically increases physical comfort throughout the built environment (e.g., washrooms, resting areas, telephones, drinking fountains, or food vending machines).

Amenity Strip - A section of a path or sidewalk that is set aside for placement of street furniture (e.g., benches, hydro poles, vending machines, and post boxes), to ensure it is located away from the pedestrian path of travel.

Anthropometrics - Refers to the study of human physical measurement, movement, and proportions of the human body, with respect to reach ranges, sight lines, etc.

Area of Refuge - A safe holding area that has been designated in a Fire Safety Plan, with direct access to an exit, and is equipped with separate ventilation and communication equipment. It is a place where people can wait temporarily until they can exit safely or await further instructions or assistance during an emergency evacuation.

Arena - Refers to an enclosed, indoor venue, often circular or oval-shaped, and designed to showcase a variety of performance or sporting events (e.g., hockey, basketball, football, or soccer) in a large open space, typically surrounded by most or all sides by tiered seating for spectators. Often, the key feature of an arena is that the event space is the lowest point, allowing for maximum visibility.

Assembly Area - A room or space accommodating a group of individuals for educational, recreational, political, social, civic or amusement purposes, or for the consumption of food and drink.

Assistive Listening Systems (ALS) - Assistive listening systems (ALS) augment standard public address and audio systems by providing signals that can be received directly by persons with special receivers or their own hearing aids and which eliminate or filter background noise. The type of assistive listening system appropriate for a particular application depends on the characteristics of the setting, the nature of the program, and the intended audience. Magnetic induction loops, and infrared and radio frequency systems are types of listening systems that are appropriate for various applications. Refer to Induction Loop or Infrared Assistive Listening Systems.

Attic or roof space - The space between the roof and the ceiling of the top story or between a dwarf wall and a sloping roof.

Audible Signals - Signals that emit a distinctive sound, communication, or alert to provide a warning or indicate a readiness to respond (e.g., alarm bell or signal).

Automatic Door - A door equipped with electronic sensors allowing it to be opened and triggered when pedestrians approach (e.g., typically sliding doors or swing doors equipped with guardrails for safety). See Power-Assisted Door.

Barrier - Refers to anything that prevents a person with a disability from fully participating in any aspect of society because of their disability. This can include a physical barrier, an architectural barrier, an information or communication barrier, an attitudinal barrier, or a technological barrier for example. It can also include policies and practices that result in an obstacle or hardship (e.g., systemic barrier).

Blended Curb - A connection with a slope of 1:20 (5%) or less between the level of a pedestrian walkway and the level of a crosswalk.

Board room / Conference room / Meeting room - A room used for meetings, which accommodates six or more people.

Bollard - Typically a 900 mm high (minimum) post to mark a pedestrian path from vehicular traffic.

Braille - Braille is a system of touch reading for the blind which employs embossed dots evenly arranged to represent numbers and letters. Literary Braille, as officially approved, comprises two grades. Grade 1 Braille is in full spelling and consists of the letters of the alphabet, punctuation, numbers, and a number of composition signs that are special to Braille. Grade 2 Braille consists of Grade 1 and 189 contractions and short-form words, typically used for signage where space is limited.

Building - A structure occupying an area greater than ten square meters, consisting of a wall, roof and floor or any of them, or a structural system serving the function thereof, including all plumbing, fixtures and service systems appurtenant thereto; or a structure occupying an area of ten square meters or less that contains plumbing, including the plumbing appurtenant thereto; or structures designated in the Ontario Building Code.

Change Room - See Dressing Room.

Clear - Unobstructed.

Clear Floor Space - The amount of unobstructed floor or ground space required to accommodate a single stationary user, or a mobility device / aid, such as wheelchairs, scooters, canes, and crutches.

Closed Circuit - A telephone with dedicated line(s), such as a house phone, courtesy phone or phone that must be used to gain entrance to a building or part thereof.

Closer - See Door Closer.

Common Use - Refers to those interior and exterior rooms, spaces or elements that are made available regularly and daily for use by the occupants or visitors of a facility. (e.g., common use areas of an office may include kitchens, reception areas, washrooms, etc.).

Communication - Devices that enable or enhance the ability of people to receive or transmit information, Devices and Systems usually electronically, for communication.

Comply with - Meet one or more specifications of this standard.

Cross Slope - The slope that is perpendicular to the direction of travel. Opposite of running slope.

Crosswalk - That part of a roadway at an intersection is marked for safe pedestrian crossing (e.**g., by lines or other markings on the surface).**

Curb Ramp - A sloped ramp surface cutting through a curb or built up to it (e.g., between the sidewalk and the road surface).

Dais - Refer to Stage.

Deaf - A term to describe people with a severe to profound hearing loss (90 decibels or greater), with little or no residual hearing. Lowercase deaf is used when referring to the medical / audio logical condition of having little or no hearing, while uppercase Deaf refers to individuals who identify themselves as deaf and share a culture and community, not just a medical condition.

Deafened - A term used to describe individuals who grow up hearing or hard of hearing and suddenly, or gradually, experience a profound loss of hearing. Late-deafened adults usually cannot understand speech without visual clues such as print interpretation (e.g., computerized note taking), speech reading or Sign Language.

DeafSpace - Deaf people inhabit a rich sensory world where vision and touch are a primary means of spatial awareness and orientation. Many use sign languages, a visual-kinetic mode of communication and maintain a strong cultural identity built around these sensibilities and shared life experiences. Our built environment, largely constructed by and for hearing individuals, presents a variety of surprising challenges to which deaf people have responded with a particular way of altering their surroundings to fit their unique ways-of- being. This approach is often referred to as DeafSpace. (Source: Gallaudet University, Campus Design and Planning).

Disability - Describes a functional limitation or activity restriction caused by an impairment. Common types include: sensory (e.g., vision or hearing), mobility, physical, cognitive, learning, or mental health disabilities. Refer to the Ontario Human Rights Code for a detailed definition of disabilities.

Door Closer - A device or assembly used to open or close a door automatically.

Door Jamb - The vertical component of a door frame.

Egress (Means of) - Means of egress refers to a continuous path of travel provided for the escape of persons from any point in a building leading to a point of safety (e.g., a separate building or an exterior open space protected from fire exposure), including exits and exit routes.

Element - An architectural or mechanical component of a building, facility, space, or site (e.g., telephone, curb ramp, door, drinking fountain, seating, or water closet).

Elevator Lobby - The waiting area in front of an elevator.

Entrance - An access point into a building or portion of a building or facility used to enter. An entrance includes the approach, the vertical access leading to the entrance platform, the entrance door, the landing area, vestibules (if provided), the entry door or gate, and the hardware of the entry door or gate. The principal entrance of a building or facility is the door through which most people typically enter (e.g., the highest level of use).

Exit - The part of a means of egress, including doorways, which leads from the floor area it serves to a separate building, an open public thoroughfare, or an exterior open space protected from fire exposure from the building and having access to an open public thoroughfare.

Facility - All or any portion of buildings, structures, elements, improvements, equipment and pedestrian or vehicular routes located on a site or in a public right-of-way, where specific programs or services are provided or activities performed.

Fire Safety - A general term typically relating to the ability of a building or site to resist, suppress or control the onset and spread of fire and the protection of building occupants.

Fire Safety Plan - An operational plan that provides information, directions, strategies, and recommendations for the safe evacuation of users during fire emergencies.

Firm Surface - Refers to a surface that does not deform under the vertical forces exerted by permitted users. Reference ASTM F 1951 Standard.

Flared Sides - A sloped surface that flanks a curb ramp and provides a graded transition between the ramp and the sidewalk. Flares bridge differences in elevation and are intended to prevent ambulatory pedestrians from tripping. Flares are not considered part of the accessible route.

FM Assistive Listening System - FM assistive listening systems are variations on the commercial FM radio. Radio signals are broadcast by an FM transmitter that is piggybacked on the sound system used in the facility. These signals are received by individual “radios,” which are small pocket-size receivers tuned to the specific frequency used in the transmission.

Foot-Candle (FC) - Refers to measurements of the visible light intensity on a surface, a distance from the light source. One foot-candle is equivalent to the illumination produced by one candle (an optical standard reference) at a distance of 305 mm (one foot). One foot-candle equals approximately ten lux. Foot-candle is the imperial measure. Refer to Lux.

Forward Approach - Where a person will make use of a service counter, drinking fountain, or any other usable element of the built environment, by positioning their body or mobility aid directly in front of and facing the element.

Glare - Often refers to uncomfortably bright light reflected from a surface, floor, window, or screen. Glare occurs when one part of the environment is much brighter than the general surrounding area, causing annoyance, discomfort, or loss in visual performance.

Grade - The slope parallel to the direction of travel is calculated by dividing the vertical change in elevation by the horizontal distance covered.

Graphic conventions - Dimensions that are not marked maximum or minimum are absolute unless otherwise indicated.

Ground floor - Any occupiable floorless than one story above or below grade with direct access to grade. A facility always has at least one ground floor and may have more than one ground floor, as where a split-level entrance has been provided or where a facility is built into a hillside.

Guard - A protective barrier to prevent accidental falls at openings in floors and at the open sides of stairs, landings, balconies, mezzanines, and ramps. Handrail support often functions as guards.

Handrail - A component that is normally grasped by hand for support at stairways and other places where needed for the safety of pedestrians.

Hard of Hearing - A term used to describe people with a hearing loss who rely on residual hearing to communicate through speaking and speech-reading, as well as to hold conversations on the telephone. The degree of hearing loss can range from mild to profound. People who are hard of hearing can understand some speech sounds, with or without a hearing aid, and communicate primarily by speech. Persons who are hard of hearing often use hearing aids, lip reading, and other assistive technologies.

Heritage facility - A facility or portions thereof designated under the Ontario Heritage Act, or identified in the inventory of heritage resources for the City of London. (See Public Heritage Facility).

Illumination - The combined amount and intensity of lighting provided, measured in foot-candles or lux.

Induction Loop Assistive Listening System - Induction loop assistive listening systems use a wire around the room to transmit an electromagnetic signal that is picked up by a small telecoil in the hearing aid. Users simply switch on this telecoil (the “T” setting) and adjust the volume of the hearing aid if Induction Loop Assistive Listening System. Loop systems are generally used by fewer people with hearing loss due to advances in hearing aid technology.

Infrared Assistive Listening System - Infrared assistive listening systems operate on infrared light that is beamed from one or several infrared transmitters to small, specialized receivers. There are several types of infrared receivers: stethoscope-style that dangle from the ears, a headset type that fits over the ears, and a small pocket-size type similar to the FM receiver. Where confidential transmission is essential (e.g., a court room setting), an infrared

system generally is more effective, recognizing transmission will be restricted within a given space.

Kilonewton (kN) - Equals 1000 Newtons.

Lavatory - A washbasin or sink used for personal hygiene.

Lux - The metric measurement for light intensity or illumination. See Foot-Candle.

Maneuvering Space - The minimum floor or ground area needed for users of mobility aids to move into or out of a place, space or along an accessible pathway or route.

Marked Crossing - A crosswalk or other identified path intended for pedestrian use in crossing a vehicular way.

May - Denotes an option or alternative.

Mezzanine or Mezzanine floor - That portion of a storey which is an intermediate floor level, is placed within the storey and has occupiable space above and below its floor.

Mobility Aids (or Devices) - A term used to encompass the variety of assistive devices used by people with mobility / physical types of disabilities, including manual and power wheelchairs, scooters, canes, and crutches.

Newtons (N) - The amount of force needed to move 1 kilogram of an object 1 meter per second squared.

Occupiable - A room or enclosed space designed for human occupancy in which individuals congregate for amusement, educational or similar purposes, or in which occupants are engaged in labor, and which is equipped with means of egress, light, and ventilation.

Open space - Large-scale tracts of land without visible evidence of residential, commercial, or industrial development. These areas may be privately or publicly owned and are generally left in a natural state and not programmed for active recreation. The benefits of open lands typically extend beyond the immediate area and usually provide community-wide benefits.

Operable Control - The part of equipment or appliances that is used to insert or withdraw objects, to activate or deactivate, or adjust the equipment or appliance (e.g., a coin slot, push button or handle).

Operable Portion - A part of a piece of equipment or appliance used to insert or withdraw objects or to activate, deactivate, or adjust the equipment or appliance, such as a coin slot, push button, or handle.

Park - Land that is privately nor publicly held has been developed for multiple recreational and leisure-time uses. This land benefits the entire community and balances the demands of the public for outdoor recreational facilities and other amenities, such as pathways, picnic areas, playgrounds, water features, and spaces for free play and leisure.

Passenger Loading Zone - Designated and signed area used for loading and unloading passengers into or out of a waiting vehicle.

Pedestrian Access Route - An accessible route or corridor for pedestrian use within the public right-of-way.

Pictogram - A pictorial symbol or image that represents activities, facilities, spaces, or concepts.

Platform Lift - An elevating device which is used to transport a person (with or without assistive equipment) between levels on a platform. A vertical platform lift is a self-contained unit, with or without an enclosure. An inclined platform lift is used for staircases.

Power-Assisted Door - A door with a mechanism that opens the door automatically, upon the activation of a switch, button, or control. The door also remains in the “open” position for a set period of time to allow safe passage. See Automatic Door.

Private Open Space - Privately owned land areas within a subdivision, generally smaller in scale than open space, have been left free from structures, parking lots, and roads. These types of areas generally benefit only the residents or employees of the particular subdivision and usually remain in private ownership.

Public Entrance - An entrance that is not a service entrance or a restricted entrance.

Public Heritage Facility - A facility or portions thereof designated under the Ontario Heritage Act or identified in the inventory of heritage resources for the City of London and that is open and accessible to the public. (See Heritage Facility)

Public Use - Buildings, facilities, and interior or exterior rooms, spaces, sites, or elements that are made available to the public and that are typically owned, operated, or leased by the City of London.

Ramp - A walking surface with a running slope steeper than 1:20.

Retrofit - See alteration.

Running Slope - The slope that is parallel to the direction of travel is expressed as a ratio of rise to run. The opposite of cross slope.

Service Counter - A raised surface on which business is transacted. Service counters can be composed of either built-in (e.g., kiosks) or loose furniture (e.g., podiums). Other examples of service counters include ATMs, checkout counters, self-service kiosks, food vendor, and information counters.

Service Entrance - An entrance not intended for use by the public and used primarily for delivery of goods and services.

Service Room - A room provided in a building to contain equipment associated with building services.

Service space - A space provided in a facility to facilitate or conceal the installation of facility service facilities such as chutes, ducts, pipes, shafts, or wires.

Shall - Denotes a mandatory specification or requirement.

Should - Denotes an advisory specification or recommendation.

Side Approach - Where a person will make use of a service counter, drinking fountain, or any other usable element of the built environment, by positioning their body or mobility aid perpendicular to the element.

Sidewalk - A public right-of-way designated for pedestrian use and typically located between the curb or roadway and the adjacent property line.

Sightline - The line of view between a person in an audience and a performance, speaker, or displayed item.

Sign or Signage - A sign is a means of conveying information about direction, location, safety, or form of action and in general should be designed to be concise and consistent. Signage displays text, symbols, tactile or pictorial information.

Site - A parcel of land bounded by a property line or a designated portion of a public right-of-way.

Site Improvement - Landscaping, paving for pedestrian and vehicular ways, outdoor lighting, recreational facilities added to a site.

Sleeping Accommodations - Rooms in which people sleep, for example, a dormitory.

Slip-Resistant - A surface that provides sufficient frictional counterforce to the forces exerted in walking to permit safe ambulation.

Space - A definable area (e.g., room, toilet room, hall, assembly area, entrance, storage room, alcove, courtyard, or lobby).

Sprinklered - Refers to a building or any part of a building equipped with an automatic sprinkler system.

Stable Surface - Refers to a surface that does not deform or erode under the angular forces of permitted users traveling in a straight line or turning.

Stage - Refers to a space designed primarily for performances and is typically elevated from the **audience seating area.**

Stair System - Refers to combined elements that make up a typical stair, including steps, landings, and handrails, for example.

Storey - That portion of a building is included between the upper surface of a floor and the upper surface of the floor next to it. If such a portion of a building does not include occupiable space, it is not considered a story for the purposes of this standard. There may be more than one-floor level within a story, as in the case of a mezzanine or mezzanine.

Street Furniture - Elements in the public right-of-way that are intended for use by pedestrians, including benches, lighting fixtures, waste dispensers, and paper vending machines, for example.

Structural Frame - The columns and the girders, beams, trusses, and spandrels have a direct connection to the columns and all other members which are essential to the stability of the building as a whole.

Tactile - Describes an object that can be perceived using the sense of touch and typically provided for users with vision loss.

Tactile Walking Surface Indicator (TWSI) - A surface detectable underfoot or by a long white cane, to assist persons with low vision or blindness by alerting or guiding them. TWSI's are referred to as either tactile attention indicator (TAI) or tactile directional indicator (TDI) surfaces.

TDD - (Telecommunication Device for the Deaf): See Text telephone.

Technically Infeasible - This means, with respect to an alteration of a building or a facility, that it has little likelihood of being accomplished, because:

Temporary Structure - A facility that is not permanent construction but that is extensively used or is essential for public use for a period of time. Examples of temporary facilities covered by this standard include, but are not limited to, reviewing stands, bleacher areas, temporary kiosks, temporary health screening services, or temporary safe pedestrian passageways around a construction site. Structures and equipment directly associated with the actual processes of construction, such as scaffolding, bridging, materials hoists, or construction trailers, are not included.

Text Telephone (TTY) - Machinery or equipment that employs interactive text-based communication through the transmission of coded signals across the standard telephone network. Text telephones can include, for example, devices known as TDDs (telecommunication display devices or telecommunication devices for deaf persons) or computers with special modems. Text telephones are also called TTYs, an abbreviation for teletypewriter.

Touch Tour - Typically refers to tours provided by museums or other cultural / arts facilities that allow users with vision loss to touch and feel objects, displays, and features, for example, to gain a sensory understanding of objects and allow individual exploration. Tactile

experiences may include: replicas, models, props, and handling objects that convey one aspect of the work.

Transfer Space - An unobstructed area adjacent to a fixture or furniture, allows the positioning of a mobility aid to assist users with transferring to the fixture or furniture.

Universal Access - A broad term to reflect the intended goal of inclusion for all, based on the principles of universal design or the “design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design” (Ron Mace).

Universal Trail Assessment Process or UTAP - An objective method of documenting trail conditions for universal access. The UTAP:

Vehicular way - A route intended for vehicular traffic, such as a street, driveway, or parking lot, within the boundary of the site.

Video Signage - Video signage refers to video devices such as televisions, computer monitors/screens, and flat panel displays that may be used to provide information (e.g., directories). Advantages of video signs include the use of motion to attract attention, and the ability to rapidly update the content.

Vision Loss - This term usually refers to a progressive decrease in visual acuity. However, it can refer to the sudden onset of substantial acuity decrease or total blindness.

Vision Panel - A glazed opening in a door leaf allows people to see through to the other side without opening the door.

Walk - An exterior pathway with a prepared surface intended for pedestrian use, including general pedestrian areas, such as plazas and courts, within the boundary of the site.

Wayfinding - A term used to describe a variety of means for spatial orientation and finding your way to a destination. Wayfinding design describes a variety of means for helping people find their way, through touch, print, signage, architecture, and landscaping, for example.

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