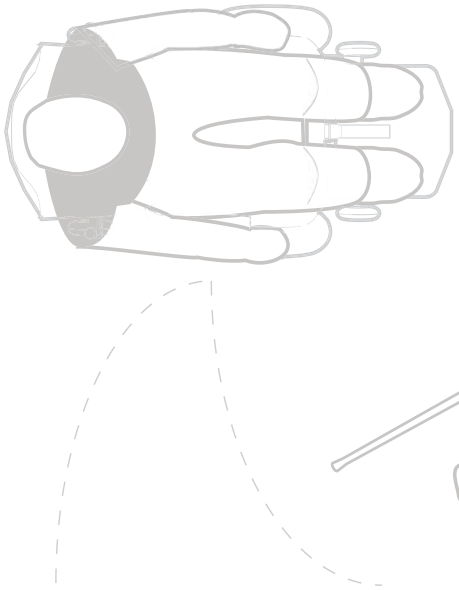

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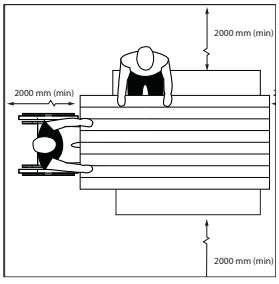

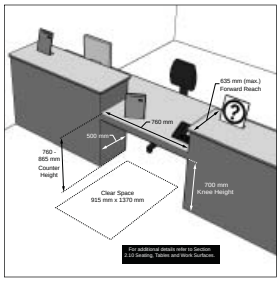

November 2012

SPH Planning & Consulting

Accessibility Design Standards

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Alternate formats of this document are available upon request.

The City of Ottawa would like to acknowledge and thank the City of Markham for permitting this adaptation of their Accessibility Design Guidelines (June 2011).

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Introduction

1.0

Mandate

The City of Ottawa intends to be a leader in developing accessible environments for all, embracing the principles of "universal design", 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, Center for Universal Design, 1997

The Ottawa Accessibility Design Standards were developed with recognition of the following:

- **Diversity**: Encourages the inclusion and integration of diverse communities, appreciating differences, while promoting a common goal to make Ottawa a more accessible place to live, work and play for everyone;
- **Barrier Removal**: Preventing and removing obstructions that create exclusion;
- **Provincial Directions**: Currently, accessibility standards for the built environment are under development by the Province, as part of the Accessibility for Ontarians with Disabilities Act (AODA) initiative; however, there is currently a requirements under the AODA Integrated Accessibility Standards Regulation (IASR) to include accessible features and criteria when procuring or acquiring good, services, kiosks or facilities effective January 1, 2013; and
- **Changing Demographics**: People with varying types of disabilities comprise a significant proportion of the population. The proportion of seniors within the Canadian population is also increasing rapidly and for some seniors, acquiring a disability may also increase with age. Currently, people with disabilities represent one in seven Ontarians. Due primarily to aging, one in every five Ontarians is expected to have a disability within 20 years.

Principles of Universal Design

1	**Equitable Use**	The design is useful and marketable to people with diverse abilities.
2	**Flexibility in Use**	The design accommodates a wide range of individual preferences and abilities.
3	**Simple and Intuitive**	Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills or current concentration level.
4	**Perceptible Information**	The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory ability.
5	**Tolerance for Error**	The design minimizes hazards and the adverse consequences of accidental or unintended actions.
6	**Low Physical Effort**	The design can be used efficiently and comfortably and with a minimum of fatigue.
7	**Size and Space for Approach and Use**	Appropriate size and space is provided for approach, reach, manipulation and use regardless of user's body size, posture or mobility.

Source: North Carolina State University, Centre for Universal Design, 1997.

With accessibility requirements and related best practices continually evolving, particularly in light of recent changes to Provincial legislation, the development and update of the City's Accessibility Design Standards will be an ongoing process. These standards are a "living document", evolving over time to meet best practices, future changes that may be related to the OBC, CSA and any future AODA updates.

During the design, planning and construction of accessible spaces and buildings, a range of opportunities exist to optimize independent access for persons with disabilities but also to improve accessibility for all users. **The purpose of the City's Accessibility Design Standards is to provide practical examples of solutions that optimize accessibility for new construction or for the redevelopment of existing facilities owned, leased or operated by Ottawa.**

Finally, the City is committed to identifying, removing and preventing barriers, but also intends to demonstrate leadership in an effort to encourage the private sector to follow the City's designs related to both existing and new facilities.

1.1 Regulatory Framework

The application of these Standards is driven by the regulatory environment and important Provincial accessibility legislation and related requirements, which also supports the City's position and initiative to be proactive and a leader in developing inclusive communities. The regulatory framework is summarized as follows.

1.1.1 The Ontarians with Disabilities Act, 2001

In December 2001, the Government of Ontario passed the *Ontarians with Disabilities Act, 2001* (ODA) to improve opportunities for people with disabilities. Under the ODA, municipalities, regardless of size, must prepare annual accessibility plans and make them available to the public. Municipalities must also include people with disabilities in the planning process, either as members of formal accessibility committees that are required to be established under the Act, or as participants in the consulting process. Municipal Accessible Advisory Committees (AAC's) must be established by municipalities with populations over 10,000. Under the ODA, accessibility plans are required to review and report on barriers that are identified within a municipality's buildings, facilities, programs, practices, services, by-laws and policies. Accessibility plans must also report on the steps that the municipality has taken to identify, remove and prevent barriers for people with disabilities.

In summary, municipal accessibility plans are required to include the following:

- Measures taken to identify, remove and prevent barriers to persons with disabilities;
- Measures in place to ensure that proposals for by-laws, policies, programs, practices and services are formally evaluated to determine their effect on

Reference

For more information on Ottawa's Accessibility Advisory Committee, refer to: www.ottawa.ca/en/city_hall/councilcommittees/mayor_council/advisory_committees/accessibility/index.html

accessibility for persons with disabilities;

- A list of the by-laws, policies, programs, practices and services that will be reviewed in the year the plan is implemented in order to identify barriers to persons with disabilities;
- The steps and initiatives to take place annually that will identify, remove and prevent barriers to persons with disabilities;
- How the accessibility plan and related information is made available to the public;
- The steps to consider accessibility in planning processes as well as when procuring goods and services from companies, granting business licences and approving plans for subdivisions.

Overall, the ODA does not expect municipalities to remove every existing barrier immediately, allowing for the removal of barriers to accessibility over time. The ODA provides municipalities with flexibility to identify their own priorities and to decide on what level of detail they will include in their annual accessibility plans. This is based on the recognition and assumption that accessibility plans must be developed on sound planning principles, with issues addressed according to priorities and needs identified during the public consultation process.

1.1.2 The Accessibility for Ontarians with Disabilities Act (AODA, 2005)

The Accessibility for Ontarians with Disabilities Act, 2005 (AODA) came into effect on June 13, 2005. Although the AODA is now law, the planning requirements of the ODA still remain in force. Section 29 of the AODA continues the AAC's role to review site plans under the *Planning Act*, and to advise municipal council on issues related to the accessibility of the built environment, including municipal sites and facilities.

Additionally, the AODA requires accessibility standards to be established by the Province. Implementation timelines will be established in the new accessibility standards that municipalities and other organizations will be required to meet under the AODA. In summary, the purpose of the AODA is to:

- Develop, implement and enforce accessibility standards in order to achieve accessibility for Ontarians with disabilities with respect to goods, services, kiosks, facilities, accommodation, employment, buildings, structures and premises by January 1, 2025.
- Provide for the involvement of persons with disabilities, the Government of Ontario and representatives of industries and of various sectors of the economy in the development of accessibility standards.

The Province of Ontario established "Standards Development Committees" (SDC's) in the areas of customer service, transportation, information and communications, the built environment and employment.

These provincial accessibility standards set out the measures, policies, practices and other steps needed to improve and prevent barriers for people with disabilities. The standards apply to both the public and private sector. Currently there are two regulations in place in Ontario: the Accessibility Standards for Customer Service Regulation and the Integrated Accessibility Standards Regulation.

Reference

For more information about the *Ontarians with Disabilities Act*, 2001 and "Complementary Amendments" to other provincial legislation made by the ODA, visit: www.mah.gov.on.ca

1.1.3 AODA Accessibility Standards

Five (5) accessibility standards have been developed or are under development as part of the AODA standards development process, including:

- **Customer Service**: States what businesses and other organizations in Ontario must do to make the provision of their goods and services more accessible to people with disabilities. For municipalities, it requires an accessible customer service policy, practices and procedures, along with employee training. Status: Approved as "Accessibility Standards for Customer Service", Ontario Regulation 429 / 07.

- The ***Integrated Accessibility Standards Regulation*** **(IASR)**, Ontario Regulation 191/11, includes general clauses as well as sections on **Information and Communication, Employment and Transportation.** The Ottawa Accessibility Design Standards have been prepared in response to the IASR general clause on procurement which states that designated public sector organizations shall incorporate accessibility criteria and features when procuring or acquiring goods, services, kiosks, or facilities, except where it is not practicable to do so by January 1, 2013.

  - » **Employment**: Refers to practices, policies and processes. Needed for hiring and retaining employees and will include employment.

  - » **Information and Communications**: Identifies how businesses and organizations are required to provide accessible public information in various formats such as online, print, verbal and digital.

  - » **Transportation**: Identifies what service providers must do to make transportation services across the Province more accessible.

- **Built Environment**: Refers to access to exterior routes, parking, entrances, service counters, interior routes, door widths, and interior signage and wayfinding as examples. As of October 2012, exterior requirements have been released by the Province in "draft" form as an amendment to the IASR known as the "Design of Public Spaces" standard. The Ottawa Accesibility Design Standards for the built environment have been developed to ensure the City is well positioned when the Provincial standards are fully implemented.

Note

For more information on provincial legislation visit the Ministry of Community and Social Services at:

www.mcss.gov.on.ca

1.1.4 The Ontario Human Rights Code (OHRC)

The Ontario Human Rights Code ('the Code') protects all Ontario residents from discrimination and harassment in specific areas including services, housing, contracts and employment. Under the Code, every person has a right to equal treatment with respect to services, goods and facilities, without discrimination because of disability, race, ancestry, place of origin, colour, ethnic origin, citizenship, creed, sex, sexual orientation, age, marital status, same-sex partnership status, and family status. Further, the Code recognizes that people with disabilities have the right to be able to access services, jobs and housing, with the right to assume the same responsibilities and duties as everyone else.

Employers, landlords, service providers and others have a duty to consider the needs of people with disabilities. This can include ways to apply the principles of inclusive or universal design for the construction or renovation of buildings and facilities, as well as their application to related processes, programs and services. If systems, facilities or other elements of the built environment or people's attitudes create discriminatory barriers, then they must be removed or changed. Where it is impossible to remove these barriers without undue hardship, then accommodations must be made so that people with disabilities can participate fully.

In summary, there are two important considerations related to the Ontario Human Rights Code that are critical to recognize as the City's Accessibility Design Standards are implemented:

1. It has primacy over all other provincial legislation including the Ontario Building Code, the *Ontarians with Disabilities Act*, 2001 and the *Accessibility for Ontarians with Disabilities Act*, 2005; and

2. Its intent is to remedy the situation for the person and to prevent further barriers.

1.1.5 The Ontario Building Code (OBC, 2006)

The accessibility requirements of the Ontario Building Code (OBC), or "barrier free design" requirements as they are referred to in the OBC (Section 3.8), are generally recognized as representing a minimum standard for accessibility.

The requirements of the OBC specifically related to accessibility can be summarized as follows:

- Governs construction of new buildings, as well as repairs, renovations and additions to buildings; and

- Contains requirements for parking, entrances, elevators, washrooms, accessible routes, ramps, stairs, signs and exits.

Most importantly, compliance with the OBC does not constitute compliance with the Ontario Human Rights Code. This is a key reason why additional accessibility design standards for the built environment are required to address the needs of users with varying disabilities.

1.1.6 Canadian Standards Association "Accessible Design for the Built Environment" (CSA B651-12)

Currently the Canadian Standards Association's "Accessible Design for the Built Environment" (CSA B651-12) is recognized as a voluntary national built environment standard for Canada. The CSA requirements were updated in 2012 and it is considered more comprehensive than the OBC. However, the CSA also has limitations; for example, the CSA contains very little with respect to signage and wayfinding accessibility requirements, or fire and life safety issues.

Overall, the City of Ottawa Accessibility Design Standards go above and beyond the minimum requirements of the OBC and the CSA B651-12, representing a "best practice" approach to providing accessible design. The OBC will be followed as required by law, however, there is no reason that the City's enhanced design standards for accessibility cannot be implemented where the intent and formal requirements of the OBC is also achieved.

1.1.7 The Ontario Planning Act

Overall, the *Planning Act* provides the legislative framework for land use planning in Ontario. It is the basis for the provincial interests relative to municipal land use planning, local planning administration, the preparation of planning policies, development control, land division and the public's right to participate in the planning process. Following the passing of the ODA, the Province amended the *Planning Act* in several sections, summarized as follows:

1.1.7.1 Section 2: Provincial Interest

Section 2 of the *Planning Act* requires planning authorities, in carrying out their responsibilities under the Act, to have regard to accessibility for persons with disabilities for all facilities, services and matters to which the Act applies. Therefore, those who have the responsibility for making planning decisions in the municipality and the province shall consider the level of accessibility for people with disabilities to all facilities and services that are guided by the act.

1.1.7.2 Section 41: Reviewing Site Plans

The *Planning Act* makes provisions for accessibility for persons with disabilities as part of the site plan process. Site plan control helps facilitate universal accessibility to buildings and the spaces surrounding the buildings on a development site. Through this process, municipalities can review a developer's plans and drawings, and require the provision of facilities for accessibility to a development proposal. Section 12(5) of the ODA also specifies that if a municipality has an AAC, it may request to review site plans and drawings described in Section 41 of the *Planning Act* (site plan control) that are submitted to support planning applications. Section 12(6) of the Act identifies that municipal councils must supply such drawings to an AAC in a timely manner.

1.1.7.3 Section 51: Reviewing Plans of Subdivision

Under the *Planning Act*, when considering a draft plan of subdivision, planning approval authorities are to have regard to accessibility for persons with disabilities. Further, section 51 now allows approval authorities to require land dedication for pedestrian and bicycle pathways, and public transit ways in new subdivision proposals.

1.1.7.4 Section 53: Reviewing Applications to Sever Land (Consents)

When reviewing consent applications, municipalities need to have regard to accessibility for persons with disabilities. This is similar to the provision regarding the review of plans of subdivision.

[Source: Adapted From "The Planning Act and Accessibility". Ontario Ministry of Municipal Affairs and Housing]

1.1.8 Scope and Application

The accessible design criteria provided in these Standards aims to make all City-owned or leased buildings, infrastructure and elements accessible to Ottawa residents, employees and visitors, as part of any new construction or redevelopment activities. The intent is for the City to clearly identify the accessibility criteria and features included in the procurement of its facilities and to demonstrate proactive steps towards making all facilities and sites accessible, prior to formal enactment of the Provincial accessibility standards for the built environment (e.g., AODA standards). When enacted by the Province, these AODA standards for the built environment will be applicable to both the public and private sector. Ottawa recognizes that addressing accessibility issues as early as possible in the planning and design phases of new construction and redevelopment projects is the most practical and cost effective way to ensure accessible and inclusive environments.

Best Practice

The Provincial Policy Statement (PPS, 2005) identifies the importance of improving accessibility for persons with disabilities and seniors. Additionally, the site plan control process is an early opportunity for City staff to address the accessibility of the built environment through its review of development proposals.

Reference

A Site Plan Review Checklist for Accessibility has been developed within these Standards. Refer to Section 7.6.

Understanding Disability

Using a Cross-Disability Perspective

Knowledge of the basic characteristics of different disabilities and the resulting barriers is critical towards understanding individual needs and how to address them when designing the built environment. Common "types" of disabilities are identified within these Standards to assist with understanding how users with disabilities interact with elements of the built environment. A list of key "types" of disabilities include but are not limited to:

- **Auditory Disabilities**
- **Intellectual Disabilities**
- **Physical Disabilities**
- **Developmental Disabilities**
- **Visual Disabilities**
- **Learning Disabilities**
- **Mental Health Disabilities**

Best Practice

Consideration of "Universal Abilities"

The intent is to recognize and understand that everyone will experience variations in abilities throughout their lifespan, or 'universal' abilities.

This approach considers no distinction between people with or without disabilities, focusing on identifying what is usable and safe for everyone in the community. The focus is also on extending the ideals of accessible design to routinely under-serviced populations, like people of short stature, seniors, pregnant women, parents with children in strollers, people who speak different languages and others.

City Staff will collaborate with all stakeholders throughout the development approvals process to ensure public spaces are designed to meet the requirements of these Standards.

These accessibility design Standards are:

- **Mandatory for all new construction and redevelopment of existing facilities, owned, leased or operated by the City of Ottawa;**
- **Intended to be applied to the greatest extent possible for retrofit, alterations or additions to existing facilities owned, leased or operated by the City of Ottawa;**
- **Encouraged to be implemented by other sectors and organizations within Ottawa; and,**
- **Recognized as addressing the needs of diverse users, with or without disabilities, to ensure inclusive environments for all.**

These accessibility design Standards are not applicable to the following spaces and areas:

- equipment service rooms or spaces;
- elevator machine rooms;
- janitor rooms;
- crawl spaces; and
- other similar areas identified in the Ontario Building Code.

Although the design criteria contained in these Standards may differ from the requirements of the Ontario Building Code and the Canadian Standards Association's "Accessible Design for the Built Environment (CSA B651-12), the intent is that OBC and CSA requirements are used as the baseline and minimum requirements that are to be applied. The Ottawa Accessibility Design Standards are intended to reflect an optimum level of accessibility for the design of the built environment, as the Standards meet or go beyond the requirements of the OBC and CSA.

By making these accessibility design Standards applicable to all planning, design and development activities, Ottawa will demonstrate its commitment to proactive measures to eliminate and prevent barriers faced by persons with disabilities and older adults.

1.1.9 Existing Barriers and Conditions

Barrier removal for existing City sites, infrastructure, facilities and elements is conducted annually through a list of priorities established in the City's Accessibility Plan. **The City intends to implement these accessibility standards to the greatest extent possible, for all renovations and alterations to facilities, sites and elements of the built environment.**

1.1.10 Implementation Alternatives

Consistent with the policies of national and international accessibility standards, the information within these Standards is not intended to prevent the use of other designs, products or technologies as alternatives to those identified. This assumes that the implementation of these alternatives will result in an equivalent or an increased level of accessibility, meeting the principles of universal accessibility.

Implementation alternatives will be evaluated on a project-by-project basis by City staff, in collaboration and consultation with all relevant stakeholders, including the Ottawa Accessibility Advisory Committee, as required.

It is the intent of the City to review these Standards annually to ensure the highest level of accessibility is achieved and to ensure the Standards reflect any future changes to the legislation.

1.2 Standard Organization

These Standards were organized to provide accessibility criteria in the following sections, in order to group and identify issues that are related. These sections are identified and colour-coded as follows:

1.0 Introduction

2.0 Common Elements: Exterior and Interior

3.0 Exterior Environments

4.0 Interior Environments

5.0 Systems, Controls and Communications

6.0 Special Facilities and Spaces

7.0 Appendices

These Sections are further divided into additional subsections that refer to specific site or facility elements. At the start of each of 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.

1.2.1 Tables, Figures and Graphics

Throughout 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.

1.2.2 Dimensions

The dimensions for specific accessibility criteria are stated in millimeters (mm) or metres (m) throughout this document, under the metric system of units, rounded up to the nearest multiple of five. 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.

1.2.3 Definitions

Throughout this document, terminology may be used that may not be familiar or understood. Definitions for key words are provided in Appendix, Section 7.1.

1.2.4 Feedback Form

The City of Ottawa 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. A feedback form is provided in Section 7.4, for any recommendations on how to improve this document or to provide new information.

1.2.5 Referenced Sections

At the time these Standards were developed, accessibility standards for the built environment were under review and development by the Province of Ontario, related to the Accessibility for Ontarians with Disabilities Act (AODA) initiative. These Provincial accessibility standards will also apply to municipalities and as a result, some sections of these Standards provide reference to AODA requirements, in this document, which can also be updated when new information is obtained.

Common Elements: Exterior and Interior

2.0

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Ground and Floor Surfaces

2.1

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. 5.4 Acoustics

Sec. 5.7 Lighting

Note

Irregular surfaces, such as cobblestones or pea-gravel finished concrete are difficult for both walking and pushing a wheeled mobility device.

Uneven surfaces can create unpleasant and damaging vibration for wheeled mobility aids users.

Sand and gravel surfaces are extremely difficult surfaces for users of mobility aids to maneuver.

Note

A firm surface does not change under vertical force / pressure.

A stable surface does not change or erode under angular forces.

Where vertical change is between 6 mm and 13 mm, a beveled slope of 1:2 is required.

If vertical change is greater than 13 mm, a slope, ramp or curb ramp is required.

2.1.1 Surfaces

Ensure all ground and floor surfaces in interior and exterior environments:

a. are firm, stable and slip-resistant;
b. have a matte finish to minimize glare;
c. are well-drained;
d. have a vertical change in level less than 6 mm;
e. have joints between surfaces no wider than 6 mm (preferred) or 10 mm (maximum);
f. do not amplify occasional noise; and
g. provide colour contrast or a change in texture with surrounding surfaces, for:
    i. curb ramps;
    ii. adjacent wall surfaces or their baseboards;
    iii. changes in level (e.g., stairs and ramps);
    iv. obstacles; and
    v. tactile walking surface indicators (TWSI).

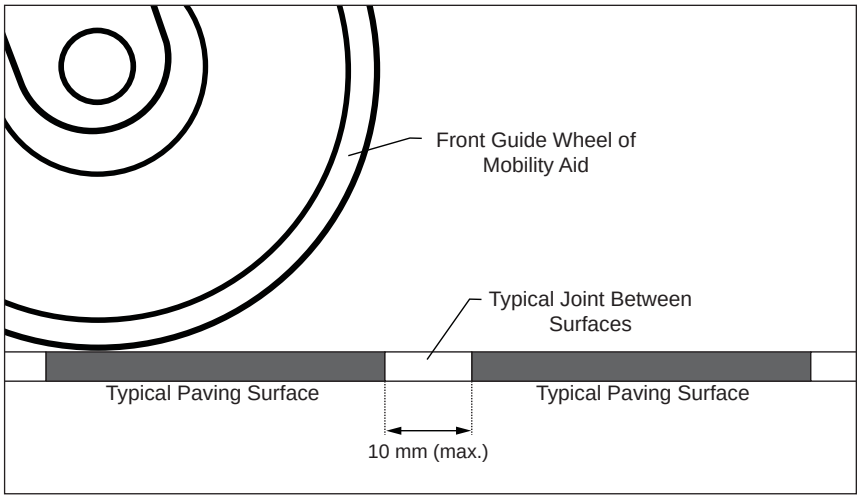

Figure 1: Joints Between Surfaces - Section View

2.1.2 Carpets

Where carpeting is used:

a. ensure it is securely fastened;
b. provide a combined carpet and pad height of 13 mm (maximum);
c. provide a firm cushion, under padding or backing; and
d. ensure it is a low level loop or level cut / uncut pile.

Note

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

2.1.3 Floor Mats

Where floor mats are used:

a. ensure they are securely fixed or placed in a depression that is level with surrounding floor area;
b. ensure mats height are no more than 13 mm high with beveled edges; and
c. provide colour contrast of 70% (minimum) between floor mats and surrounding surfaces.

Example of a recessed floor mat system which is preferred.

Best Practice

Avoid the use of any grate, opening or cover along accessible routes, especially high traffic areas, in order to prevent any potential tripping hazards for all users, including people with vision loss.

Note

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

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:

a. ensure no opening is greater than 13 mm, in one direction; and
b. ensure the longer dimension of opening is perpendicular to the pedestrian path of travel.

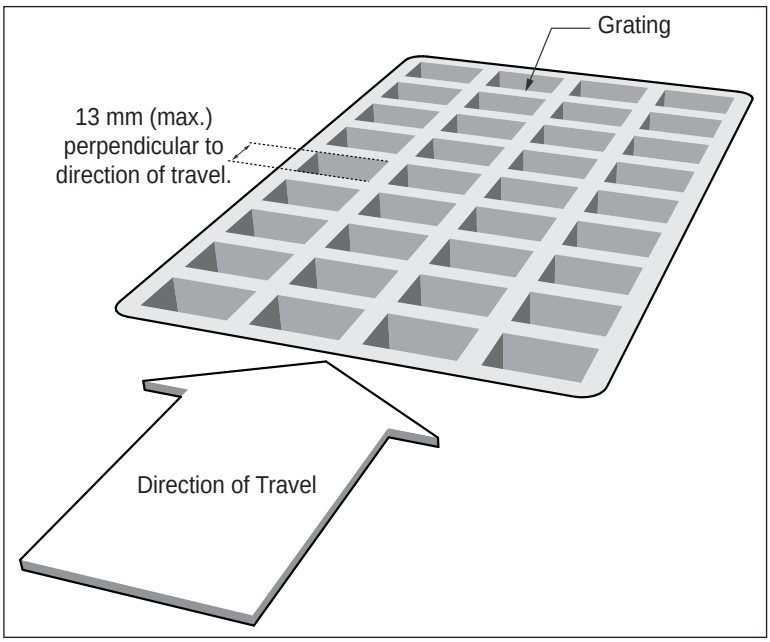

Figure 2a: Grating Opening

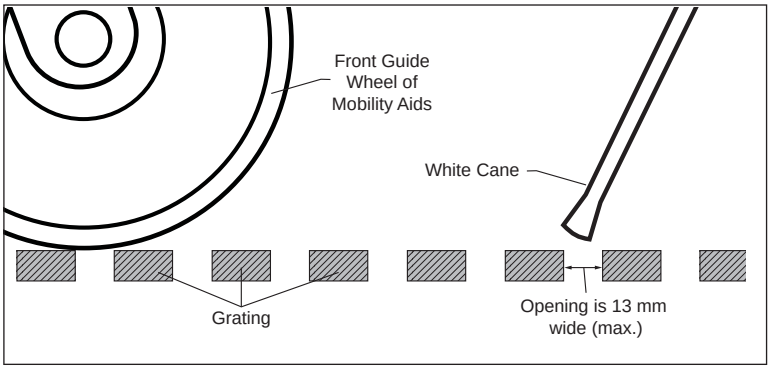

Figure 2b: Gratings - Section View

Ramps

2.2

Application

This section applies to ramps provided as part of an accessible route within exterior or interior environments, where the slope of a path of travel exceeds a gradient of 1:20 (5%).

Additionally, refer to Ontario Building Code (OBC) for all applied requirements for ramps.

Reference

Sec. 2.1	Ground and Floor Surfaces
Sec. 2.4	Guards and Handrails
Sec. 2.7	Tactile Walking Surface Indicators
Sec. 5.7	Lighting

Note

It is preferred to avoid providing ramps in new construction where alternate universal design solutions are possible.

Best Practice

Provide a desired clear width of 1200 mm for ramp surfaces. Where ramps are specifically designed for use by persons with vision loss, a ramp surface of up to 1500 mm wide is preferred, in order to allow space for a companion or guide dog.

2.2.1 Design Features

a. provide a clear width of 1100 mm (minimum) between handrails;
b. ensure ramp section is no longer than 9000 mm **(Figure 3)**;
c. ensure lighting level of 100 lux (10 foot-candles) (minimum), measured at floor level; and
d. at slope changes, provide 50 ± 10 mm wide colour-contrasted and slip-resistant strips equal to the width of the ramp.

2.2.1.1 Running Slope

a. ensure maximum gradient of 1:15 (6.67%) **(Figure 3)**.

2.2.1.2 Cross-Slope

a. ensure maximum gradient of 1:50 (2%).

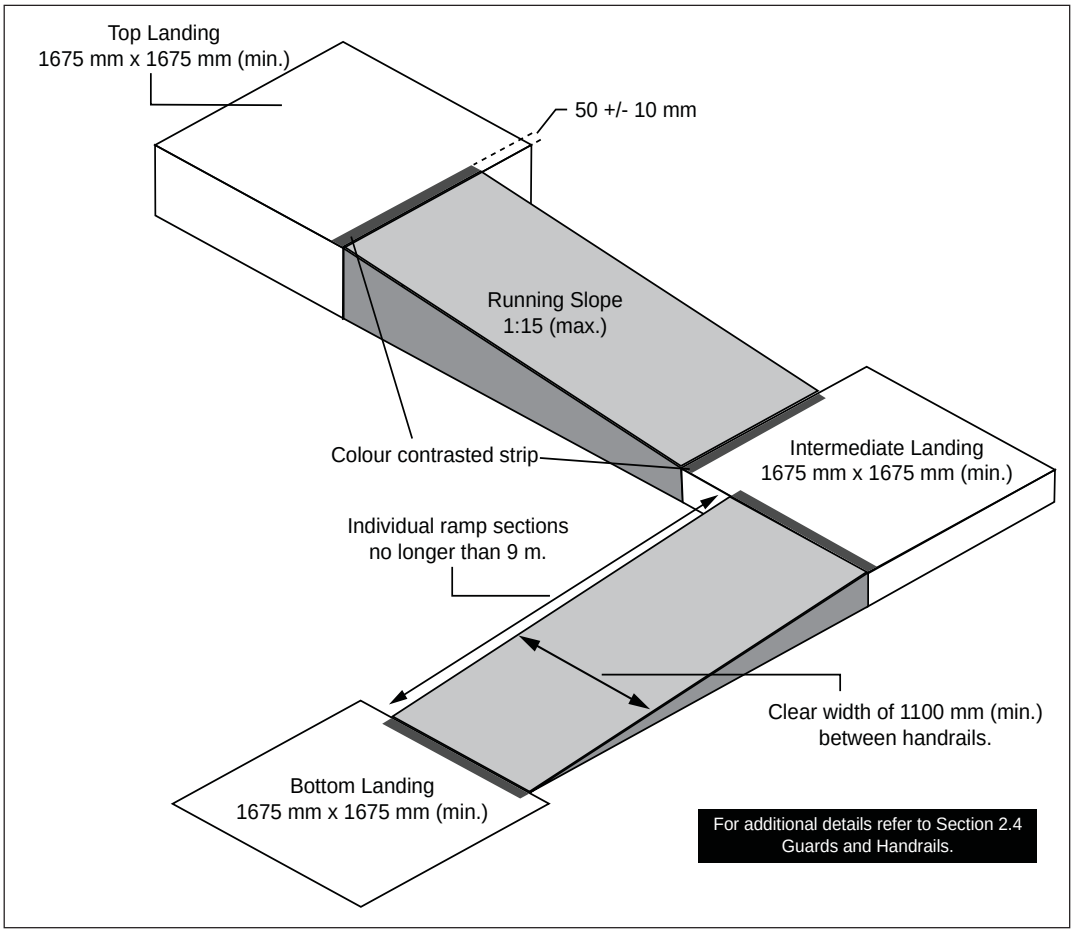

Figure 3: Ramp Design Features

2.2.1.3 Edge Protection

Where ramps and landings are not at grade, or where there is no solid enclosure or guard:

a. provide edge protection at least 75 mm (minimum) high (e.g., curb) **(Figure 4a)**; and
b. where solid barrier protection or rail protection is provided, ensure the gap between barrier or rail and floor surface is 50 mm (maximum) **(Figure 4b & 4c)**.

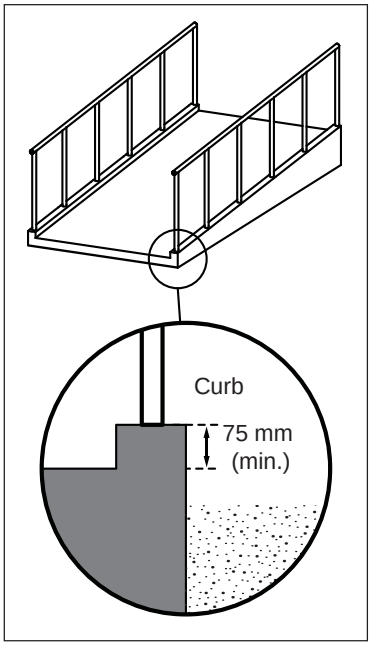

Figure 4a: Curb Protection

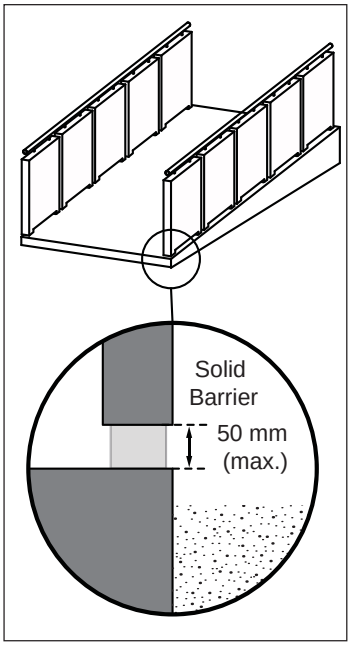

Figure 4b: Solid Barrier Protection

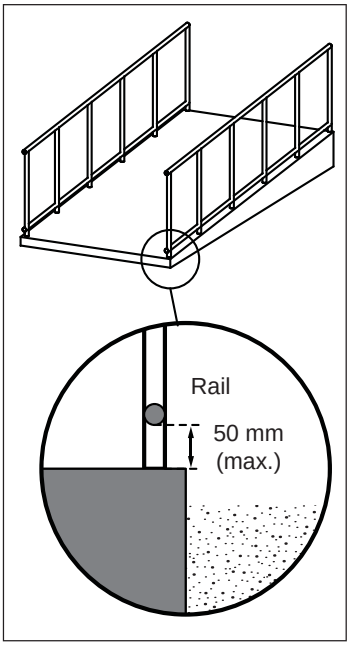

Figure 4c: Rail Protection

Best Practice

Exterior ramp and landing surfaces should be heated to prevent snow and ice accumulation during winter conditions.

Where space is available, a landing dimension of 2500 mm by 2500 mm is preferred in order to accommodate larger, wheeled mobility aids, including scooters and powered wheelchairs.

2.2.2 Landings

a. provide landings at top, bottom, intermediate level or where there is any directional change **(Figure 5)**;
b. ensure landings are level;
c. provide clear space of 1675 mm by 1675 mm (minimum) at top and bottom landings **(Figure 3)**;
d. configure to provide clear space of 1675 mm deep, for in-line landings;
e. where overall length of ramp exceeds 9000 mm, provide intermediate landings; and
f. where a door swings into ramp landing, ensure length of landing is extended:
   i. 600 mm beyond the latch side of the door opening, when the door swings towards the ramp landing **(Figure 6a)**; and
   ii. 300 mm beyond the latch side of door opening, when door swings away from the ramp landing **(Figure 6b)**.

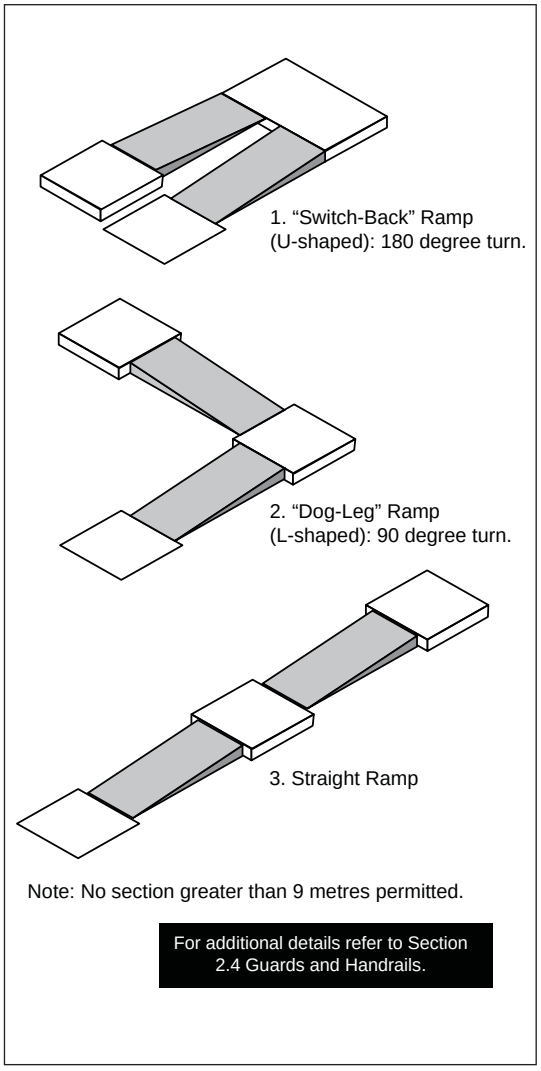

Figure 5: Typical Ramp Configurations

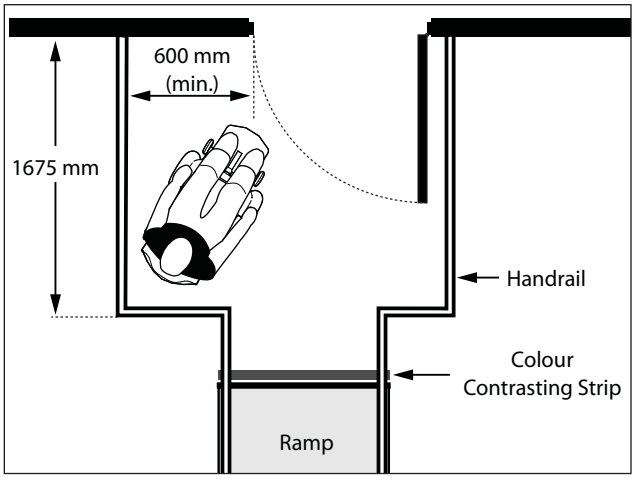

Figure 6a: Door Swings into Ramp Landing - Plan View

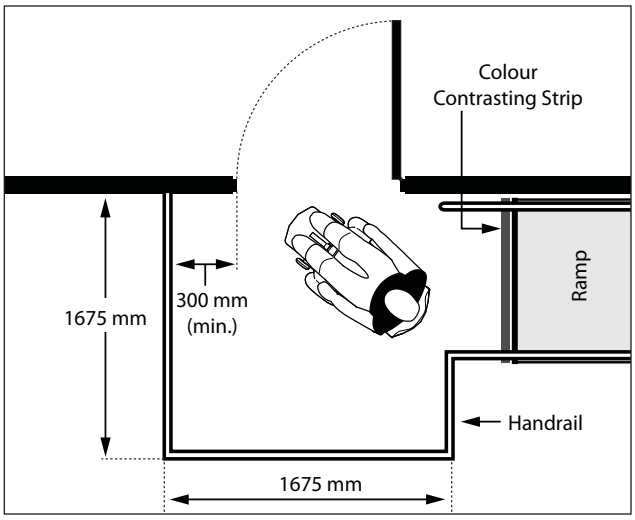

Figure 6b: Door Swings Away From Ramp Landing - Plan View

2.2.3 Handrails and Guards

2.2.3.1 Handrails

a. mount on both sides of ramp, at consistent height between 865 mm and 965 mm from top of ramp surface **(Figure 8)**;
b. provide clear width of 1100 mm (minimum) between handrails;
c. provide intermediate handrails where exterior ramps are more than 2200 mm wide, with a maximum of 1650 mm between handrails;
d. ensure colour contrasted finish of 70% (minimum) between handrails and mounting surfaces; and
e. provide extensions based on the following criteria **(Figure 7a, b & c)**:
    i. extend horizontally 300 mm (minimum) at top and bottom landings;
    ii. design to return to the guard / rail, wall or floor; and
    iii. ensure handrails are terminated in a manner that will not obstruct pedestrian path of travel or create potential bumping hazards.

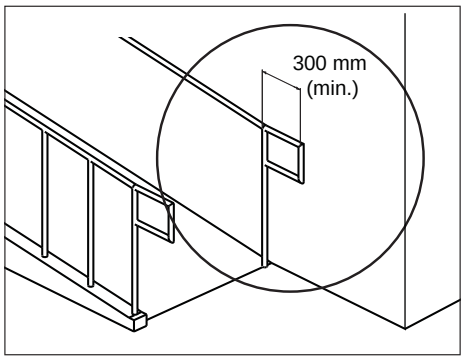

Figure 7a: Handrail Returns to Guard or Rail

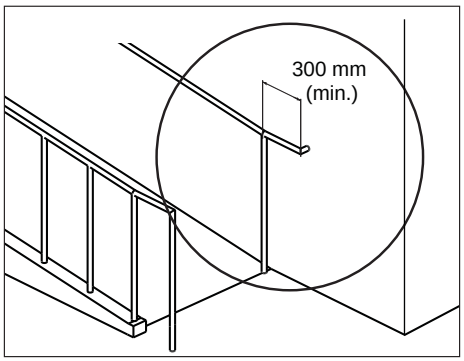

Figure 7b: Handrail Returns to Wall

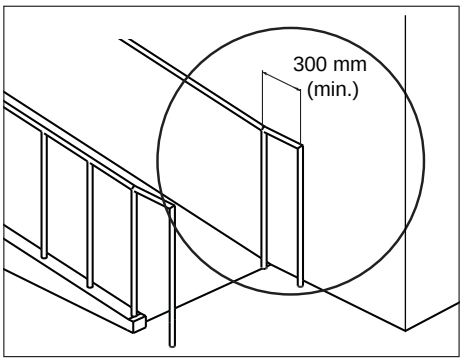

Figure 7c: Handrail Returns to Floor

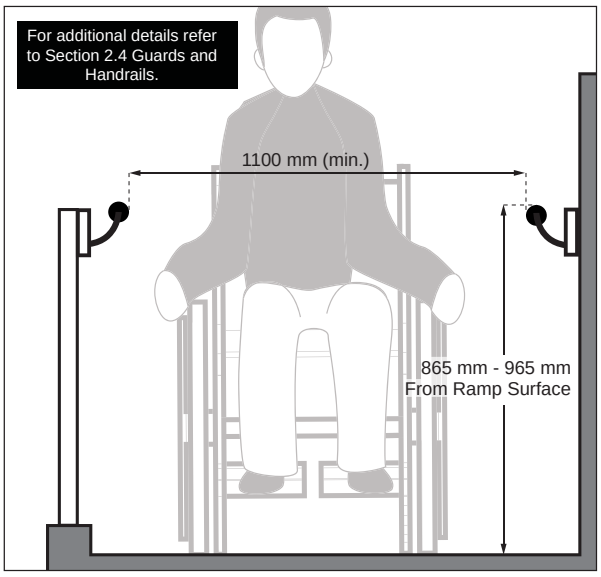

Figure 8: Handrail Design and Features - Section View

Ensure handrail extensions do not obstruct path of travel or create hazards.

2.2.3.2 Guards

Where change in level is more than 600 mm adjacent to ramp surface:

a. provide guard mounted 1070 mm (minimum) high, measured vertically to the top of the guard from the ramp surface;
b. provide edge protection 75 mm (minimum) high; and
c. ensure design does not facilitate climbing.

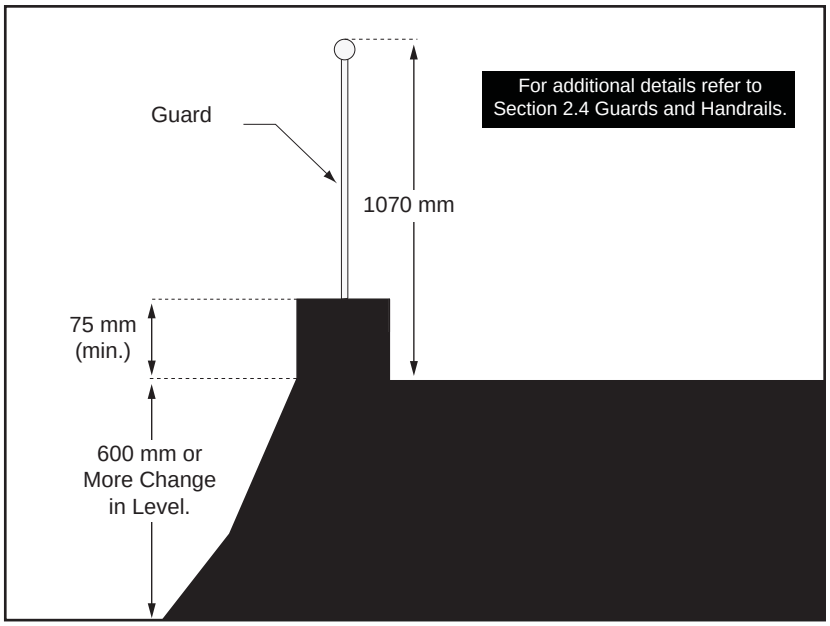

Figure 9: Guard Where Level Change is More than 600 mm Adjacent to Ramp Surface - Section View

Stairs

2.3

Application

This section applies to stair systems, where provided for exterior or interior environments.

Additionally, refer to Ontario Building Code (OBC) for all applied requirements for stairs.

Reference

Sec. 2.1 Ground and Floor Surfaces

Sec. 2.4 Guards and Handrails

Sec. 2.7 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 lighting level of 50 lux (average), measured at floor level.

2.3.1.1 Treads and Risers

a. riser height of 125 mm (minimum) to 175 mm (maximum);
b. tread depth of 280 mm (minimum) to 355 mm (maximum);
c. no open risers are permitted; and
d. ensure uniform riser height and tread depth throughout any stair system.

Exception

Riser height and tread depth standards do not apply to interior exit stairwells.

2.3.1.2 Nosings

a. ensure no abrupt undersides;
b. ensure they do not project more than 38 mm over the tread below and are sloped to the riser at an angle greater than 60 degrees to the horizontal;
c. ensure leading edge is rounded or has a beveled profile, with a radius of curvature of 13 mm or less; and
d. provide horizontal marking strips:
    i. 50 mm (+/- 10 mm) deep;
    ii. at the leading edge of the tread;
    iii. ensure strong colour contrast compared with tread and riser finishes with slip-resistant surface; and
    iv. extend the full width of the tread.

Note

Marking strips can also be fully integrated within the design of the nosing or finish used on the tread. For exterior stairs, exposed to the elements, and/or stair systems that have a high level of pedestrian traffic, durable marking strips are recommended (e.g., carborundum).

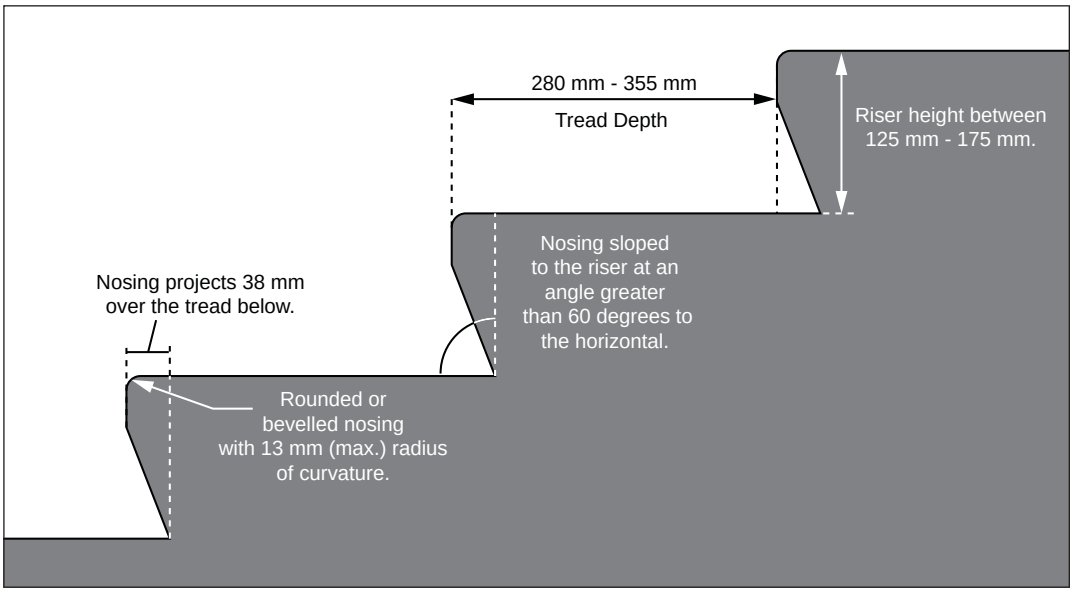

Figure 10: Stair Design Features - Section View

2.3.1.3 Tactile Walking Surface Indicators (TWSIs)

Provide tactile walking surface indicators (TWSIs):

a. at top of stairs, at a distance of one tread depth back from stairs; and
b. with surface depth of 600 - 650 mm (minimum), extending the full length of the stairs.

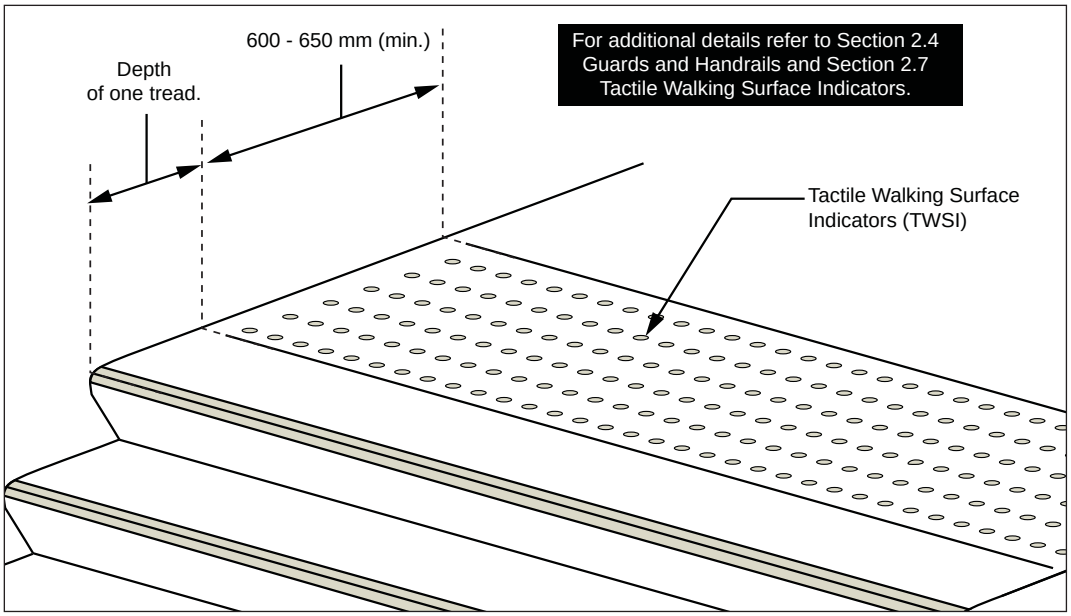

Figure 11: Tactile Walking Surface Indicators (TWSI) at Top of Stairs

Best Practice

Tactile walking surface indicators (TWSI) provided at the head of stair systems act as a warning, and colour contrasted nosings increase the visibility of each step when descending, especially for users with vision loss.

2.3.2 Guards and Handrails

2.3.2.1 Guards

Where there is more than a 600 mm change in floor level adjacent to stairs, provide guards as follows:

a. mount 1070 mm (minimum) high, measured vertically to the top of the guard from the stair surface;
b. provide edge protection; and
c. ensure design does not facilitate climbing.

2.3.2.2 Handrails

a. provide 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 **(Figure 12)**;
c. ensure colour contrast is provided between handrails and mounting

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.

Note

Handrails do not only 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 strong colour contrast is provided.

2.3.2.2 Handrails (Continued)

surfaces for improved visibility;

d. be continuous around landing less than 2100 mm in length, 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 exterior stairs are more than 2000 mm wide, provide one or more intermediate handrails with a maximum of 1650 mm between handrails;
g. provide extensions based on the following criteria:
   i. extend horizontally 300 mm (minimum) at 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 bottom of flight of stairs then extend 300 mm parallel to the floor surface;
   iii. design to return to the wall, guard or floor; and
   iv. ensure handrails are terminated in a manner that will not obstruct pedestrian travel or create hazards; and
h. be designed and constructed such that handrails and their supports:
   i. will withstand the loading values obtained from the non-concurrent application of a concentrated load not less than 0.9 kN applied at any point and in any direction; and
   ii. a uniform load not less than 0.7 kN/m applied in any direction to the handrail.

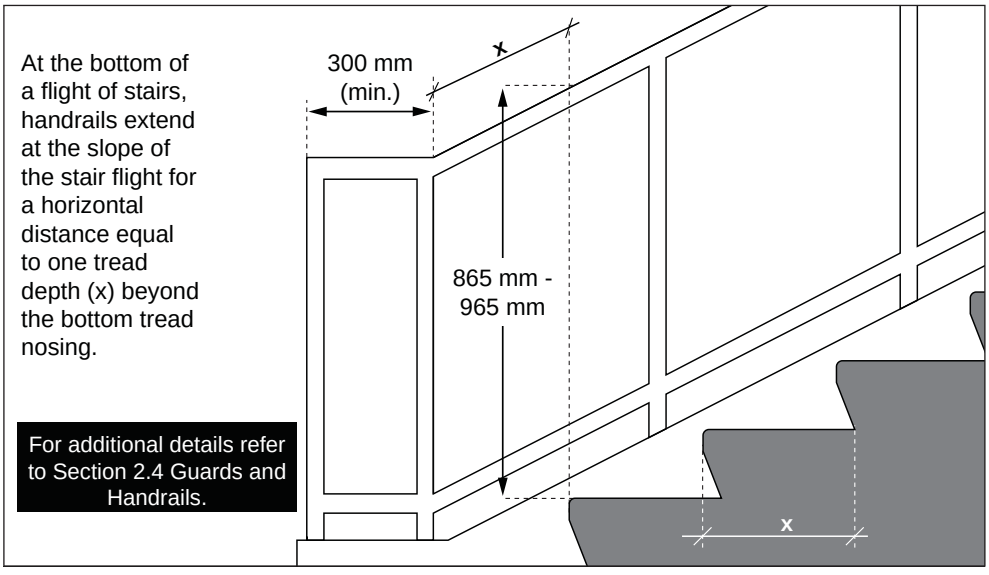

Figure 12: Handrail Extensions at Stairs - Section View

Guards and Handrails

2.4

Application

This section applies to guards, provided where vertical changes in level are more than 600 mm, at stairs and ramps for both interior and exterior environments.

Reference

Sec. 2.2 Ramps

Sec. 2.3 Stairs

Note

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

2.4.1 Guards

a. ensure they comply with the Ontario Building Code requirements;
b. ensure that any member, attachment or opening that is located between 140 and 900 mm above the floor does not facilitate climbing; and
c. provide guards with:
    i. curb or edge protection at least 75 mm high, where no solid enclosure or solid guard is provided; or
    ii. railings or other barriers that extend to within 100 mm beyond the ground surface.

2.4.2 Handrails

Best Practice

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

a. ensure handrails are continuous with grasping surface, uninterrupted by mounting brackets, newel posts or any other construction elements;
b. provide rounded edges, free of abrasive elements;
c. provide outside diameter between 30 and 40 mm for circular cross-section, which is preferred **(Figure 13a & 13b)**;
d. where non-circular cross sections are provided, ensure perimeter dimension of 100 mm (minimum) and 125 mm (maximum), with cross section dimension of 45 mm (maximum);
e. provide clearance of 50 mm (minimum) between grasping surface and any adjacent surface **(Figure 13a)**;
f. where handrails are in a recessed area, ensure clearance of 40 mm (minimum) between handrail surface and adjacent surface with clearance of 450 mm (minimum) above the handrail **(Figure 13b)**; and
g. install to resist a force of 0.7 kN/m, applied in any direction.

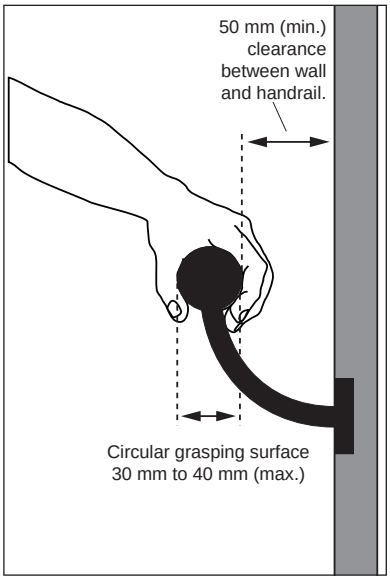

Figure 13a: Handrails on Wall - Section View

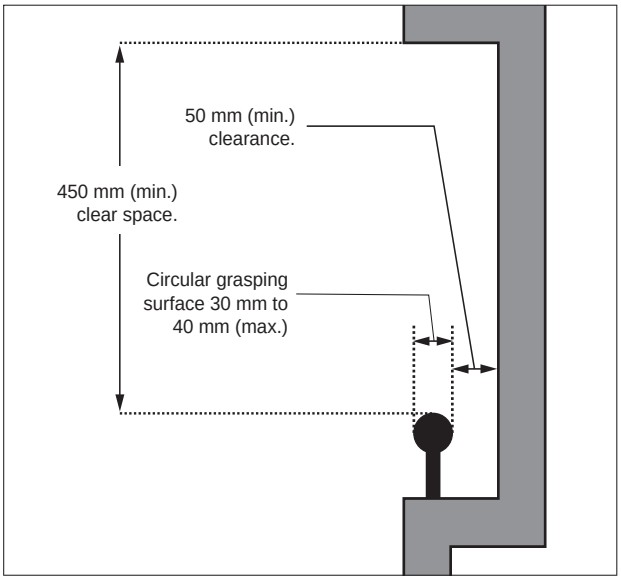

Figure 13b: Handrails in Recessed Area - Section View

Overhanging and Protruding Objects

2.5

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 Accessible Routes

Sec. 4.3 Interior Accessible Routes

Best Practice

Planters or seating are options for providing protection under stairs as long as they are placed within cane detection limits.

2.5.1 Headroom Clearance

a. provide 2100 mm (minimum) floor-to-ceiling clearance; and
b. where headroom clearance is less than 2100 mm from floor level (e.g., underside of stairs, escalators or ramp landings), install cane detectable guards.

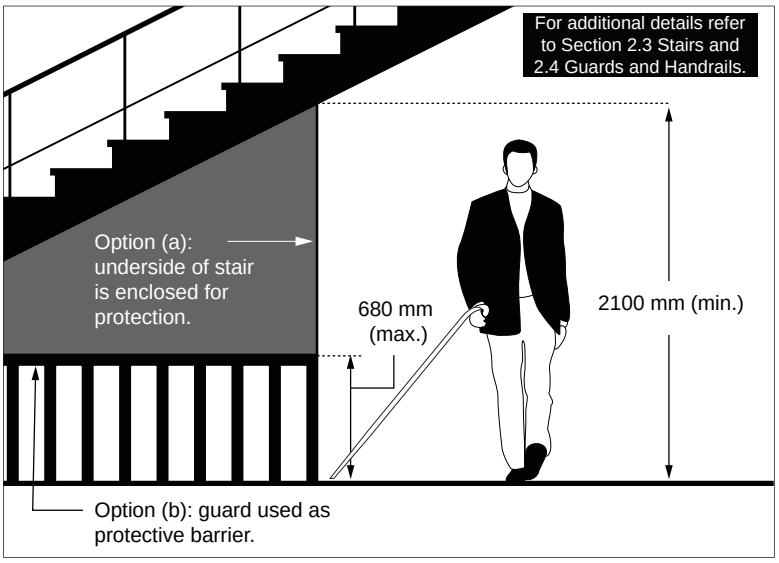

Figure 14: Protection Options Underneath Stairs

Best Practice

Wing walls, extending from protruding edge to floor / ground surface, provide cane detection, where protrusion is greater than 100 mm.

Note

This is not applicable to continuous protrusion (handrail, guards, door latches or panic bars) where the clear path of travel will be maintained.

2.5.2 Protruding Objects

Where objects protrude along accessible paths of travel:

a. ensure clear width of accessible path of travel is 1100 mm (minimum); and
b. ensure objects protruding more than 100 mm from wall have bottom edge mounted at or below 680 mm for cane detection.

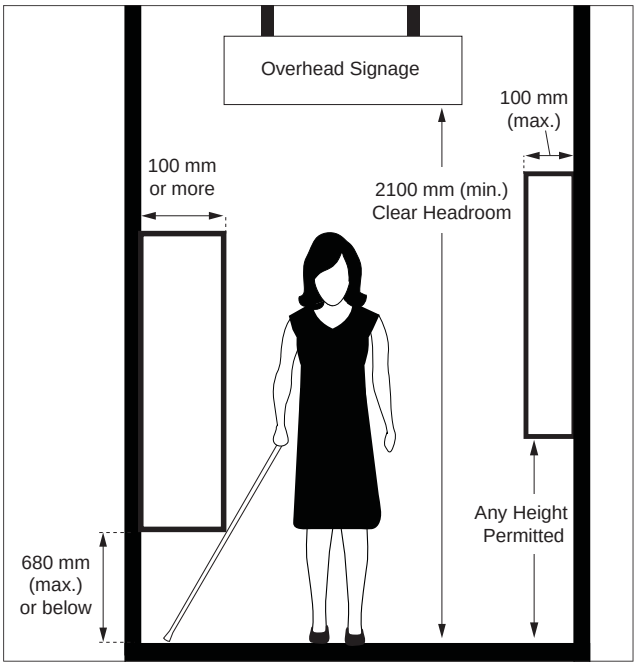

Figure 15: Protruding Objects

Rest Areas

2.6

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, limited stamina or for users of mobility aids to transfer onto.

Reference

Sec. 2.1	Ground and Floor Surfaces
Sec. 2.10	Seating, Tables and Work Surfaces
Sec. 5.7	Lighting

Best Practice

Provide an electrical outlet adjacent to a rest area to charge mobility aids, in recreation areas where users may be expected to stay for extended periods.

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.

2.6.1 Design and Layout

a. locate adjacent to and away from accessible path of travel;
b. ensure ground and floor surfaces are firm, stable and slip-resistant;
c. ensure colour contrast (e.g., amenity strips) is provided to distinguish accessible path of travel to these locations;
d. provide clear floor space of 915 mm wide by 1370 mm long (minimum); and
e. where seating is provided, ensure that at least one bench or seat is accessible.

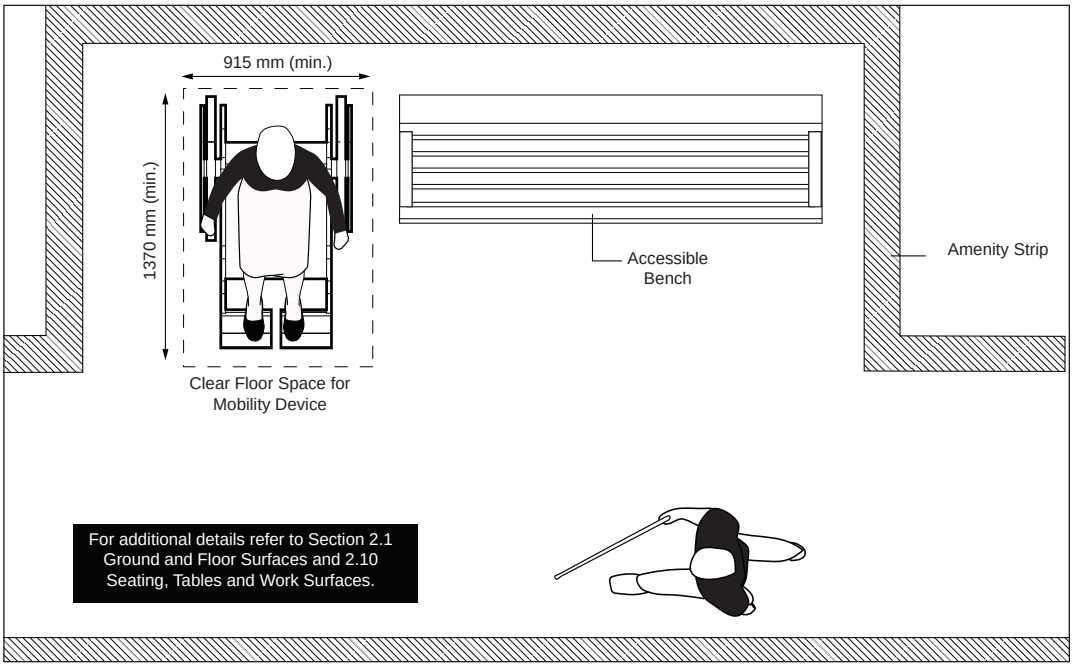

Figure 16: Rest Area - Plan View

2.6.2 Consultation Requirements

When developing new or redeveloping exterior paths of travel, ensure the City:

a. consults with the Accessibility Advisory Committee, the public, and persons with disabilities on the design and placement of rest areas along the path of travel.

Tactile Walking Surface Indicators

2.7

Application

Tactile walking surface indicators (TWSI) are designated to call attention to potential hazards. Typical locations where TWSIs are required are as follows:

- at curb ramps;
- where walking surfaces between pedestrian and vehicular areas are not separated by curbs;
- at top landing of stairs;
- at any stair landing that incorporates an entrance into the stair system;
- where the regular pattern of a stairway is broken;
- where the run of a landing with no continuous handrail is greater than 2100 mm;
- at top landing of a ramp; and
- at unprotected edges with a major change in elevation (e.g., at the edge of a platform).

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

Reference

Sec. 2.2	Ramps
Sec. 2.3	Stairs
Sec. 3.3	Exterior Accessible Routes
Sec. 3.4	Curb Ramps
Sec. 4.2	Doors and Doorways
Sec. 4.3	Interior Accessible Routes
Sec. 6.8	Recreational and Community Facilities
Sec. 6.12	Elevated Platforms or Stages

Note

TWSIs can also be referred to as detectable walking surfaces.

Note

Applying colour contrasted finish to a concrete surface does not provide appropriate detection by foot or cane.

Although it is recognized that an industrial yellow colour provides a preferred colour contrast, a light colour contrasted TWSI, on a dark colour contrasted ground surface is suitable. Alternatively, a dark on light contrast is also suitable.

2.7.1 Design Features

a. ensure surface is slip-resistant and non-glare;
b. ensure colour contrast of TWSI is at least 70% compared with adjacent surfaces;
c. provide textural differentiation with adjacent surfaces for TWSIs to be detectable when walked upon and / or by a long cane;
d. ensure edges are beveled or level with surrounding surface (e.g., height of 3 mm or less); and
e. design with truncated domes (e.g., circular and flat-topped domes).

2.7.2 Truncated Dome Specifications

a. ensure flat-topped domes are 5 mm (+/- 1 mm) high;
b. ensure the top of flat-topped domes are between 12 to 25 mm diameter;
c. ensure diameter of the lower base of the flat-topped domes are 10 mm (+/- 1 mm) more than the diameter of the top (e.g., a base diameter of 21 to 36 mm is typical);
d. ensure distance between each base of adjacent domes is 15 mm (minimum); and
e. ensure spacing between adjacent flat-topped domes is adjusted depending on the size of the domes, as identified in **Table 1**.

Table 1: Truncated Dome Spacing Requirements

Top Diameter of Flat Topped Domes (mm)	Spacing Between the Centres of Adjacent Domes (mm)
12	42 to 61
15	45 to 63
18	48 to 65
20	50 to 68
25	55 to 70

Note

For more information on requirements for truncated domes, refer to: ISO 23599:2012 "Assistive products for blind and vision-impaired persons -- Tactile walking surface indicators."

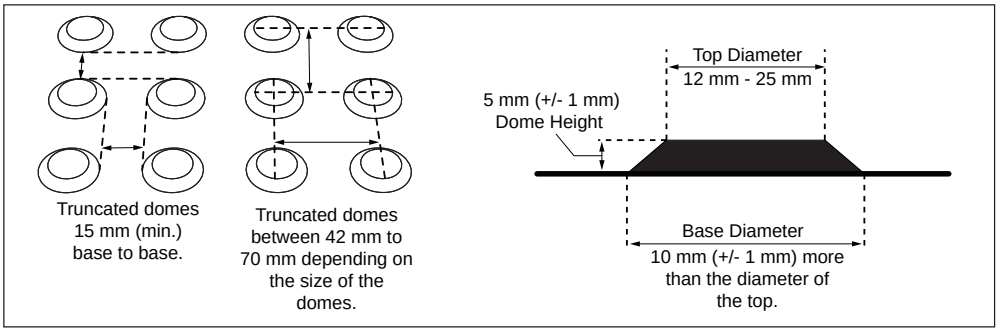

Figure 17: Truncated Dome Specification

Drinking Fountains

2.8

Application

This section applies to drinking fountains where provided throughout interior and exterior environments.

Reference

Sec. 3.3 Exterior Accessible Routes

Sec. 4.3 Interior Accessible Routes

Note

Where a single drinking fountain cannot meet the requirements for both standing and seated person, provide an additional drinking fountain.

2.8.1 Design and Layout

Where drinking fountains are provided:

a. ensure fountain is located along an accessible path of travel and does not project into route;
b. mount against a wall or provide free standing unit;
c. ensure at least one drinking fountain is accessible 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; and
d. ensure drinking fountain fixtures are colour contrasted with surroundings for easy identification.

2.8.1.1 Clear Floor Space Requirements and Approach

a. provide clear floor space of 915 mm wide by 1370 mm deep (minimum) for forward approach;
b. provide clear floor space of 1525 mm wide by 915 mm deep (minimum) 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.

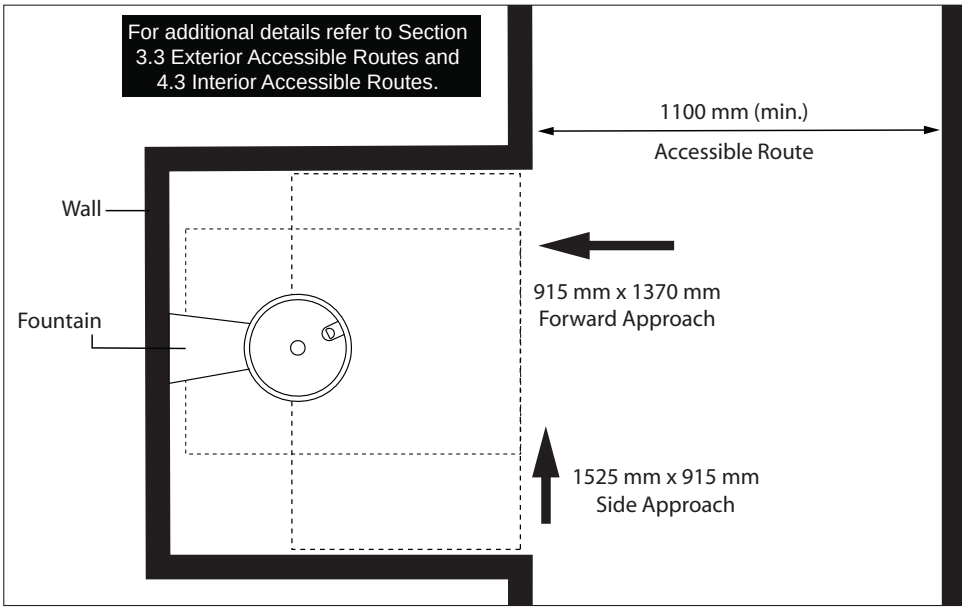

Figure 18: Clear Floor Space Requirements and Approach at Drinking Fountain - Plan View

2.8.1.2 Knee and Toe Clearances

Where cantilevered drinking fountains are provided:

a. ensure minimum clear knee space under the fountain is 500 mm deep by 760 mm wide and 700 mm high **(Figure 19)**;
b. ensure minimum clear toe space under the fountain is 600 mm deep by 760 mm wide and 350 mm high; and
c. where not recessed or otherwise located out of the circulation routes, ensure fountain is cane-detectable with base of unit mounted at or below 680 mm (maximum) above the finished floor.

Note

The space beneath the drinking fountain 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.

2.8.1.3 Operating Controls

Ensure fountain operating controls are:

a. located at the front of the drinking fountain, between 760 mm and 915 mm high above floor **(Figure 19)**;
b. operable with one hand, requiring a maximum force of 22 Newtons to operate without turning / twisting of the wrist or pinching of the fingers; or
c. allows automatic or hands-free use.

2.8.1.4 Water Spout

a. mount no higher than 915 mm above the finished floor **(Figure 19)**;
b. mount 125 mm (maximum) from the front of the drinking fountain and located 380 mm (minimum) from the vertical support **(Figure 19)**;
c. ensure water flows 100 mm high (minimum); and
d. ensure water flows 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 water spouts are located between 75 mm and 125 mm from the front of the unit.

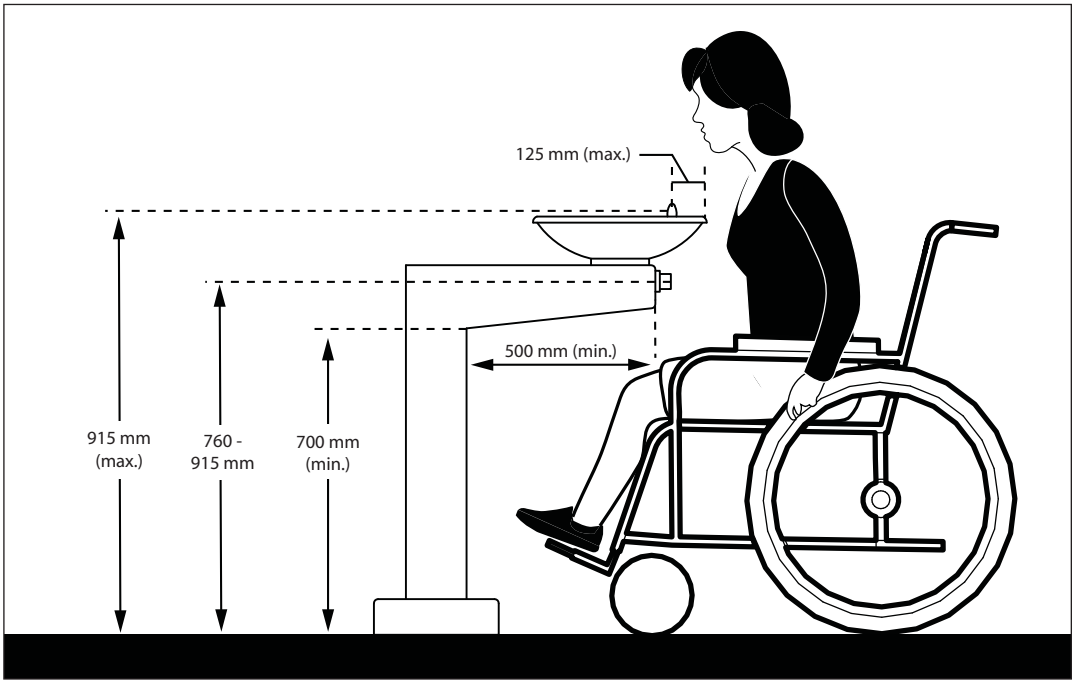

Figure 19: Fountain Design and Layout - Elevation View

Public Telephones

2.9

Application

This section applies to public telephones, which include coin operated, coin-less, and courtesy phones, located in both exterior and interior environments.

Reference

Sec. 2.10	Seating, Tables and Work Surfaces
Sec. 5.1	Controls and Operating Mechanisms
Sec. 5.7	Lighting
Sec. 5.8	Signage and Wayfinding

Note

Public telephones can vary in design and style. Overall configuration is beyond the scope of these Standards and is typically the responsibility of the telephone service provider.

Best Practice

Where more than four public telephones are provided on an accessible floor level, equip one phone with a fixed TTY device, mounted below the phone without minimizing required knee space height for users of mobility aids.

2.9.1 Provision

a. provide at least one accessible telephone unit on each accessible floor level as identified in **Table 2**.

Table 2: Minimum Number of Accessible Telephones Required

Total Number of Telephone Units Located on Floor	Number of Telephone Units Required to be Accessible
1 or more single units	1 per floor
1 bank	1 per floor
2 or more banks	1 per bank

2.9.2 Design and Layout

a. provide directional signage to accessible public telephone location, if phone is hidden from view or mounted in a recessed area;

b. mark with International Symbols of Accessibility and Hearing Loss, for accessibility features provided;

c. provide clear floor space in front of accessible telephone unit (e.g., can be wall-mounted or hung in an enclosure) of:

   i. 915 mm wide by 1370 mm depth (minimum) for a forward approach; and

   ii. 1525 mm wide x 915 mm depth (minimum) for a side approach;

d. ensure clear knee space below telephone of at least 500 mm deep by 700 mm high by 760 mm wide;

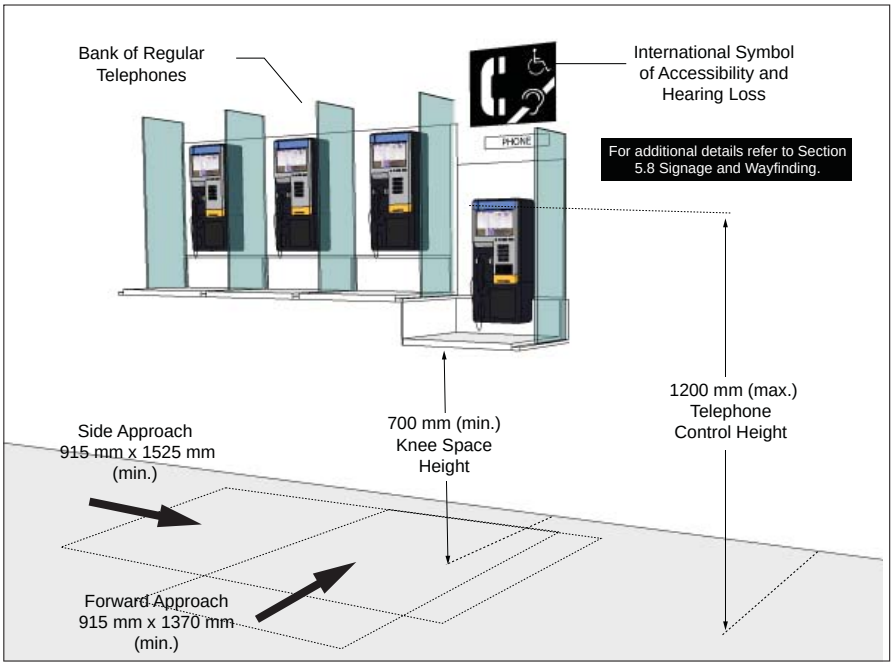

Figure 20: Public Telephone Provisions and Layout

e. ensure overhead clearance of 2100 mm (minimum);
f. where seating is provided in floor space, ensure it is flexible to accommodate users of mobility aids and people who prefer to stand (e.g., can be moved);
g. where stall or booth is provided for privacy and acoustics, provide sound-absorbing surfaces and ensure all required clearances are provided (e.g., floor space); and
h. ensure lighting level is 200 lux (20 foot-candles) (minimum) over all controls and related features / signage.

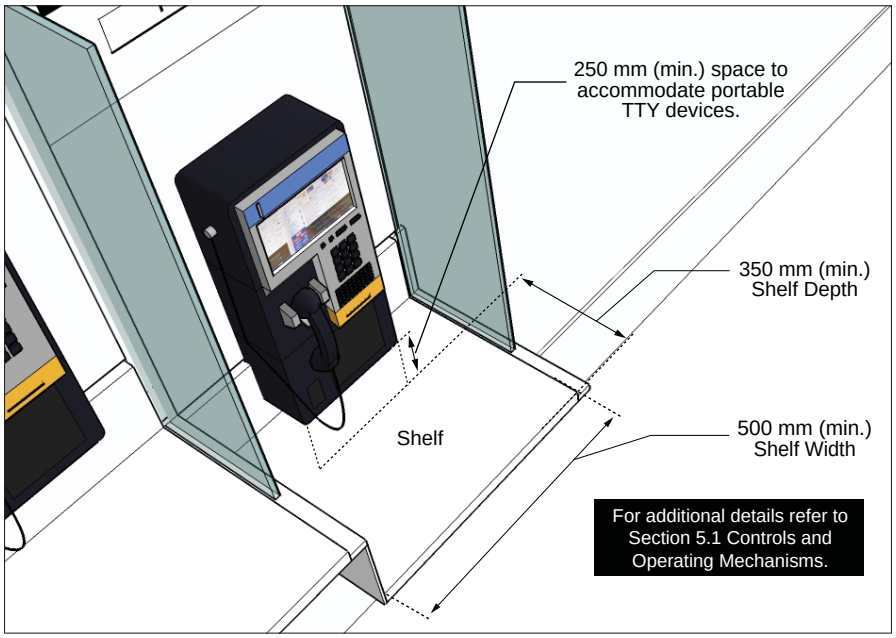

Figure 21: Shelf Dimensions for Public Telephones

2.9.3 Telephone Operating Controls

a. provide push button controls with large size numbers;
b. ensure colour contrast is provided between button and background, as well as numbering;
c. ensure controls have a matte finish;
d. mount operating controls, including coin and card slots, push buttons and dispensers, 1200 mm (maximum) from floor level **(Figure 20)**;
e. ensure maximum reach to all operating controls is 485 mm from front edge of phone cabinet or shelf;
f. provide cord for telephone handset with length of 735 mm (minimum); and
g. equip with adjustable volume controls for users with hearing loss.

Best Practice

All accessible public telephones and a minimum of 25% of the total number of telephones provided should be equipped with adjustable volume control.

Note

It is the responsibility of the phone service provider to ensure all telephone features comply with CAN / CSA-T515 standard.

2.9.4 Text Telephones (TTYs)

Where fixed text telephone (TTY) devices or portable TTY connections are available:

a. provide fixed signage with the International Symbols of Accessibility and Hearing Loss and symbol for TTY, to identify its location;
b. provide adaptable controls to allow portable TTY connections, including adjacent electrical outlet where telephones are provided specifically to address the needs of users with hearing loss;
c. provide long cord on telephone handset to allow connection to text telephone (TTY), if acoustic coupler is used; and
d. provide a shelf underneath telephone for TTY **(Figure 21)**:
    i. 500 mm wide by 350 mm deep (minimum);
    ii. mount at 775 to 875 mm high above floor; and
    iii. ensure a clear space of 250 mm (minimum) high between top of shelf and lower edge of phone equipment.

Examples of Text Telephones (TTYs).

Seating, Tables and Work Surfaces

2.10

Application

This section applies to site and facility furniture, provided in both exterior and 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.

Note

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

Best Practice

Where multiple benches are provided in a rest area, consider option of some benches oriented to face each other where possible. This arrangement allows people to see each other, which is beneficial for people with hearing and communication disabilities to facilitate interaction.

2.10.1 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 provided in both interior and exterior environments:

a. provide a seat height at 450 to 500 mm above finished floor / ground;
b. ensure seat depth between 510 to 610 mm;
c. provide back support of at least 1065 mm long, extending 51 mm (maximum) above the seat surface to 455 mm above the seat surface;
d. ensure the back support is 64 mm (maximum) from the rear edge of the seat, measured horizontally;
e. provide arm rests at both ends of all benches and an additional arm rest in the middle where benches are longer;
f. ensure bench is stable at all times; and
g. ensure seating surfaces are colour contrasted with surroundings to enhance visibility.

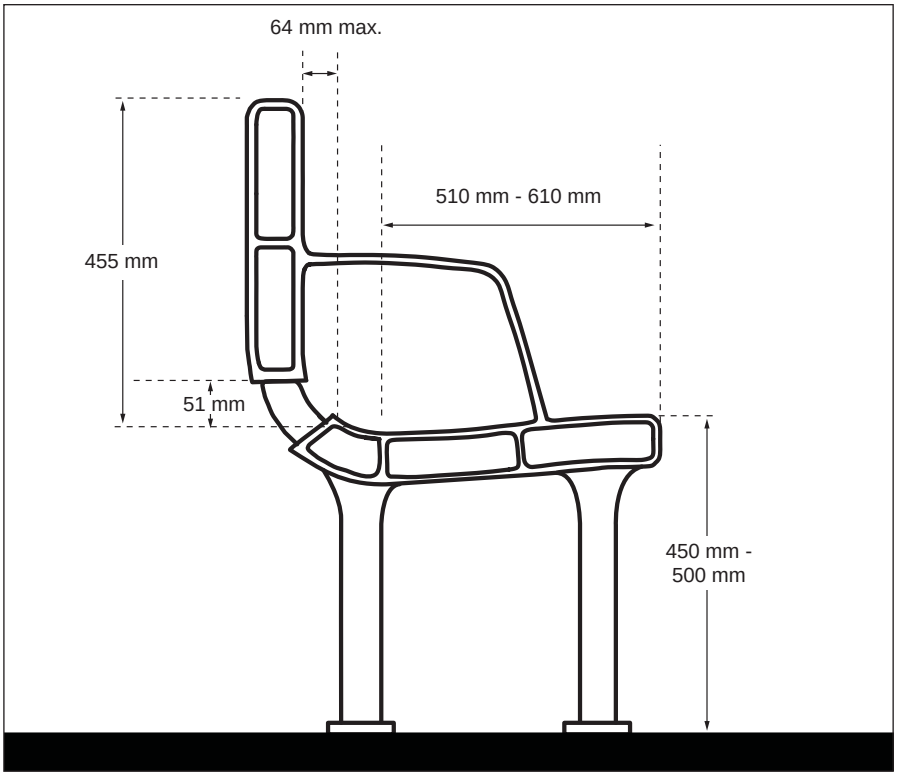

Figure 22: Typical Accessible Bench Dimensions - Section View

2.10.2 Tables and Work Surfaces

a. ensure top surface is between 760 mm and 865 mm high **(Figure 23a)**;
b. provide clear knee space under the top surface of at least 500 mm deep by 760 mm wide by 700 mm high (minimum) **(Figure 23b)**;
c. provide toe space below top surface of at least 600 mm deep by 760 mm wide by 350 mm high (minimum) **(Figure 23b)**;
d. ensure top surface and edges are colour contrasted with adjacent surroundings to enhance visibility; and
e. ensure clear floor space in front of table and work surfaces for users of mobility aids is:
    i. 915 mm wide by 1370 mm deep (minimum) to allow forward approach; and
    ii. 1525 mm wide by 915 mm deep (minimum) for a side approach.

Best Practice

Provide a clear floor space or ground surface with turning diameter of 1675 mm, to allow both side and front approach by users of larger wheeled mobility aids, such as powered scooters and wheelchairs.

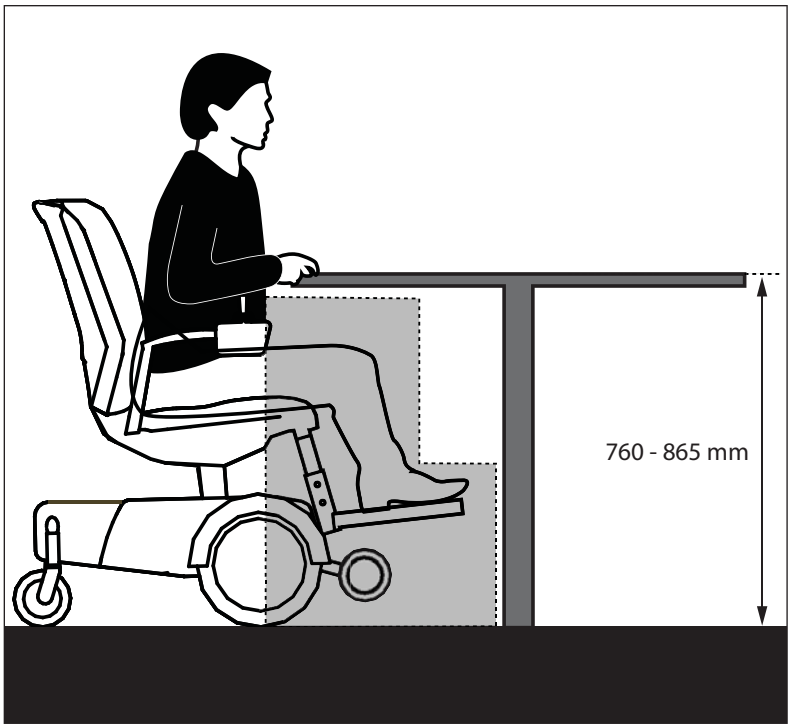

Figure 23a: Table and Work Surface - Elevation View

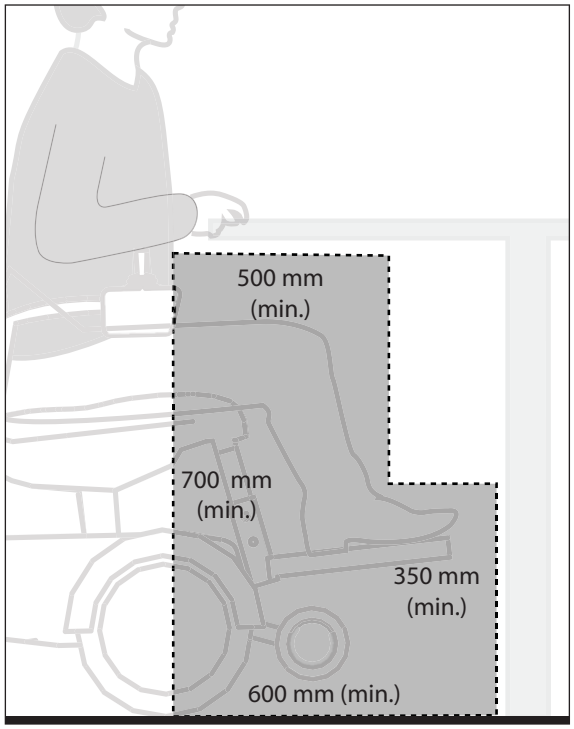

Figure 23b: Knee and Toe Space Dimensions

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Exterior Environments

3.0

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Parking

3.1

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.

Accessible parking space requirements in this section are intended to be universal to accommodate both cars and vans.

Reference

Sec. 2.1	Ground and Floor Surfaces
Sec. 3.3	Exterior Accessible Routes
Sec. 3.4	Curb Ramps
Sec. 5.7	Lighting
Sec. 5.8	Signage and Wayfinding

Note

Where more than one type of parking facility is provided, review facilities independently to determine the number of accessible parking spaces required for each facility (e.g., for both parking lots or structures).

Note

City of Ottawa parking by-law may be in effect for existing facilities, based on time of original construction. The Standards in this section will be primarily in force for newly constructed facilities.

Best Practice

Where facilities may expect a higher proportion of people with disabilities using their services (e.g., Healthcare, Long Term Care and Senior's facilities), the provision of additional accessible parking spaces is 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.

Best Practice

Wherever possible, provide accessible parking spaces at the same level as accessible path of travel or provide curb ramps at relevant transition areas.

Accessible parking spaces and adjacent access aisles should be regularly maintained, kept clear of debris and snow, and where possible, have overhead protection for users from the elements (e.g., such as direct sun, rain or snow).

3.1.1 Provision

a. locate accessible spaces adjacent to the shortest accessible path of travel leading to the accessible entrance / exit of the parking facility;
b. provide one Type A parking space where there are 25 or fewer spaces;
c. ensure 4% of the total number of parking spaces are accessible, where there are between 26 and 500 total parking spaces, in accordance with the following:
    i. provide an equal number of Type A and Type B parking spaces where an even number of accessible parking spaces is required;
    ii. provide an equal number of Type A and Type B parking spaces plus an additional type B parking space where an odd number of accessible parking spaces is required;
d. where the total number of spaces is greater than 500, provide 20 accessible parking spaces plus an additional two 2% of the total number of spaces in accordance with the following:
    i. provide an equal number of Type A and Type B parking spaces where an even number of accessible parking spaces is required;
    ii. provide an equal number of Type A and Type B parking spaces plus an additional type B parking space where an odd number of accessible parking spaces is required;
e. ensure that if more than one parking facility is provided, that the total number of spaces provided is based on the total number of spaces required for each facility, however, these may be distributed among the lots in a manner that provides the greatest accessibility in terms of distance from an accessible entrance or user convenience; and
f. provide accessible parking on at least one level in multi-storey or underground parking garages, with easy to locate accessible parking spaces, and at least one accessible route leading to entrance, exit or elevator.

3.1.2 Design and Layout

a. locate as close as possible to the nearest accessible entrance / exit, or within 30 metres (maximum);
b. ensure ground surface is firm, stable and slip-resistant;
c. maximum running slope of surface at 1:50 (2%);
d. maximum cross-slope of surface at 1:50 (2%);
e. length of 5800 mm **(Figure 24)**;
f. width of 3400 mm for "Type A" wide van accessible spaces and width of 2400mm for "Type B" standard parking spaces **(Figure 24)**;
g. provide access aisle, 1500 mm wide (minimum), clearly indicated by high contrast diagonal pavement markings that extend the full length of the space **(Figure 24)**;
h. two adjacent accessible parking spaces may share an access aisle;

i. ensure access aisles lead directly to accessible path and/or curb ramp, and do not require users to walk behind other parked vehicles;
j. ensure overhead clearance of 2100 mm high (minimum) or 2750 mm (preferred), throughout space and along the vehicular access and egress routes to and from the space;
k. ensure lighting level is 10 lux (minimum);
l. provide directional signage, marked with the International Symbol of Accessibility, where the location of designated accessible parking spaces, or the location of the nearest accessible entrance, is not obvious along the path of travel or is distant from the accessible parking space; and
m. ensure spaces are clearly designated with pavement and vertical signage, containing the International Symbol of Accessibility **(Figure 25 & 26)**.

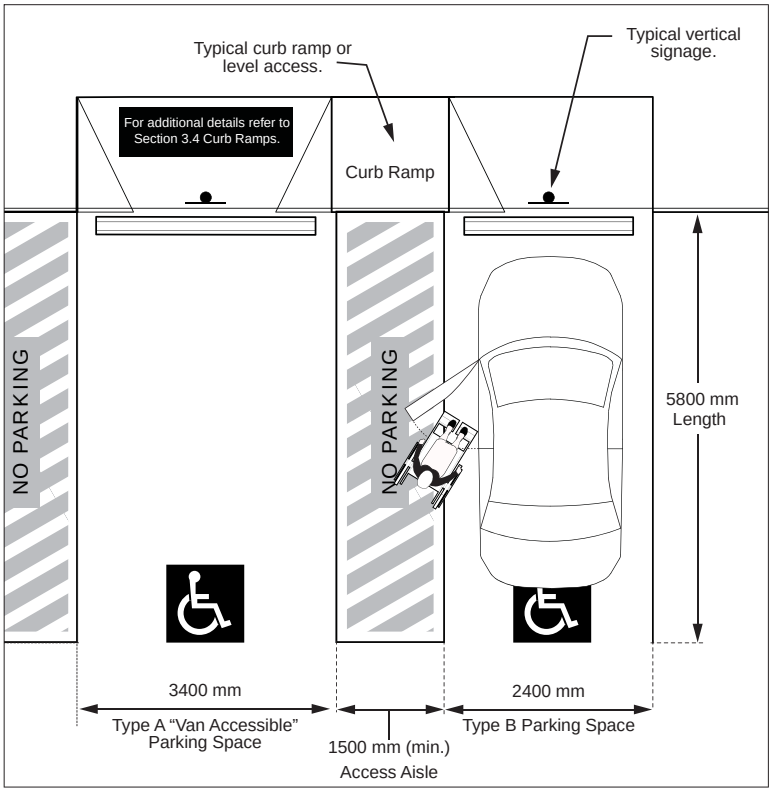

Figure 24: Accessible Parking Space Dimensions - Plan View

Locate accessible parking space as close as possible to accessible entrance, with accessible route integrated.

Accessible parking spaces and access aisle.

3.1.2.1 Vertical Signage

a. mark with International Symbol of Accessibility;
b. ensure size of 300 mm wide by 450 mm high (minimum);
c. mount at height of 1500 mm to 2500 mm (centre) (e.g., wall or post-mounted), from ground / floor;
d. ensure suitable colour contrast between sign and background environment;
e. provide information text, compliant with City By-law requirements; and
f. provide signage that identifies the space as “van accessible” for Type A spaces.

3.1.2.2 Pavement Markings

a. mark with International Symbol of Accessibility;
b. ensure 1525 mm wide by 1525 mm depth (minimum);
c. provide a white border with a blue background field colour;
d. locate near the back of the space for 90 degree or angled parking spaces and centered for parallel parking spaces; and
e. ensure all surface markings are slip-resistant.

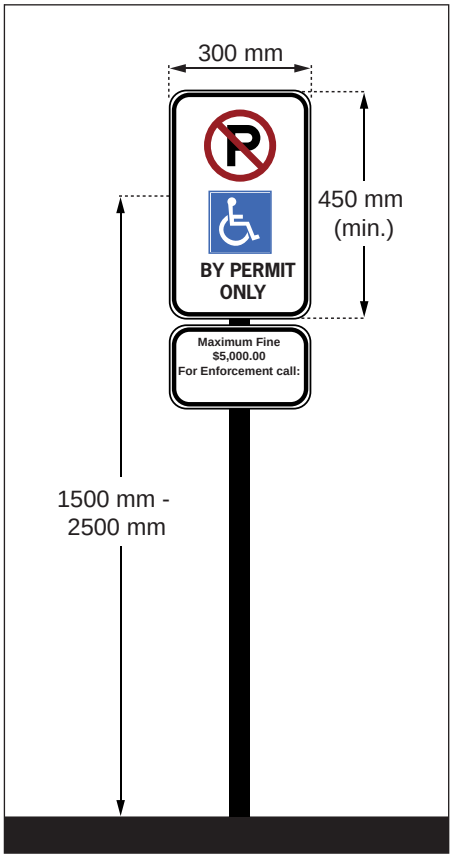

Figure 25: Accessible Parking Vertical Signage

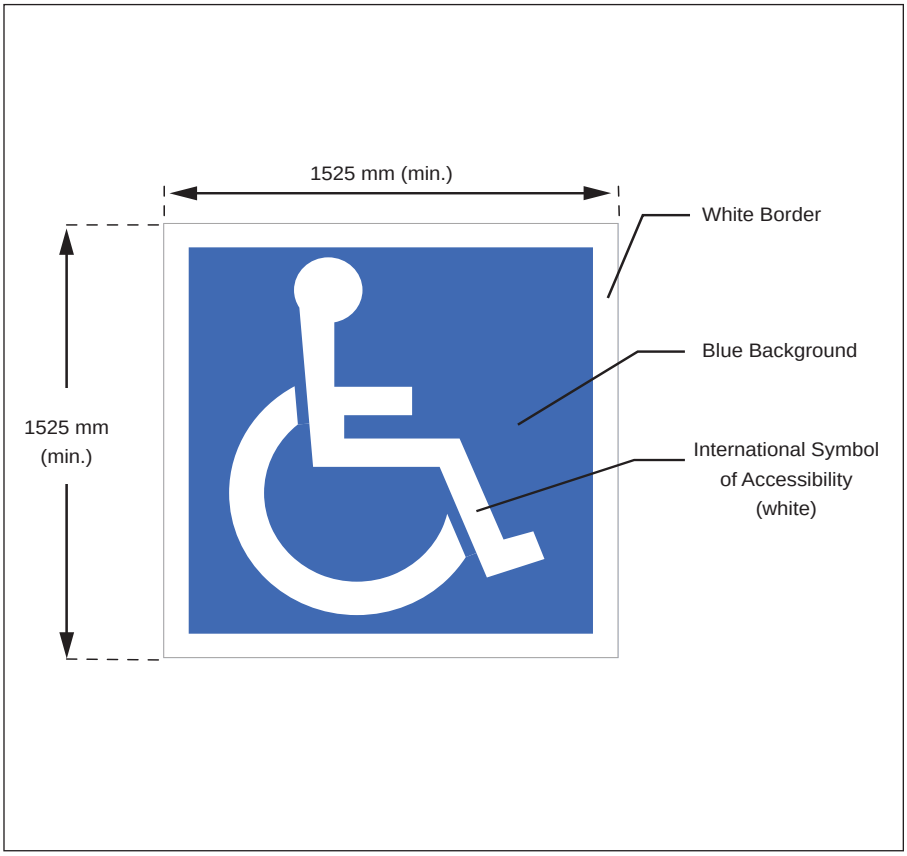

Figure 26: Accessible Parking Pavement Markings

3.1.3 On-street Parking

Before developing new or redeveloping existing on-street parking spaces, ensure the City:

a. consults with the Accessibility Advisory Committee, the public, and persons with disabilities on the need, location, and design of accessible on-street parking spaces

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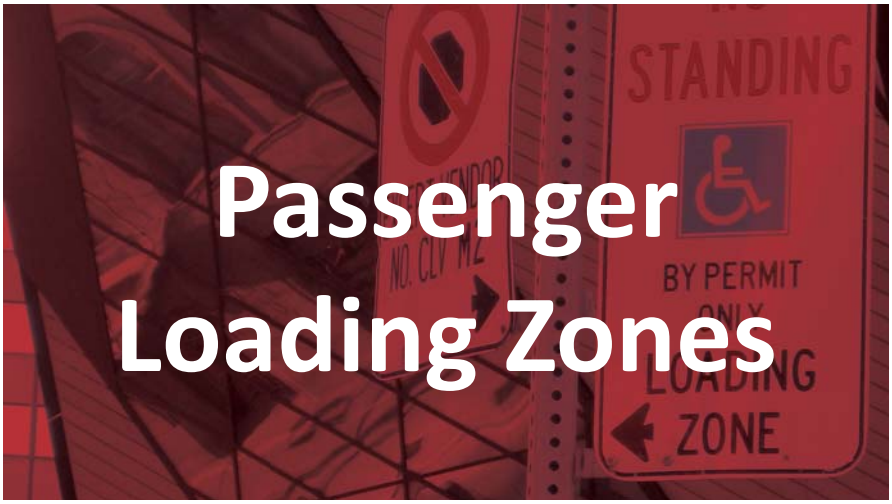


Passenger Loading Zones

3.2

Application

This section applies to 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, for users of mobility aids, and for people who travel with companions or caregivers (e.g., person with vision loss or cognitive disability, the very young, and seniors).

Reference

Sec. 3.3	Exterior Accessible Routes
Sec. 3.4	Curb Ramps
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 and are not covered within the scope of these Standards.

Best Practice

Consider providing access aisle 3050 mm wide by 7925 mm long, to accommodate a wider range of vehicles (e.g., vans, para-transit vehicles and larger buses).

3.2.1 Design and Layout

a. locate as close as possible to the nearest accessible entrance or within 30 metres (maximum);
b. ensure it is located away from any traffic flow and that it is designed to allow users to 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 clearance (i.e., vertical dimension) of 2750 mm (minimum) throughout vehicular pull-up space and passenger loading zone;
d. provide at least one curb ramp, for users of mobility aids, where there is level change; and
e. provide a side access aisle, adjacent and parallel to the vehicular pull-up space **(Figure 27)**:
    i. 2000 mm (minimum) wide;
    ii. 7000 mm (minimum) long; and
    iii. mark access aisle clearly with diagonal pavement markings (e.g., hatched or yellow lines), extending the full length of the space.

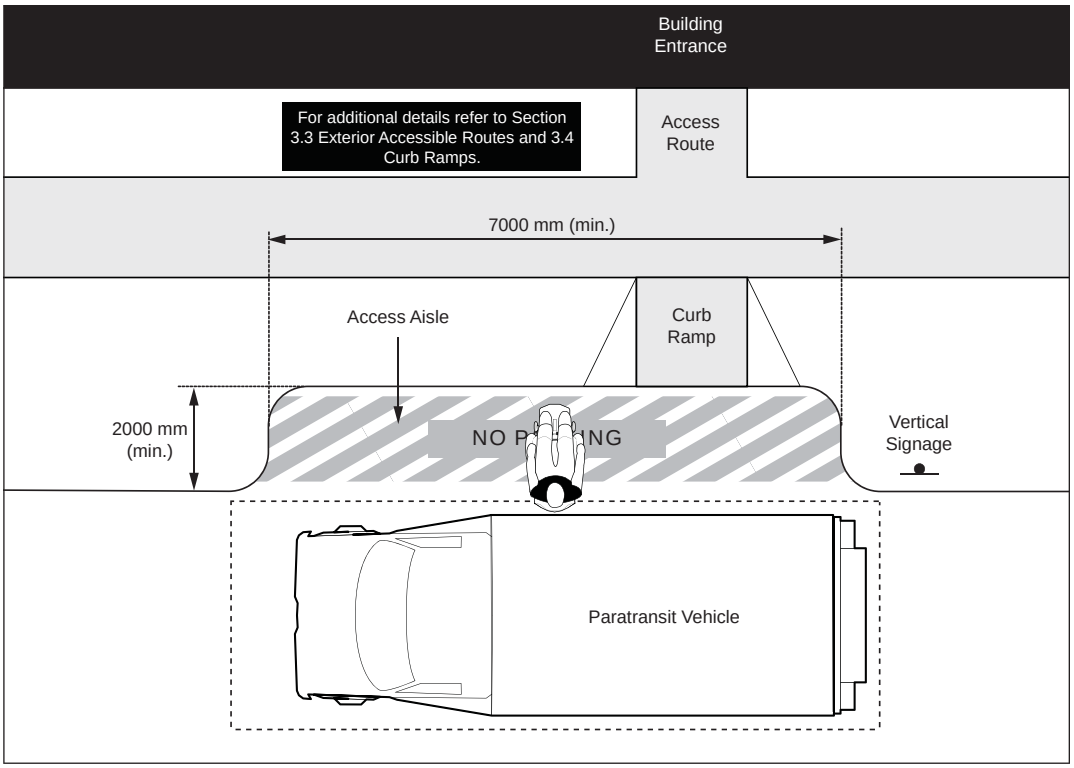


Figure 27: Passenger Loading Zone - Plan View

3.2.1.1 Vertical Signage

a. mark with the International Symbol of Accessibility to formally designate passenger loading and drop-off zones;
b. ensure size of 300 mm wide by 450 mm high (minimum);
c. mount at height of 1500 mm to 2500 mm (centre) (e.g., wall or post-mounted), from ground / floor;
d. ensure colour contrast between sign and background environment;
e. ensure suitable colour contrast between sign and background environment; and
f. provide information text, compliant with City By-law requirements (e.g., “Designated Passenger Loading Zone”).

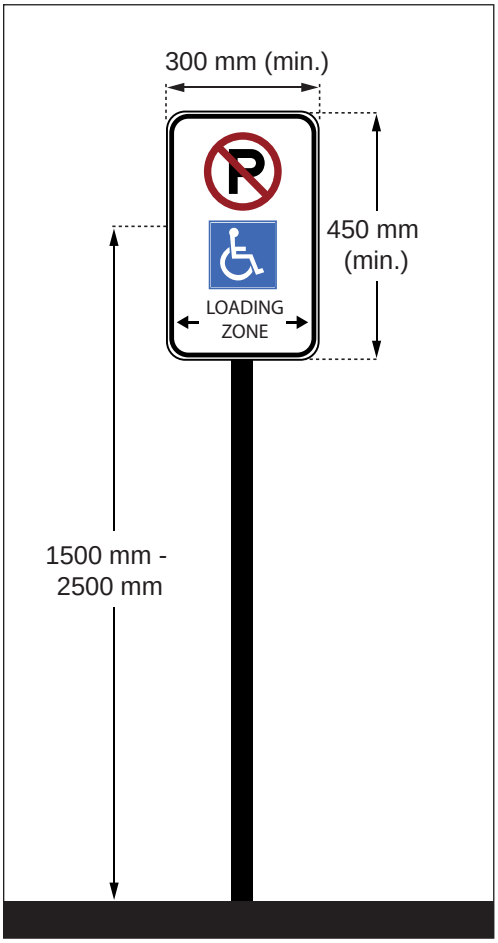
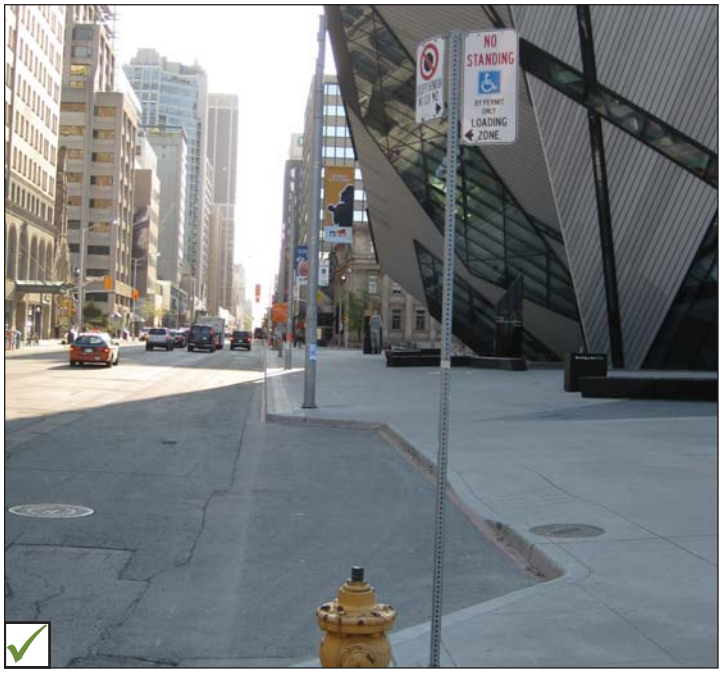


Figure 28: Passenger Loading Zone Vertical Signage



Example of designated passenger loading zone and signage.

Exterior Accessible Routes

3.3

Application

This section applies to exterior accessible routes, which typically include, but are not limited to:

- pedestrian circulation routes that serve facility entrances, exits, elements or amenities;
- pedestrian circulation routes that serve as connections between a site boundary and access into or from a facility;
- public right-of-ways (e.g., sidewalks and footpaths);
- ramps; and
- curb ramps.

Where stairs are located on accessible exterior routes or walkways, an alternative accessible route is to be provided immediately adjacent to the stairs and may include a ramp or another accessible means of negotiating elevation change.

Exterior accessible routes do not include trails or other paths of travel related to parks and the natural environment or private residential areas.

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	Rest Areas
Sec. 3.4	Curb Ramps
Sec. 5.7	Lighting
Sec. 6.15	Trails
Sec. 6.16	Playspaces

Exception

Compliance is not required where it would:

- cause substantial harm to cultural, historic, religious, or significant natural features/characteristics;
- substantially change the intended experience provided by the facility;
- be impractical due to physical terrain; and
- require construction methods or materials that are prohibited by federal, provincial or local laws.

3.3.1 General Features

a. ensure ground surfaces are firm, stable and slip-resistant;
b. ensure headroom clearance is not less than 2100 mm;
c. ensure lighting level is 10 lux (average); and
d. provide a colour contrast of 70% (minimum) to distinguish the edges of exterior accessible routes.

3.3.2 Clear Width

a. provide clear width of 1800 mm (minimum) **(Figure 29a)**; and
b. where criteria for exceptions exist, the clear width of exterior routes may be reduced to 1200 mm (minimum), with passing spaces of 1800 mm wide by 2000 mm long (minimum) provided, at intervals of 30 metres or less **(Figure 29b)**.

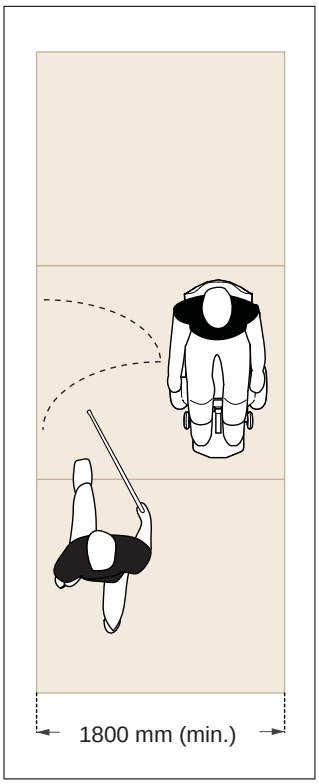


Figure 29a: Minimum Clear Width of Exterior Accessible Route

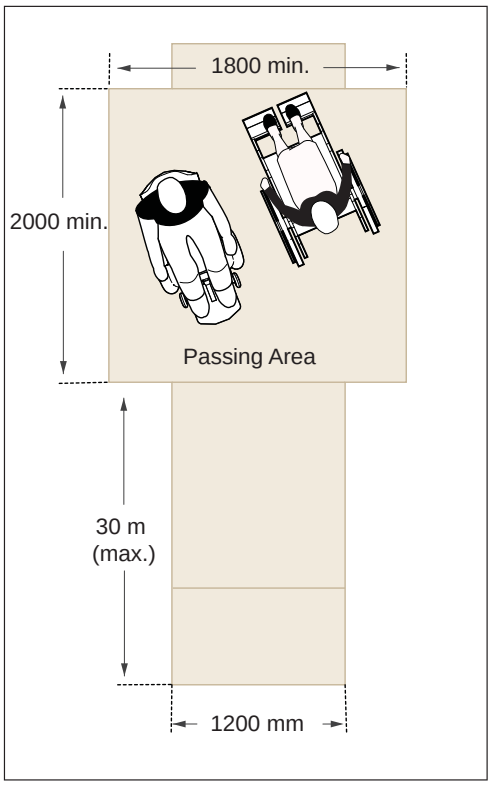


Figure 29b: Reduced Clear Width and Required Passing Area

Best Practice

Where exterior paths of travel cross vehicular routes or intersections, ensure they are clearly marked.

If 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 walking surface indicators (TWSI), continuous along the full length of the crossing boundary.

Best Practice

Provide clear width of 2000 mm (minimum) for exterior accessible routes, where possible.

3.3.3 Running and Cross-slopes

3.3.3.1 Running Slope

a. ensure a running slope gradient of 1:20 (5%) (maximum) or minimum permitted by the terrain, unless criteria for exception applies;
b. where slope gradient exceeds 1:20 (5%), path of travel is considered a ramp;
c. where applicable over a 2 metre distance, ensure the ratio of change of the running slope does not exceed 10%; and
d. where the running slope exceed 1:20 (5%), provide a level rest area at 30 metres for people with limited stamina / mobility or users of mobility aids.

3.3.3.2 Cross-Slope

a. provide a cross-slope gradient of 1:50 (2%) (maximum); and
b. where one or more of exceptions occur, a cross slope gradient of 1:10 (10%) (maximum) is permitted.

Note

It is important that the cross-slope be minimal to allow for adequate drainage. The greater the cross-slope, the more likely it will affect the balance of an individual while walking or using a mobility aid.

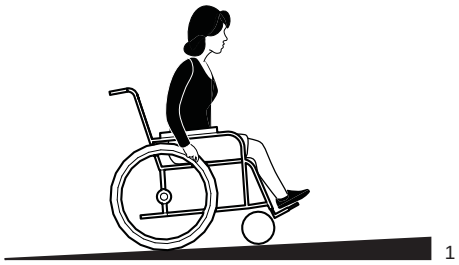


Figure 30a: Running Slope

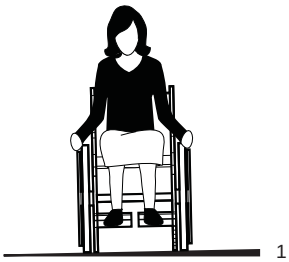


Figure 30b: Cross-Slope

3.3.4 Changes in Level

a. where change in level is between 200 and 600 mm, provide colour contrasted curb or other barrier protection, 75 mm (minimum) high above path of travel; and
b. where change in level is more than 600 mm, provide guards.

Note

Ensure curb or other barrier protection is designed to allow surface drainage.

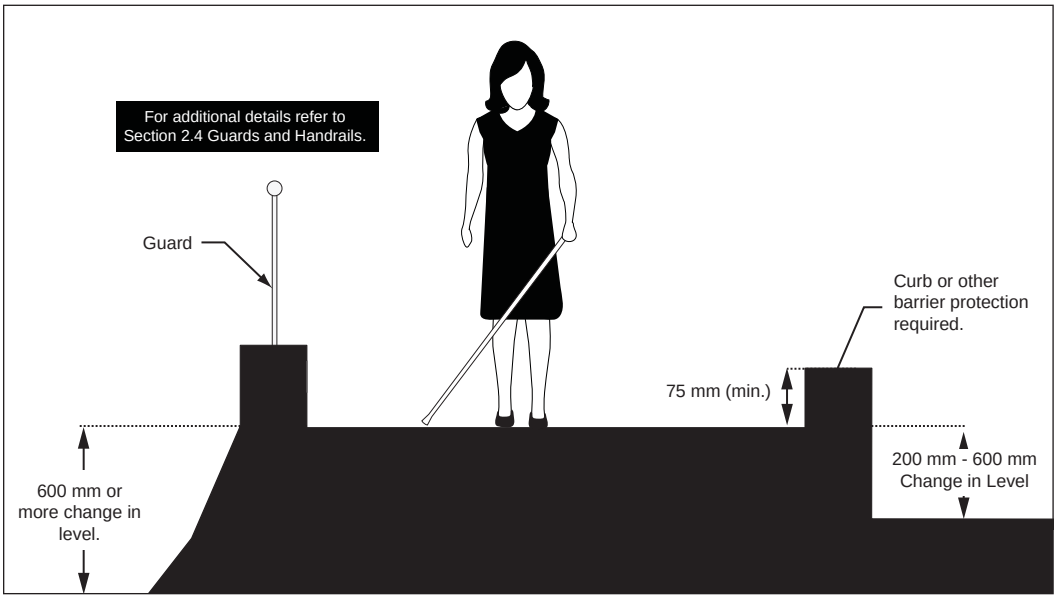


Figure 31: Changes in Level - Section View

Ensure a smooth transition is provided between sidewalk segments.

Best Practice

To achieve a smooth transition between sections of concrete sidewalks when they are poured in place, finishing and texturing the surface after any scoring is completed (e.g., scoring is typically made for incorporating expansion joints between the sidewalk sections) will ensure no uneven surfaces, ridges or bumps are accidentally put in place between sidewalk sections.

Curb Ramps

3.4

Application

Curb ramps or blended transitions are required when there is a change in level between exterior path of travel and adjacent vehicular route.

The provision of curb ramps or blended transitions 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 route where there are elevation changes.

Reference

Sec. 2.1	Ground and Floor Surfaces
Sec. 2.7	Tactile Walking Surface Indicators
Sec. 3.1	Parking
Sec. 3.2	Passenger Loading Zones
Sec. 3.3	Exterior Accessible Routes

Note

Blended transitions should only be used in locations of traffic calming, since the shallow slope of a blended transition can be difficult to detect for persons with vision loss

3.4.1 Design and Layout

a. provide stable, firm, slip-resistant and non-glare surface;
b. ensure running slope of 5% preferred and cross-slope of 2%, when compared to adjacent surfaces at either the level of the vehicular route or the level of the pedestrian exterior route;
c. provide clear width of 1500 mm (minimum), exclusive of return curbs or flared sides;
d. provide a transition area 1500 mm (minimum) in diameter at the top and bottom of the curb ramp;
e. design to provide suitable drainage, to prevent water, snow and ice accumulation within the accessible path of travel; and
f. ensure gratings and other openings are not placed on curb ramps or within pedestrian crossings.

Best Practice

A transition area of 1675 mm (or more) in diameter at top and bottom of the curb ramp is recommended, where possible, to accommodate larger wheeled mobility aids.

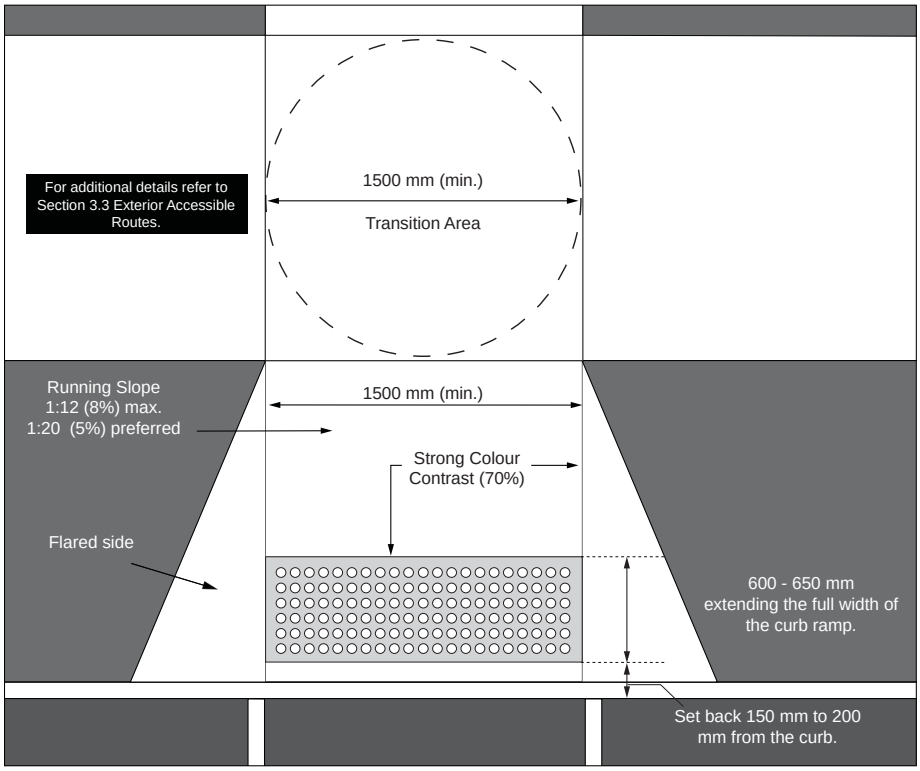


Figure 32: Typical Curb Ramp Design - Plan View

3.4.1.1 Running Slope

a. for curb ramps, provide a slope gradient of 1:20 (5%, preferred) or 1:12 (8%, maximum); and
b. for blended transitions, provide a slope gradient of 1:20 (5%) (maximum).

Note

For retrofit conditions, running slope of 10% maximum permitted.

3.4.1.2 Cross-Slope

a. provide a cross-slope gradient of 1:50 (2%) (maximum) at intersections and 1:20 (5%) at mid-block crossings.

3.4.1.3 Counter Slope

When the counter slope at a curb ramp is greater than 11%, provide a transition area that:

a. extends the full width of the curb ramp;
b. begins at the base of the curb ramp and extends to a length of at least 600 mm on the street; and
c. has a cross-slope gradient of 1:50 (2%) maximum.

3.4.1.4 Tactile Walking Surface Indicator

a. provide on all curb ramps and blended transitions;
b. install 150 to 200 mm back from the front edge of the curb ramp; and
c. ensure surface depth of 600 - 650 mm, extending full width of curb ramp or transition area **(Figure 32)**.

3.4.2 Curb Ramp Sides

Note

Return curbs provide defined, detectable edges on both sides of the curb ramp to prevent people from moving unintentionally off of the curb ramp surface. They also provide directional guidance for people with vision loss. Return curbs may be used where pedestrians are not expected to walk across the curb ramp.

3.4.2.1 Return Curb

a. extend over the full length of the curb ramp; and
b. ensure the outer surface of the curb is colour contrasted or has a texture change to assist with identification and differentiation between pedestrian and vehicular routes.

3.4.2.2 Flared Sides

a. ensure surface is stable, firm, slip-resistant and non-glare;
b. ensure the sides are clearly demarcated and grooved;
c. provide width of 1000 mm (minimum); and
d. provide a maximum slope gradient of 1:20 (5%, maximum).

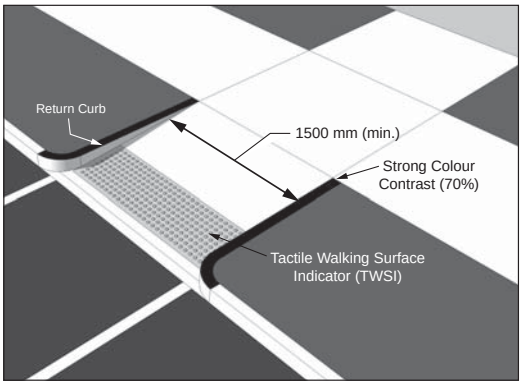


Figure 33a: Return Curb

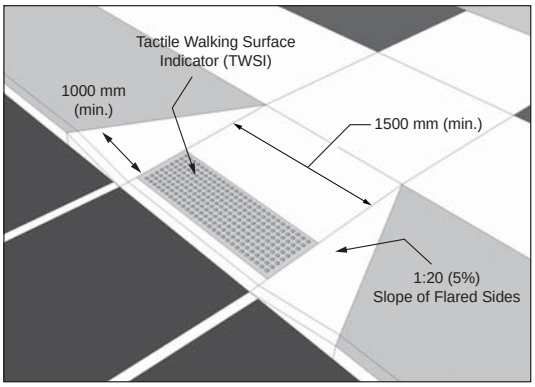


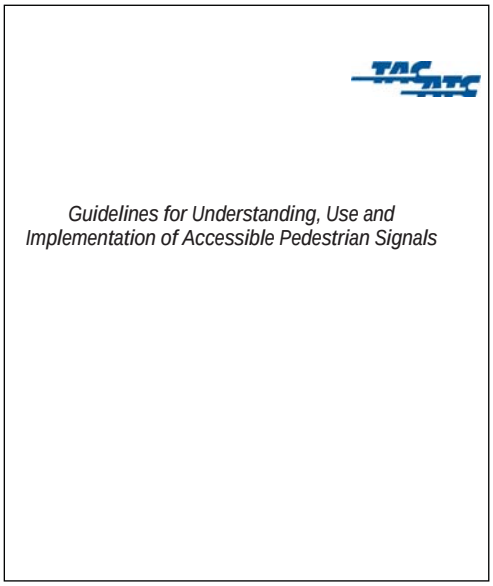
Figure 33b: Flared Sides

Accessible Pedestrian Signals

3.5

Application

This section addresses accessible pedestrian signals (APS), required for public safety at pedestrian crossings at vehicular roadways, including but not limited to, designated crosswalks and signalized intersections.



3.5.1 Provision

a. provide accessible pedestrian signals that comply with:
    i. Transportation Association of Canada's (TAC) "Guidelines for Understanding, Use and Implementation of Accessible Pedestrian Signals" – August 2008 (or current version).

Note

Detailed information is provided in "Appendix A" of the "TAC Guidelines for Understanding, Use and Implementation of Accessible Pedestrian Signals".

3.5.2 APS Intersection Evaluation Procedure

The purpose of the prioritization process is to establish factors to be used in creating ranking amongst potential locations for the installation of APS. The process involves the review of the following factors:

a. Pedestrian Crossing Demand (e.g., anticipated level of use);
b. Proximity to alternative crossings;
c. Traffic conditions;
d. Physical environment of location; and
e. Width of crossing.

Source: *Adapted from Guidelines for Understanding, Use and Implementation of Accessible Pedestrian Signals, Transportation Association of Canada (2008).*

Typical APS actuation.

Interior Environments

4.0

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Entrances

4.1

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 transition area between exterior and interior environments (e.g., vestibule). It may also include an interior lobby or waiting area, where applicable.

Reference

Sec. 2.2	Ramps
Sec. 2.3	Stairs
Sec. 2.4	Guards and Handrails
Sec. 2.6	Rest Areas
Sec. 2.7	Tactile Walking Surface Indicators
Sec. 2.10	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, Line-up 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.

Best Practice

Where an entrance is not accessible, provide directional and informational signage to identify location of the closest accessible entrance.

4.1.1 Provision

a. at least one main or primary entrance into a facility is required to be accessible (e.g., via level, sloped or ramped accessible routes);
b. at least 50% of the total number of building entrances are required to be accessible; and
c. locate entrance 30 metres or less from designated accessible parking or passenger loading or drop-off zones.

Best Practice

Consider providing automatic sliding doors at highly used entrances.

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 vestibule is provided.

Exception

Power door operators are not required at:

- exit stairwell doors;
- secure/rear entrances at police and fire stations, and other similar City facilities.

4.1.2 Main or Primary Entrance Features

Where an entrance is designated as a main or primary accessible entrance into a facility:

a. locate as part of an accessible path of travel, including exterior landing area with 1675 mm turning diameter (minimum);
b. provide power door operator and mark door with International Symbol of Accessibility **(Figure 35)**;
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 clear door width of 850 mm (minimum);
e. where an entrance vestibule is provided, ensure the distance between the two doors in series is 1500 mm (minimum), plus the width of the door swinging into the space; and
f. provide overhead protection (e.g., canopy) at pedestrian entrance and passenger loading or drop-off zones adjacent to the entrance, with height clearance of 2750 mm.

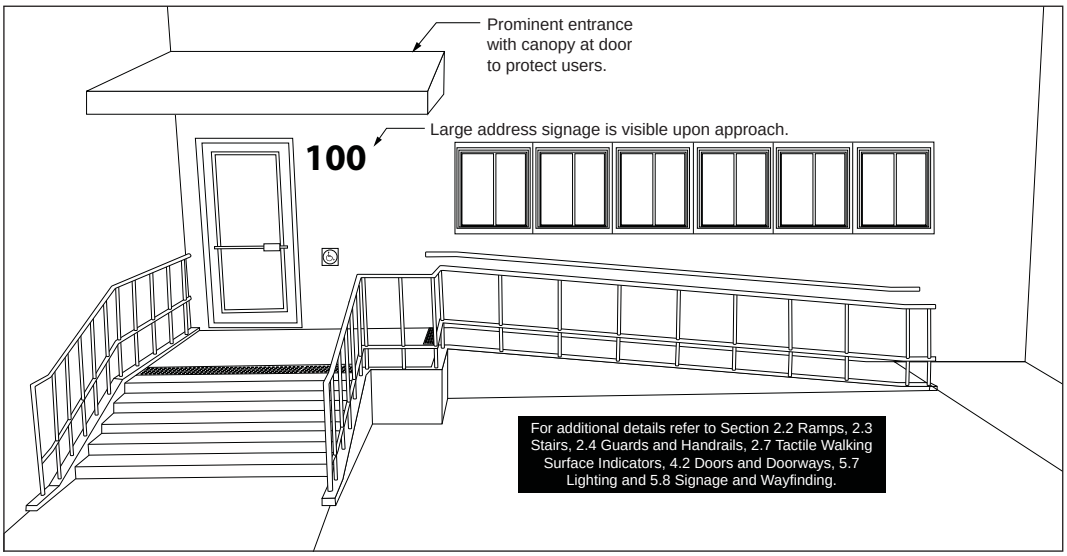


Figure 35: Main or Primary Entrance Features

4.1.3 Reception and Waiting Areas

Where reception and waiting areas are provided:

a. locate strategically in order for users to have a clear view of both areas when entering a facility from the main accessible entrance;
b. provide directional and informational signage to identify and guide users to reception / waiting areas, where they are not located at obvious locations;
c. provide a clear floor space of 915 mm wide and 1370 mm depth, adjacent to seating / waiting area and away from the main path of travel, for users of mobility aids to position themselves or maneuver throughout the space **(Figure 36)**;
d. provide accessible seating options, including back and arm supports for various users;
e. provide a building directory for large facilities, especially where no rooms are assigned; and
f. where lower coffee or telephone tables are provided adjacent to seating / waiting areas, ensure the top surface is 510 mm high (minimum), for reach from a seated position.

Best Practice

Provide tactile floor plan / directional map to assist users with vision loss with wayfinding throughout complex facilities.

Note

Clear floor space for designated accessible seating must be positioned to allow shoulder alignment for user of mobility aid and person in adjacent seat.

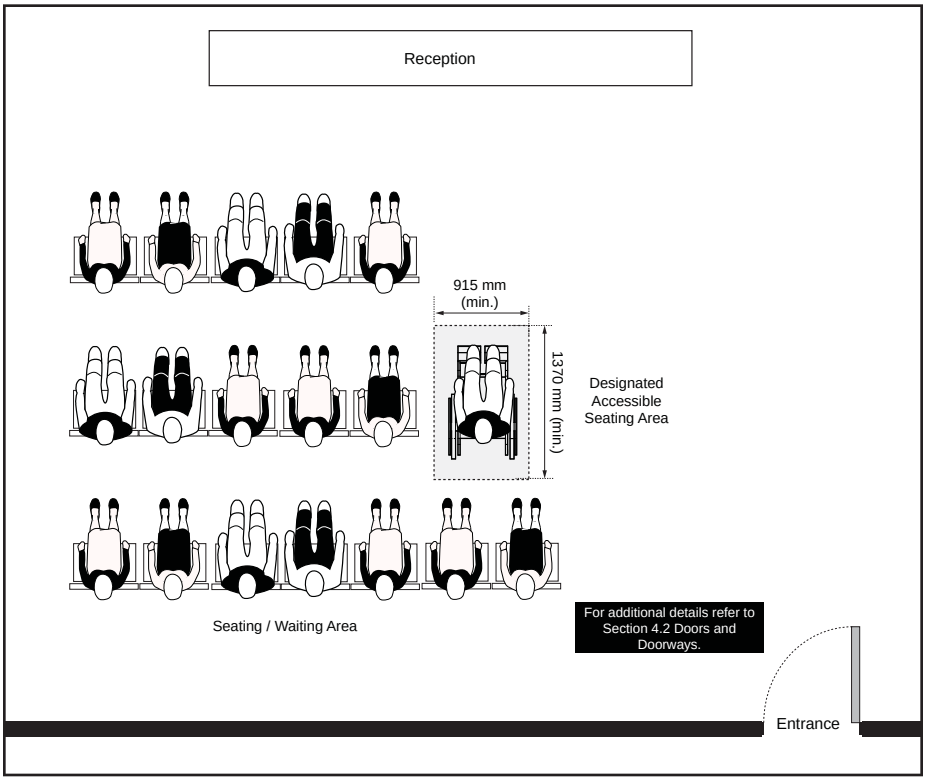


Figure 36: Lobby and Waiting Area - Plan View

Doors and Doorways

4.2

Application

This section applies to all interior and exterior doors intended for staff and public use, which lead into, out of and through a facility. 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 leafs is required to be accessible, meeting the criteria identified in this Section.

Reference

Sec. 2.4	Guards and Handrails
Sec. 2.7	Tactile Walking Surface Indicators
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 all interior and exterior doors and doorways:

a. provide a clear width of 850 mm (minimum), measured when 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 door stop; and
b. where there is a projection into clear opening width, ensure it is 100 mm (maximum) between 860 mm and 2030 mm high above floor.

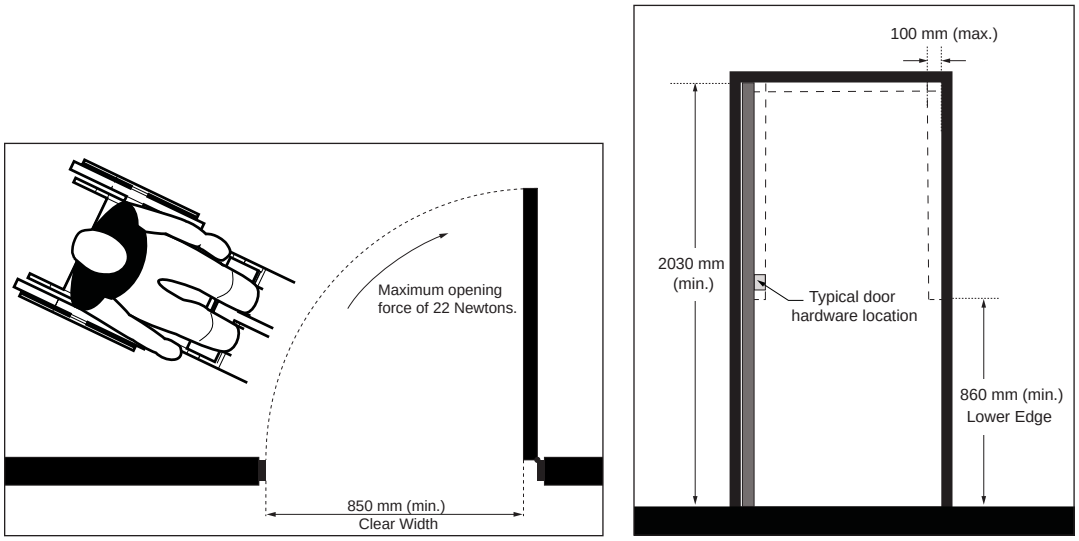


Figure 37: Clear Width of Doors - Plan and Elevation Views

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 pounds) for interior hinged doors; and
c. 22 Newtons (5 pounds) for sliding or folding doors.

4.2.2.2 Closers

a. adjust closers so that from an open position of 90 degrees, the time required to move the door to a position of 12 degrees from the latch is 5 seconds (minimum).

4.2.3 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.

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).

Best Practice

Provide clear width of 915 mm (minimum) at all doorways, where feasible.

Note

For existing doors with panic hardware for exiting, often hardware projects more than 100 mm and reduces required clear width.

Note

Knob 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 usable on both sides when the door is in the open position (e.g., large D-pull handles).

4.2.4 Door Hardware

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

a. mount between 900 mm (minimum) and 1100 mm (maximum) high from finished floor or ground surface;
b. 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;
d. ensure colour contrasted hardware finishes are provided when compared to mounting surface; and
e. install door kick plates 300 mm high, measured from bottom edge of door, covering the entire width of the door (e.g., especially for high traffic areas).

4.2.5 Colour Contrast of Doors and Frames

a. provide colour contrast of 70% (minimum) to differentiate:
    i. doors and / or door frames from the surrounding environment; and
    ii. door handles and other operating mechanisms from the door itself.

Note

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. Some specialized revolving door systems are accessible and can accommodate larger mobility aids.

4.2.6 Revolving Doors and Turnstiles

a. provide accessible gate or door adjacent to turnstiles and / or revolving door, with clear width of 850 mm (minimum); and
b. ensure accessible gate or door is clearly marked with International Symbol of Accessibility.

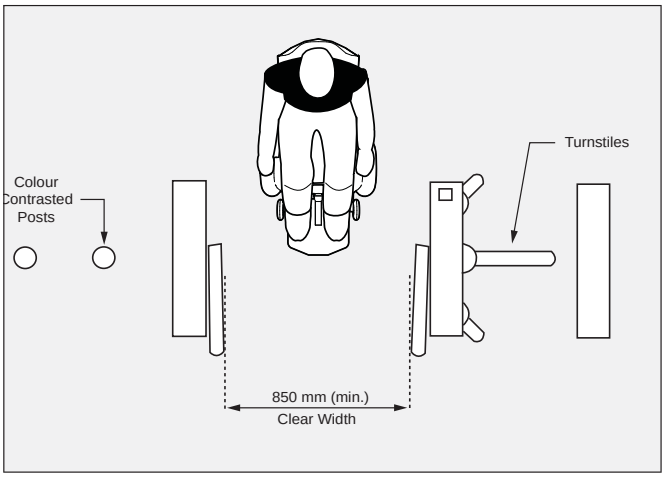


Figure 38: Accessible Controlled Gate

4.2.7 Automatic Doors

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

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

4.2.8 Power-Assisted Doors

Power-assisted doors are typically activated by a control and are predominantly required at the following locations:

- building entrances;
- interior doors along accessible routes and / or connecting accessible routes;
- accessible washrooms;
- doors leading to reception areas;
- doors entering into primary functional spaces (e.g., multi-purpose rooms or meeting rooms); and
- doors leading to exits and “Areas of Refuge”.

Where power-assisted doors are provided:

a. mark accessible doors with International Symbol of Accessibility decal and other signage (e.g., “Caution” decals to warn of door swing);
b. ensure a force of no more than 66 Newtons is required to stop door movement;
c. in case of power failure, ensure power-assisted doors can be opened manually;
d. ensure door remains fully open for 5 seconds (minimum);
e. ensure doors take 3 seconds (minimum) to move from a closed to fully open position, when activated; and

Best Practice

In all new construction, provide necessary wiring and access to electrical power roughed-in, to enable power-assisted doors to be installed at a later date at doors to meeting rooms, common areas and along paths of travel.

Touch activation devices, with dimension of 150 mm wide by 915 mm high, allow activation from any approach and height level **(Figures 39 and 40b)**.

Note

Where power-assisted doors are activated by proximity card reader devices, ensure timing of door opening is synchronized with operation of proximity device.

Figure 39: Example of Power Operator Control Promoting Universal Use

f. provide activation devices on both sides of doors, for use when entering or leaving, with the following criteria:
   i. mount in clearly visible location for easy identification upon approach;
   ii. ensure control dimension of 150 mm by 150 mm (minimum);
   iii. ensure colour contrast of 70% (minimum) is provided between activation device and mounting surface;
   iv. ensure they project less than 100 mm from mounting surfaces;
   v. mark with International Symbol of Accessibility;
   vi. ensure controls are operable with a closed fist;
   vii. mount at height of 1000 mm to 1100 mm from ground or floor surface **(Figure 40a)**;
   viii. mount beyond the arc of the door swing away from door frame at least 600 mm, on a level wall surface or separate post **(Figure 40a)**;
   ix. locate no more than 1500 mm beyond door swing, where door opens towards control **(Figure 40b)**; and
   x. provide a minimum clear floor space of 1675 mm by 1675 mm in front of activation devices.

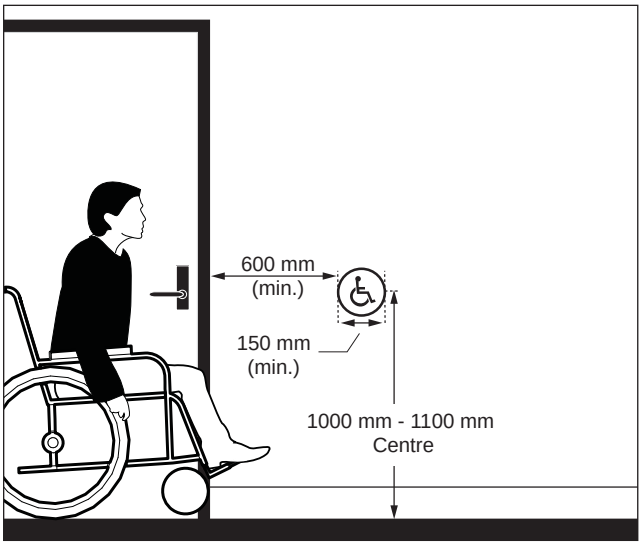


Figure 40a: Circular Push Button - Elevation View

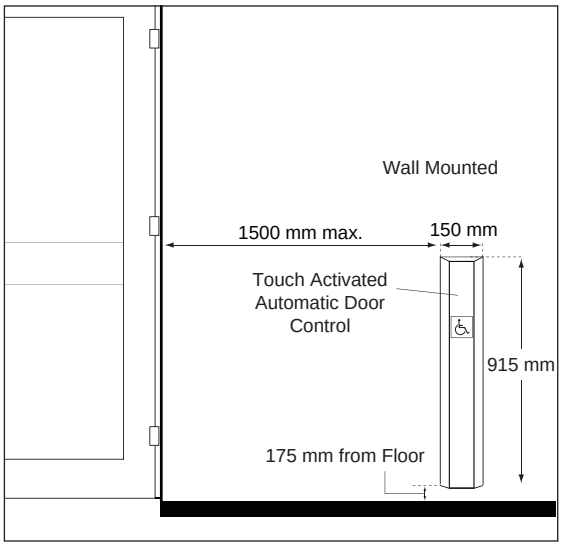


Figure 40b: Touch Activation Device - Elevation View

Touch activation device can accommodate a wider range of users (e.g., can be operated by foot or foot rest).

Large circular push button, clearly marked with International Symbol of Accessibility.

4.2.9 Approach Clearances at Doors

The floor space requirements at swinging 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). Clear floor space requirements for approach at different types of doors are summarized in **Table 3** with corresponding diagrams referenced.

Table 3: Minimum Clearance at Doors

Context	Floor Space Required in mm		
	Depth (min.)	Width (min.)	Space Beside Latch
Side-Hinged Door - Front Approach **(Figure 41a)**			
Pull side	1525	1600	600
Push side	1370	1250	300
Sliding Door **(Figure 41b)**			
Front approach	1370	1100	50
Side approach	1370	1550	600
Side-Hinged Door - Hinge Side Approach **(Figure 41c)**			
Pull side	2440	2440	600
Push side	1370	1830	450
Side-Hinged Door - Latch Side Approach **(Figure 41d)**			
Pull side	1370	1600	600
Push side	1370	1525	600
Folding Door			
Front approach	1220	610	n/a
Side approach	1220	610	n/a
Recessed Door - Front Approach			
Pull side	1675	445	n/a
Push side	1675	445	n/a
Doorways Without Doors			
Front approach	1220	n/a	n/a
Side approach	n/a	1065	n/a

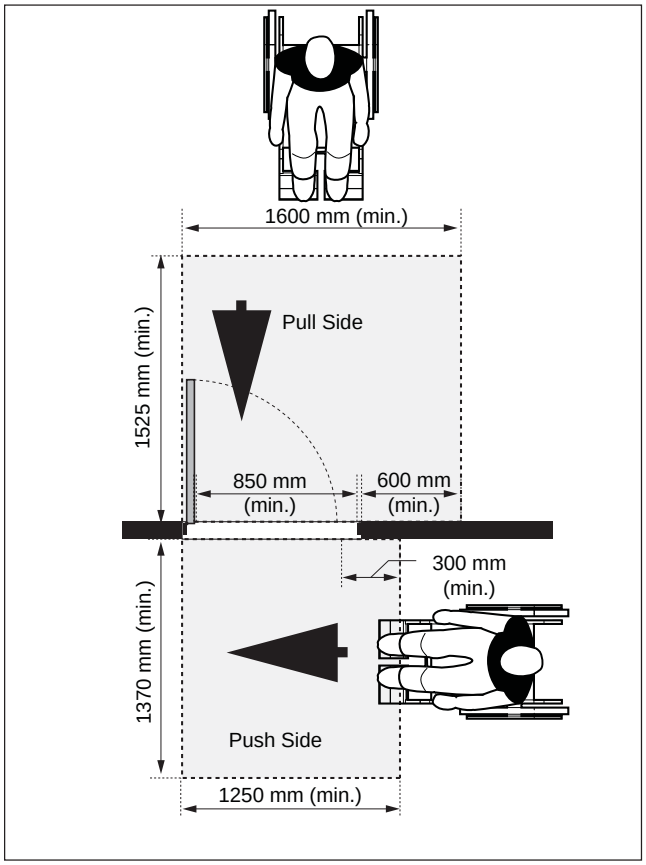


Figure 41a: Front and Side Approach at Side-Hinged Door - Plan View

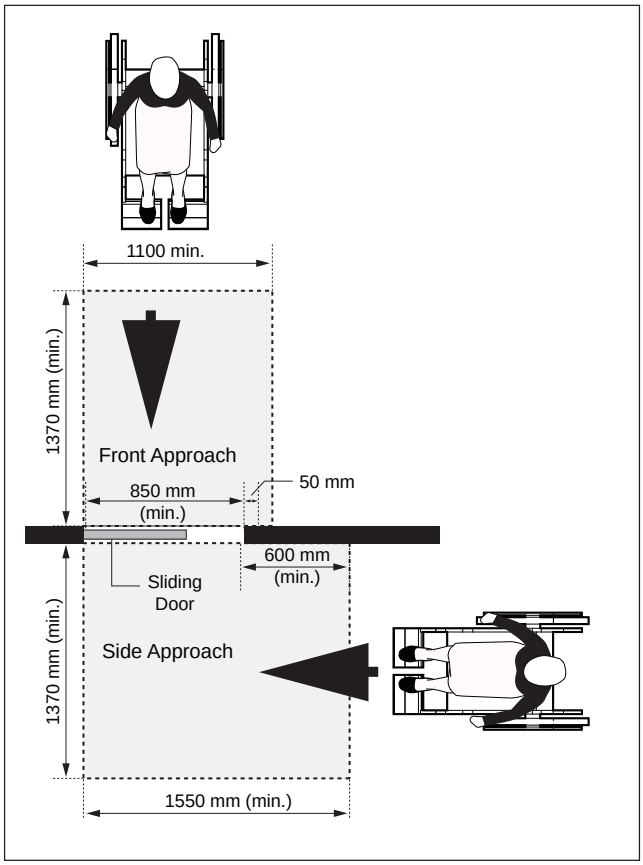


Figure 41b: Front and Side Approach at Sliding Door - Plan View

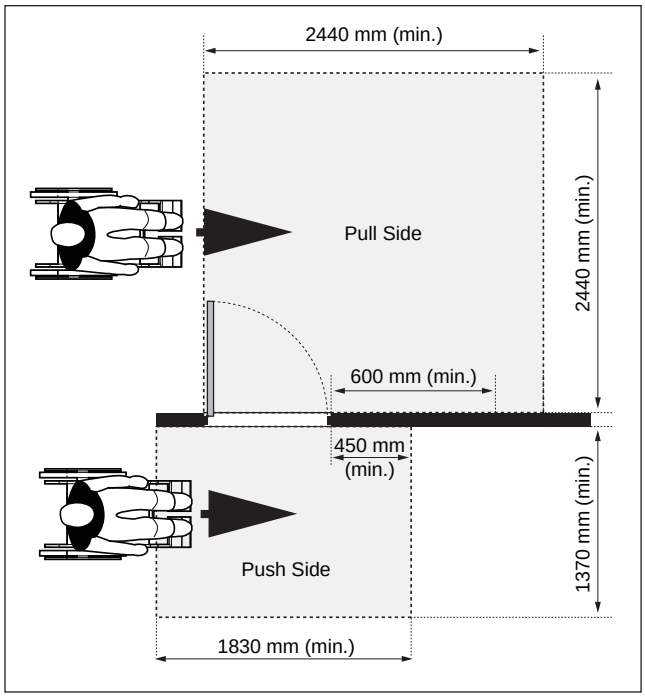


Figure 41c: Hinge Side Approach at Side-Hinged Door - Plan View

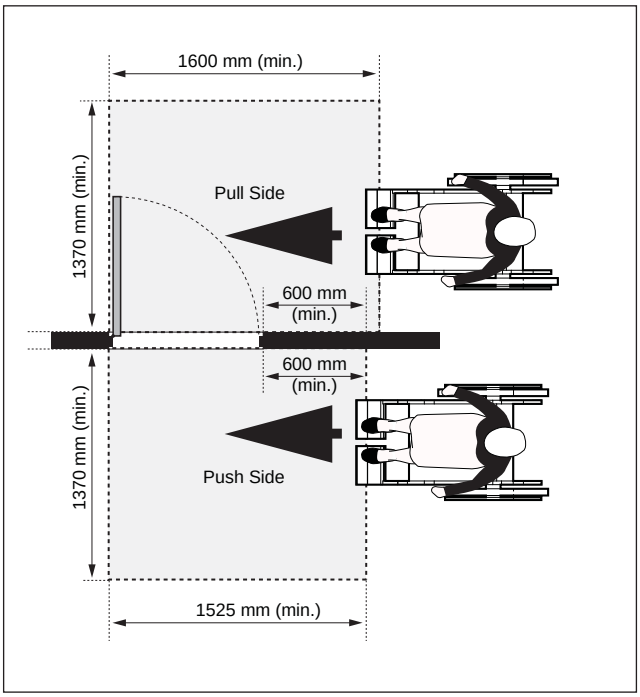


Figure 41d: Latch Side Approach at Side-Hinged Door - Plan View

4.2.10 Doors on Accessible Routes

Where fire regulations permit, a door connecting two primary horizontal accessible routes should:

a. provide a transparent glazed panel.

Where automatic doors or power-assisted doors open towards people approaching along an accessible path of travel:

b. provide tactile walking surface indicators (TWSI), 600 mm beyond the door swing; and
c. provide guards, extending 300 mm (minimum) beyond the door swing, on both sides of doors, with a cane detectable lower rail surface mounted no more than 680 mm high (maximum) from ground or floor surface.

Exception

Guards are not required where pedestrian traffic is one way and doors swing away from users approaching (e.g., controlled entrances and exits).

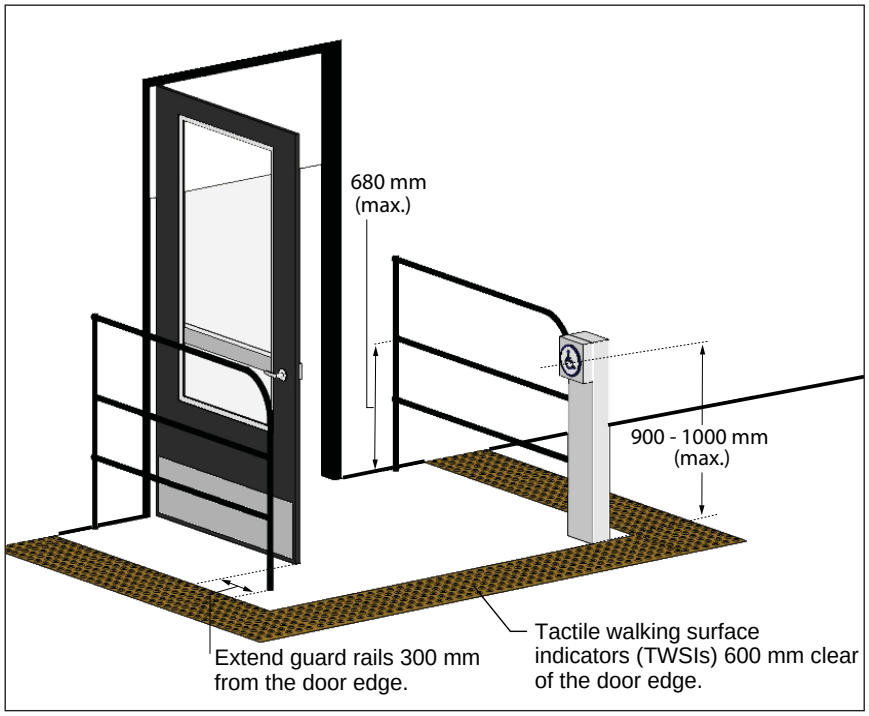


Figure 42: Doors on Accessible Routes

4.2.11 Doors in Series

Doors in series are typically provided at vestibules for main entrances into a facility and key amenities such as washrooms:

a. provide a distance between two doors in series of 1500 mm (minimum), plus the width of the door swinging into the space **(Figure 43)**; and
b. arrange to allow the movement of users of mobility aids.

Note

Ensure power door operators are provided for both doors of vestibule.

Best Practice

Provide additional space for doors in series with doors operable independently (e.g., in order to avoid a “wind tunnel effect”)

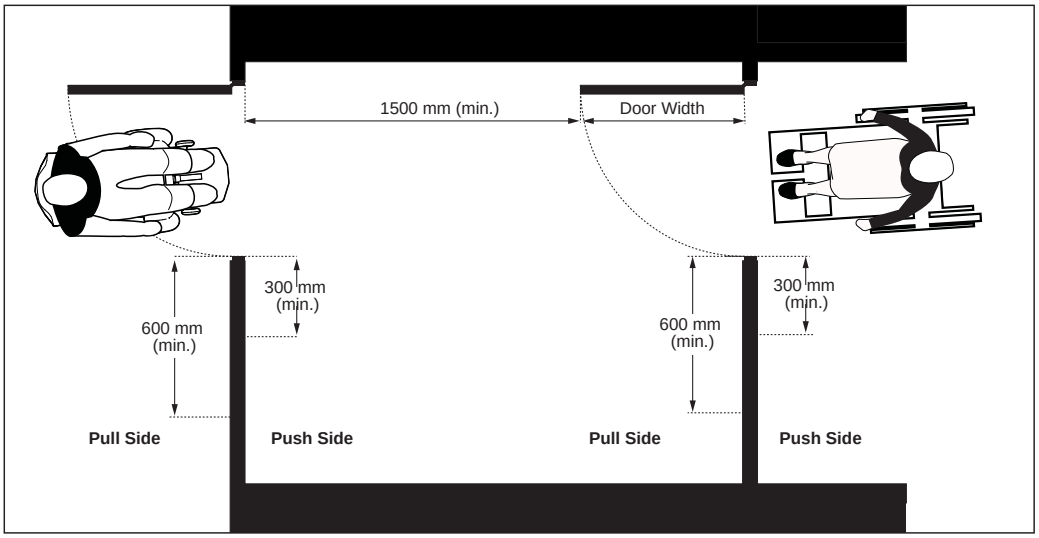


Figure 43: Doors in Series - Plan View

Best Practice

Frameless and fully glazed doors are not recommended.

Note

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

4.2.12 Glazed Doors or Doors with Sidelights

a. provide colour 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 frame) with strong colour contrast; and

c. provide continuous colour contrasted decal strip **(Figure 44)**:

   i. provide width of 50 mm (minimum); and

   ii. mount at eye level between 1350 mm and 1500 mm high from floor level.

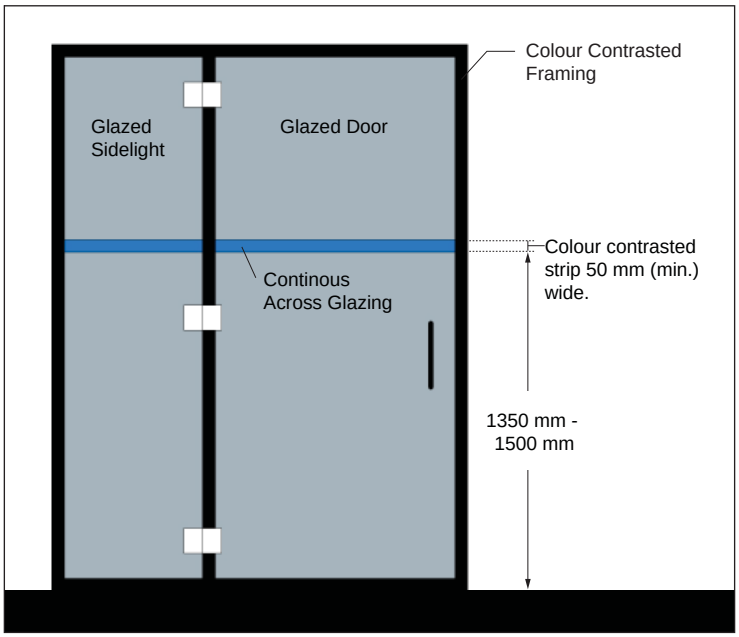


Figure 44: Glazed Doors - Elevation View

4.2.13 Vision Panels

a. provide width of 75 mm (minimum); and
b. mount bottom edge at a height of 900 mm (maximum) with side edge no more than 250 mm from latch side of the door.

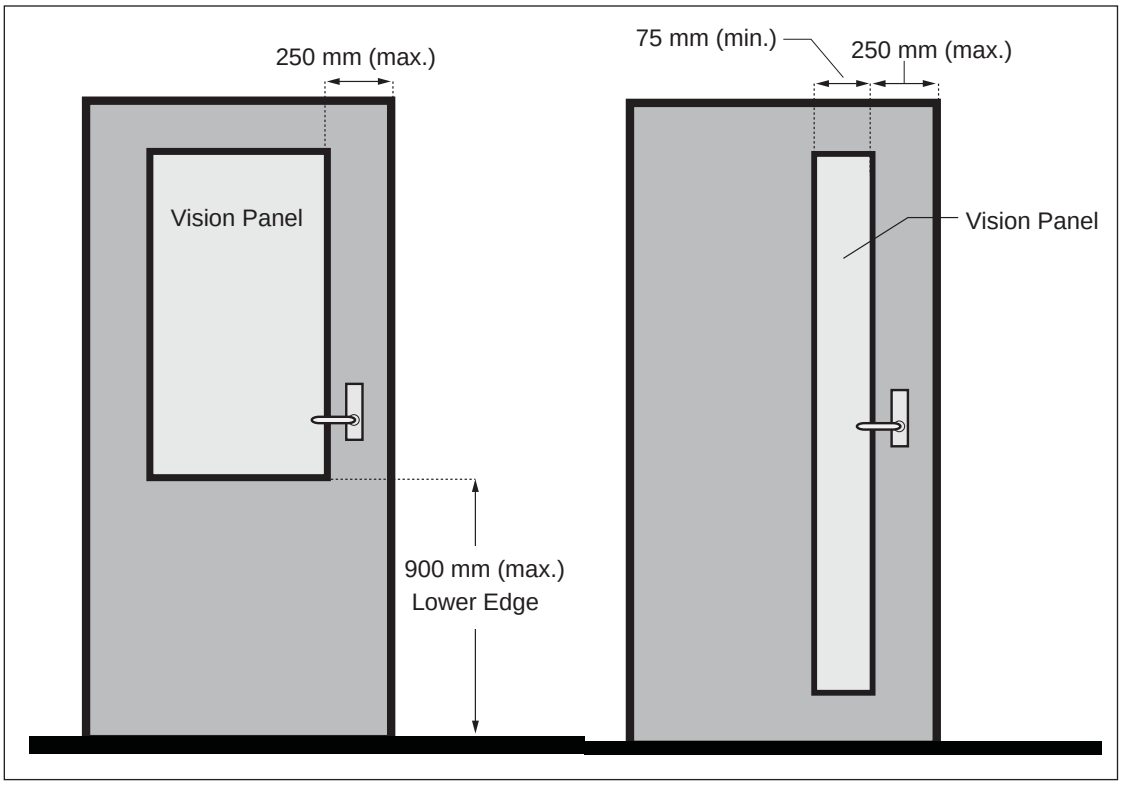
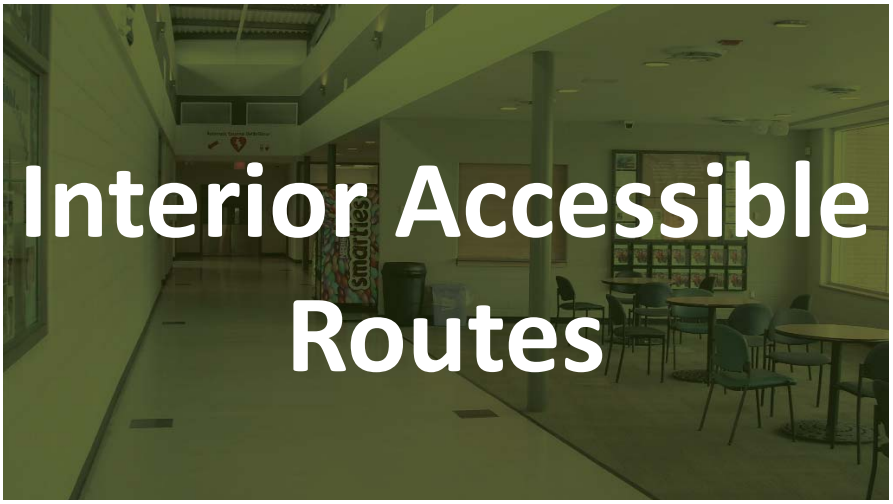


Figure 45: Vision Panels - Elevation View



Interior Accessible Routes

4.3

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.

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. 2.6	Rest Areas
Sec. 5.4	Acoustics
Sec. 5.7	Lighting
Sec. 5.8	Signage and Wayfinding

Exception

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

- Elevator machinery or other equipment rooms.
- Crawl spaces and attics.
- Within portions of a floor area with fixed seats in an assembly occupancy, where these portions are not designated for users of mobility aids.
- Into suites of residential occupancy that are in storeys other than the entrance storey and have all entrance doors at floor levels that are not within elevator lobby level.
- As required by jurisdictions having authority within a suite of residential occupancy.

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;
c. where headroom clearance along accessible routes is less than 2100 mm, provide guards to protect users from potential hazards;
d. design public corridor to facilitate wayfinding by using acoustic treatments to differentiate main corridors from secondary corridors;
e. ensure lighting level is 50 lux (average), measured at ground level; and
f. where accessible routes are more than 30 metres long, provide rest areas.

Best Practice

Consider using texture and acoustical cues to enhance wayfinding.

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

Tactile floor surface to guide users with vision loss.

Where structural column / support is within accessible route, colour contrasted floor surface at base is beneficial for all users.

4.3.2 Clear Width

a. provide clear width of 1100 mm (minimum) **(Figure 46a)**;
b. where clear width is less than 1620 mm along a route that exceeds 30 metres in length, provide a passing area of 1800 mm wide by 2000 mm (minimum) length at interval of no more than 30 metres; **(Figure 46b)**
c. where clear width is reduced to 915 mm (minimum width permitted), extending to a length of 610 mm (maximum), a clear floor space of 1100 mm wide by 1500 mm long (minimum) is required before and after the reduced width segment **(Figure 46c)**; and

Exception

Minimum clear width of accessible route is not required at:

- doors / doorways;
- ramps and stairs; and
- elevating devices.

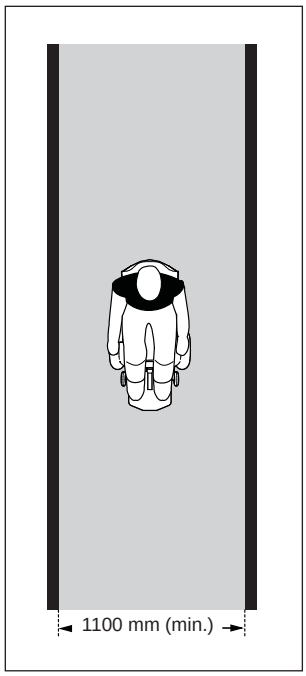


Figure 46a: Clear Width (Typical)

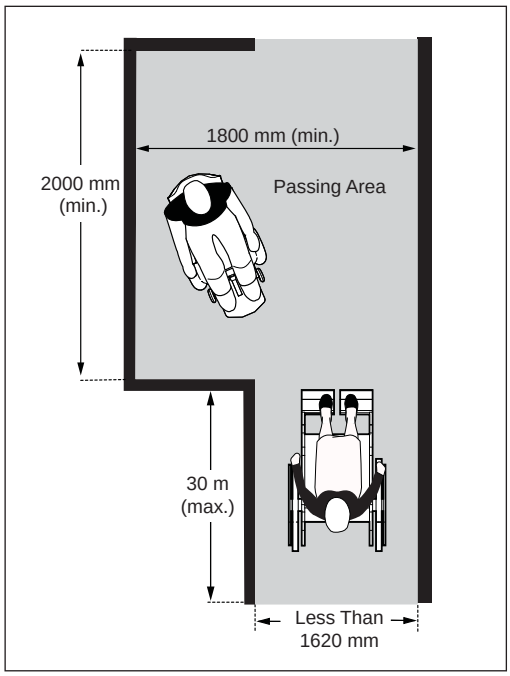


Figure 46b: Required Passing Area for Routes Greater than 30 metres

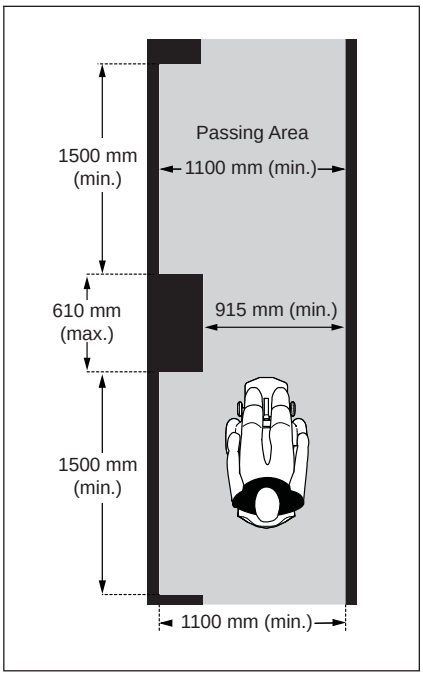


Figure 46c: Permitted Reduced Clear Width

d. where an accessible route makes a 180 degree turn around an obstacle that is less than 1200 mm in width:
   i. ensure clear width of 1100 mm (minimum) is provided, when approaching and leaving the turn, and 1200 mm (minimum) at the turn **(Figure 47a)**; and
   ii. if the clear width at the turn is 1525 mm (minimum), the clear width when approaching and leaving the turn can be reduced to 915 mm (minimum) **(Figure 47b)**.

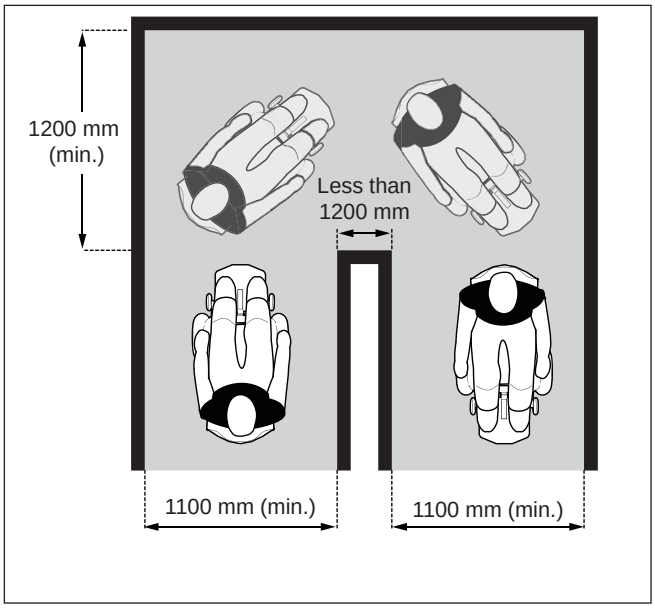


Figure 47a: 180 Degree Turn (Typical)

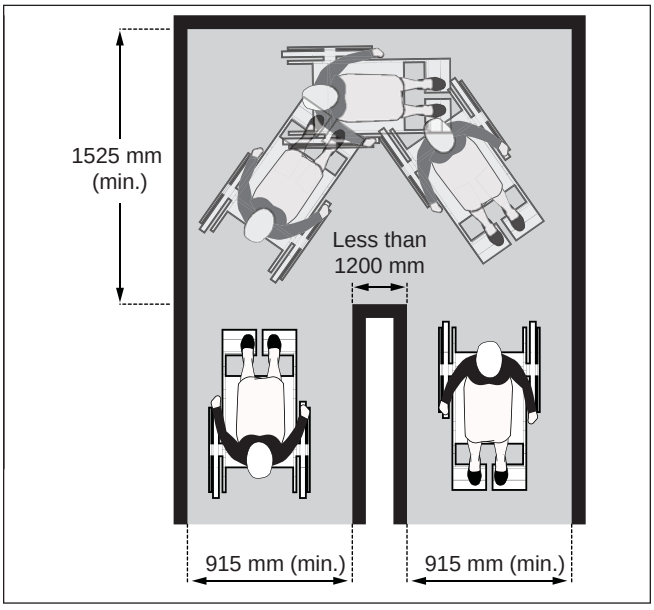


Figure 47b: 180 Degree Turn - Exception

4.3.3 Running and Cross-Slopes

4.3.3.1 Running Slope

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

4.3.3.2 Cross-Slope

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

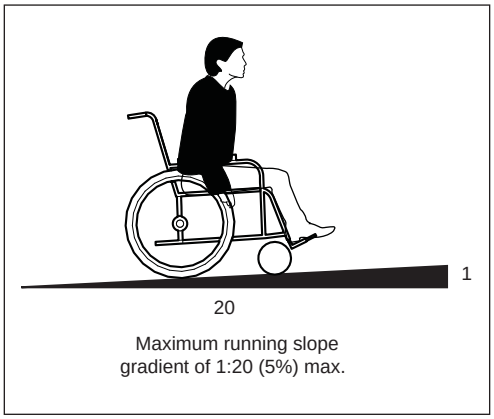


Figure 48: Running Slope

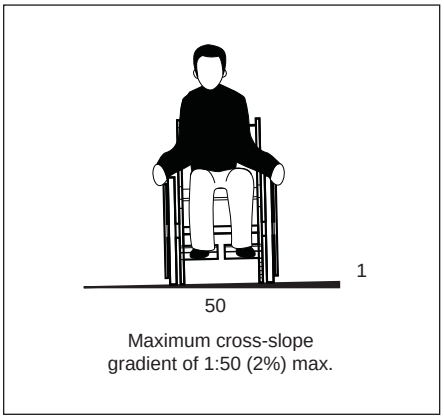


Figure 49: Cross-Slope

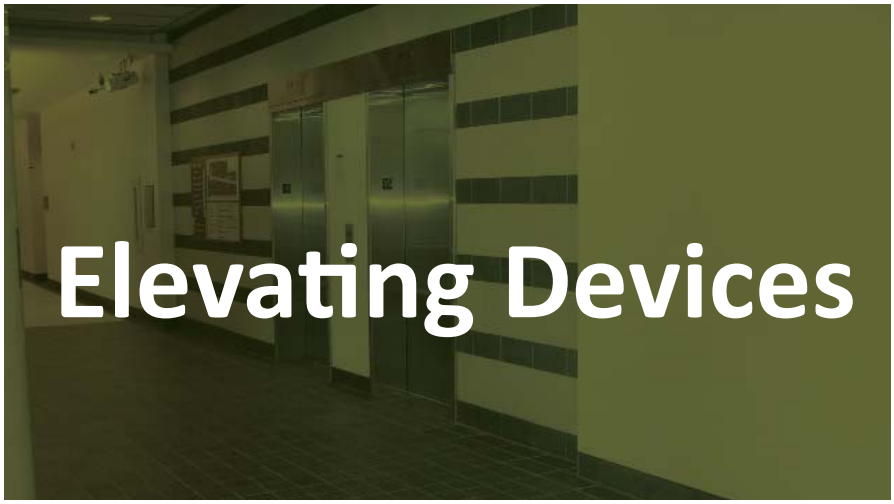
4.3.4 Changes in Level

Where edges of an accessible route are not level with adjacent surface:

a. provide colour contrasted 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 colour contrasted curb or other barrier protection, 75 mm (minimum) high; and
c. where the change in level is greater than 600 mm, provide guards.

Best Practice

Avoid level changes between an accessible route and adjacent surface, wherever possible.



Elevating Devices

4.4

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 ramps; and
- escalators.

All passenger elevators or lifts provided in multi-storey facilities to comply with:

- CAN / CSA B44-07: Safety Code for Elevators and Escalators (Appendix E); and
- CAN / CSA B355-09: Lifts for Persons with Physical Disabilities.

Best Practice

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

Note

Detailed accessibility criteria for elevating devices are not included in these Standards including signage requirements. The City recommends direct referencing of other applicable and governing standards.

Exception

Freight elevators are not required to comply with accessibility requirements.

4.4.1 Passenger Elevators

Key design features for passenger elevators are summarized as follows: (Note: refer to CSA standards for detailed criteria)

a. Hall call buttons, with visual indicators to identify when car call has been registered and answered), mounted between 890 to 1200 mm from floor (e.g., measured to centerline of button). Ensure clear floor space in front of hall call buttons of 760 mm wide by 1220 mm depth (minimum);
b. 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, or alternatively, provide verbal annunciators;
c. Entrance doors with clear opening width of 915 mm and door re-opening device that senses objects or person in path of travel of closing door (e.g., automatic sensors). Provide a tactile (e.g., both raised and braille, colour contrasted surface) elevator car identification sign, with characters 50 mm high, immediately below the hoistway entrance floor designation;
d. Interior car floor space of 2030 mm wide (measured side to side) by 1370 mm depth (measured from back wall to inside face of door) preferred, or 1525 mm wide by 1525 mm depth (minimum);
e. Interior car operating controls to be mounted 1220 mm high (maximum, to centerline of control preferred), or 1370 mm high is permitted, for cars with more than 16 openings, where parallel approach to controls is also provided for users of mobility aids;
f. Audible and visual car floor location indicators. Audible signal to be verbal announcement that identifies floor at which car has stopped; and
g. Emergency two-way communication system (e.g., speaker phone preferred), with operating controls mounted at 1220 mm high (maximum) from floor, with accessible features (e.g., push button type) and 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).

Note

Platform lifts are only allowed where alternatives are not considered feasible (e.g., primarily retrofit scenarios). Ensure lifts that require key access and / or an attendant for use are not provided.

Tactile elevator car identification sign.

Elevator sensor door and floor registration buttons.

Washrooms

4.5

Application

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

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

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

Best Practice

Universal toilet rooms 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 Location

Where multiple occupancy public washrooms are provided:

a. provide at least one separate universal toilet room for each cluster of men's / women's regular washrooms; or
b. provide one accessible water closet stall for each multiple occupancy washroom on each floor of a facility;
c. locate along an accessible route, within 45 metres (maximum) of regular washrooms;
d. locate centrally within a facility;
e. identify clearly with signage, indicating gender where applicable, with other accessibility features (e.g., Braille, tactile);
f. mark with International Symbol of Accessibility; and
g. where washrooms are not accessible, provide directional signage to indicate location of nearest accessible washroom on the same floor.

Best Practice

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

Where retrofitting multiple occupancy washrooms (e.g., with accessible water closet stalls) is technically not feasible, identifying additional space for providing a universal toilet room is recommended.

4.5.2 Multiple Occupancy Washrooms

For the design and layout of multiple occupancy washrooms with accessible water closet stalls:

a. provide entrance door with clear width of 850 mm (minimum) **(Figure 50)**;
b. provide clear floor space of 1675 mm by 1675 mm (minimum), of which 500 mm (maximum) may be under the lavatory, to allow users of mobility aids to make a 180° turn **(Figure 50)**;
c. ensure floor surfaces are slip-resistant, with a maximum slope of 1:50 (2%);
d. provide accessible lavatories with washroom amenities as identified in this section;
e. provide accessible water closet stalls with suitable clear floor space as identified in this section;
f. ensure lighting level is evenly distributed and 50 lux (average), measured at floor level, and 150 lux (average) at fixtures;
g. install audible and visual fire alarm system;
h. provide an emergency alarm linked to central switchboard that is monitored at all times; and
i. install any drains out of the path of travel.

Best Practice

Wherever possible, consider use of privacy walls or specialized configuration of entrance lobbies to avoid the need for doors.

Final Proposed AODA requires lighting level of 200 lux (20 foot-candles) throughout accessible washrooms.

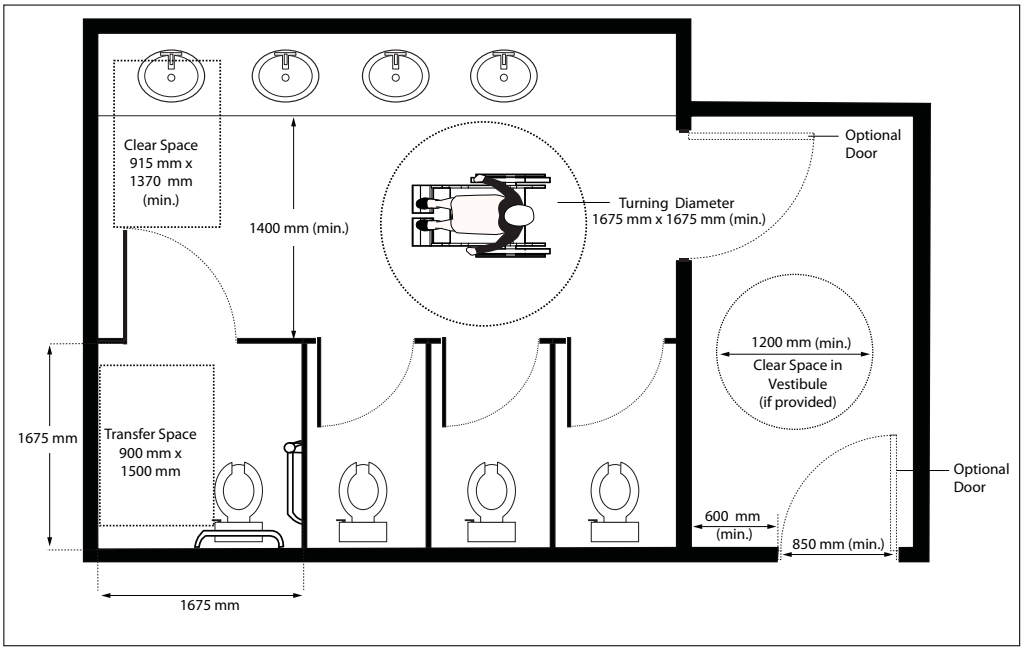


Figure 50: Example of Multiple Occupancy Washroom Layout

4.5.3 Universal Toilet Rooms

Where universal toilet rooms are provided:

a. locate in the same vicinity as other washrooms along the shortest accessible route;
b. mark with the International Symbol of Accessibility;
c. provide accessible entrance door:
    i. equip with power door operator;
    ii. provide locking mechanism that can be opened from exterior, in case of emergency;
    iii. mount graspable operating and locking mechanisms 900 to 1000 mm above floor; and
    iv. where door swings outwards, provide door closer, spring hinges or gravity hinges that closes door automatically;
d. ensure internal dimension between walls is no less than 2500 mm **(Figure 51)**;
e. ensure floor surface is firm, stable and slip-resistant;
f. ensure a minimum turning diameter of 1675 mm with transfer space beside toilet at 1020 mm wide by 1800 mm depth **(Figure 51)**;
g. provide one accessible lavatory with washroom amenities as identified in this section;
h. provide one accessible water closet with suitable rear and side grab bars as identified in this section;
i. provide motion sensor for automatic illumination of interior;
j. install audible and visual fire alarm systems;

Note

Universal toilet rooms are also referred to as Unisex or Family washrooms.

k. install any drains out of the path of travel; and

l. provide emergency alarm linked to central switchboard that is monitored at all times:

   i. identify clearly with signage (e.g., large print text and instructions);

   ii. mount 1200 mm (maximum) high above floor;

   iii. ensure colour contrast is provided compared with mounting surface; and

   iv. provide visual and audible signal indicating “help is on the way”, when activated, both inside and outside of the room.

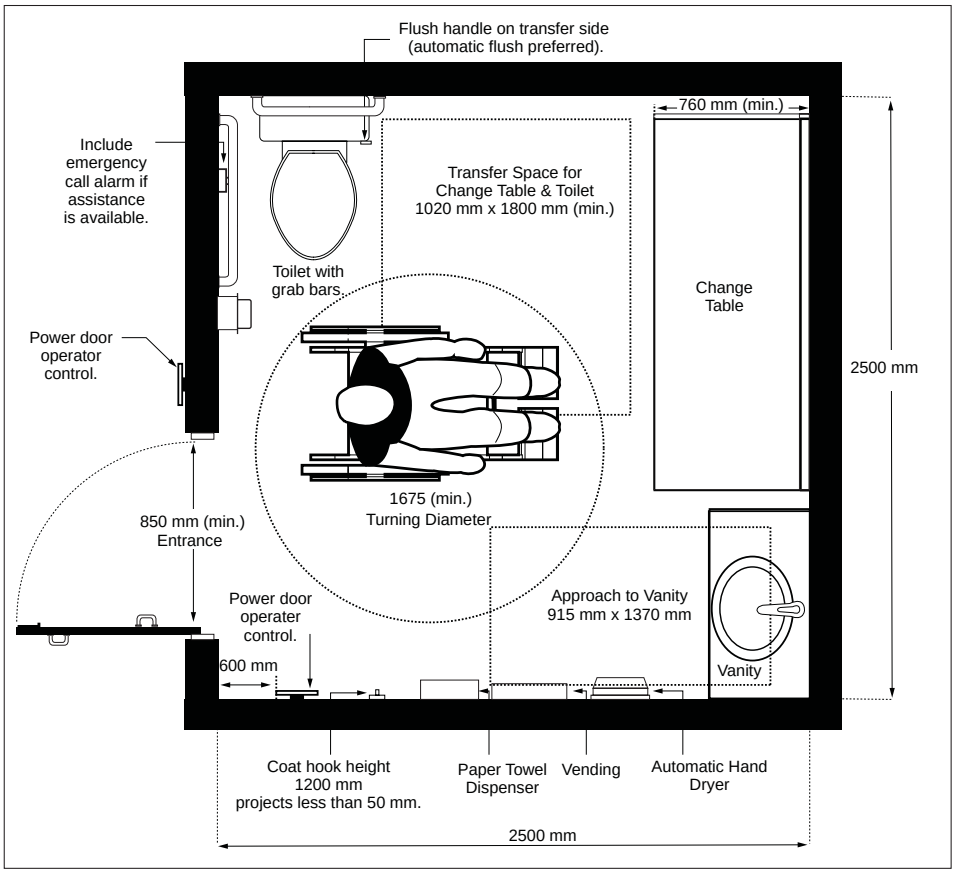


Figure 51: Universal Toilet Rooms

4.5.4 Water Closet Stalls

In multiple occupancy washrooms, provide at least one accessible water closet stall:

a. with a clear floor space of 1600 mm wide by 1500 mm deep (minimum);

b. 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; and

c. ensure minimum clearance of 1400 mm between outside wall of stall and any wall-mounted fixtures or other obstructions **(Figure 50)**.

Best Practice

Mark accessible water closet stall with International Symbol of Accessibility.

4.5.4.1 Stall Doors

a. provide clear width of 850 mm (minimum) **(Figure 52)**;
b. ensure door is aligned with water closet transfer space (e.g., door is positioned on opposite side of water closet);
c. ensure door swings outward against a wall, unless a 915 mm wide by 1370 mm long clear floor area is provided within the stall to permit the door to be closed inside without interfering with the mobility device;
d. ensure self-closing, with spring-type or gravity hinges;
e. provide accessible locking mechanisms, with stall capable of being locked from the inside by a control that is operable with a closed fist;
f. ensure door can be released from the outside in case of emergency ; and
g. provide D-pull door hardware on inside and outside of the door **(Figure 52)**:
    i. ensure hardware is colour contrasted with mounting surface;
    ii. provide length of 140 mm (minimum);
    iii. mount horizontally 800 to 1000 mm high from floor, centered 120 to 220 mm from door latch, on outside doors; and
    iv. mount horizontally 800 to 1000 mm high from floor, centered 120 to 220 mm from hinge side, on inside doors.

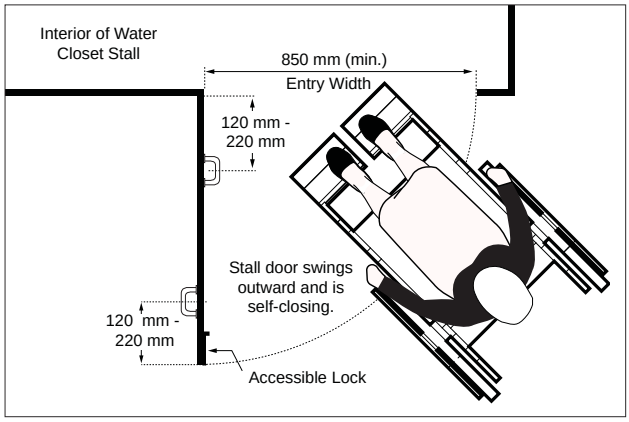


Figure 52: Water Closet Stalls Door Features

Best Practice

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

4.5.5 Water Closets

a. mount seat between 430 mm and 460 mm high from floor;
b. ensure centerline of water closet from any adjacent side wall is between 460 mm and 480 mm **(Figure 53)**;
c. provide an unobstructed transfer space of 900 mm wide by 1500 mm deep (minimum), beside water closet **(Figure 53)**;
d. provide seat or back support if there is no tank;
e. ensure seat is not spring activated;
f. provide internal extension guards that will not allow the seat to slide;
g. install lever flush control or other flush control operable by one hand

without tight grasping, pinching or twisting of the wrist (e.g., push button control) on transfer side;

h. mount toilet paper dispenser 600 to 700 mm high from floor, 300 mm from front edge of water closet; and

i. install at least one coat hook mounted 1200 mm (maximum) high from floor, with a maximum projection of 50 mm from mounting surface.

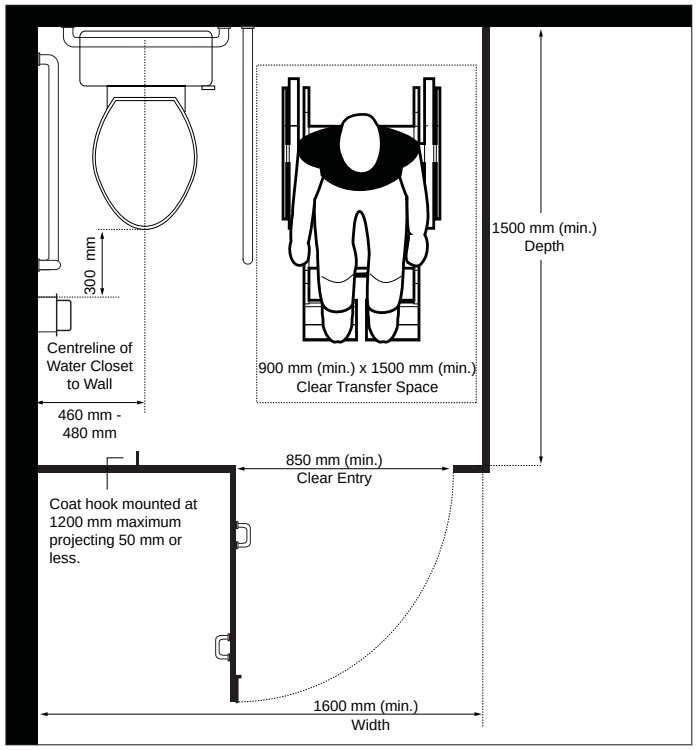


Figure 53: Water Closets

4.5.6 Grab Bars

Where grab bars are provided:

a. ensure surface is non-abrasive and slip-resistant;

b. provide grasping surface that is circular in shape, with diameter between 30 and 40 mm;

c. ensure clear space of 30 to 40 mm (minimum) between mounting surface and grab bar, as well as between ends of grab bar and any adjacent wall;

d. ensure clear space of 300 mm (minimum) above grab bars;

e. ensure colour contrasted finish between grab bar and mounting surfaces; and

f. mount securely to withstand a force of 1.3 Kilonewtons applied in all directions.

Note

The clear transfer space is measured from side surface of water closet to stall partition / wall, or side of adjacent vanity, if applicable.

Best Practice

Space of 40 mm (minimum) is required between grab bar and toilet paper dispenser. Large double roll toilet dispensers are not recommended as they typically block a user's ability to grasp adjacent grab bars.

4.5.6.1 Horizontal Grab Bars

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

4.5.6.2 L-Shaped Grab Bars

a. ensure length of 760 mm (minimum) for both vertical and horizontal components;
b. mount vertical component 150 mm (maximum) from front of water closet; and
c. mount horizontal component 750 to 900 mm high above floor.

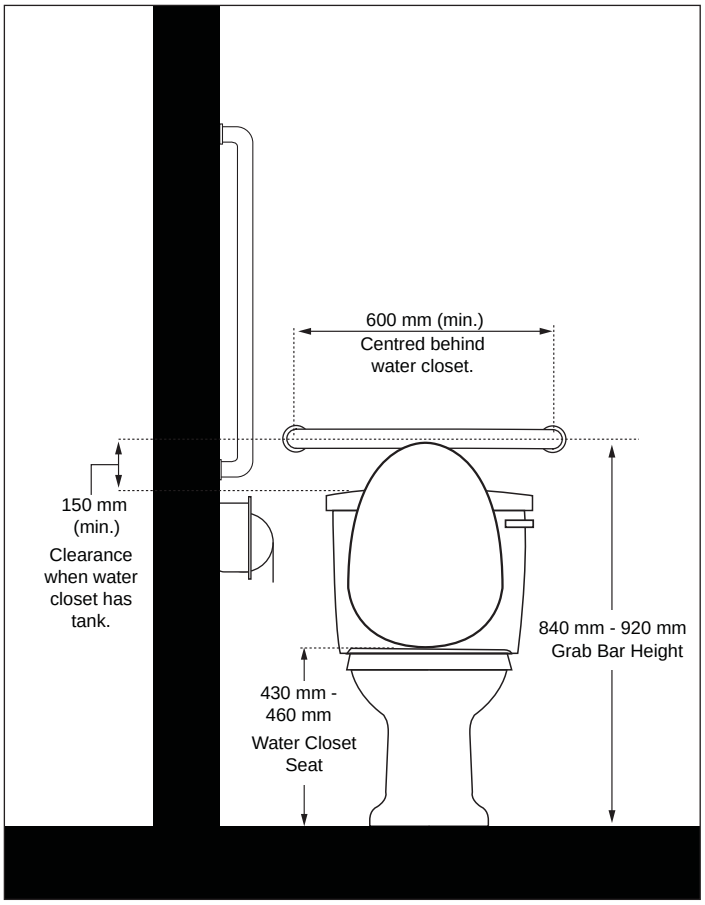


Figure 54: Horizontal Grab Bar

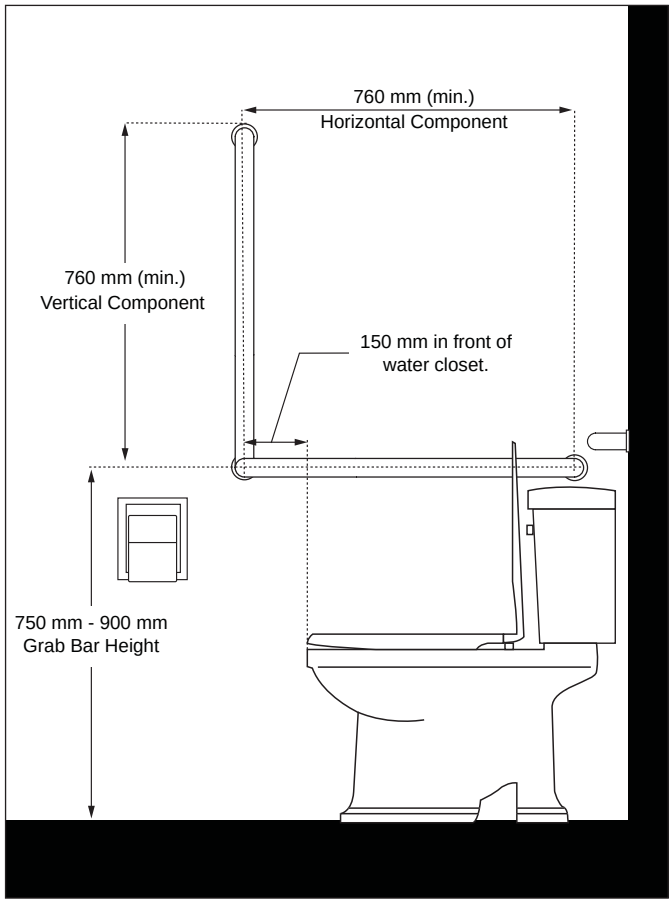


Figure 55: L-Shaped Grab Bar

4.5.6.3 Fold Down Grab Bars

a. locate on transfer space side;
b. ensure clear transfer space is not obstructed by location of grab bar;
c. ensure length of 760 mm (minimum);
d. mount with centerline between 420 mm and 440 mm from centerline of water closet **(Figure 56a)**;
e. mount with lower end between 630 mm and 690 mm high from floor level **(Figure 56b)**;
f. extend 150 mm (minimum) beyond the front edge of water closet **(Figure 56b)**; and
g. ensure force required to pull down grab bar is no more than 22 Newtons.

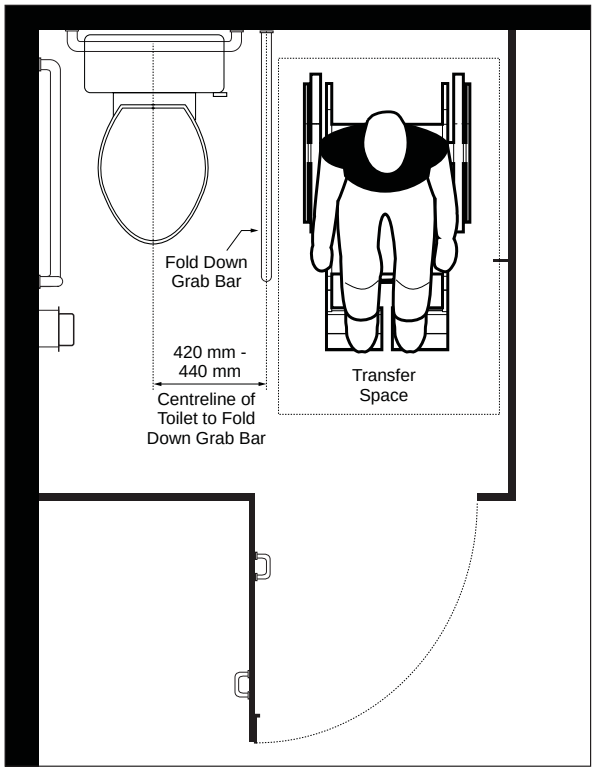


Figure 56a: Fold Down Grab Bars - Plan View

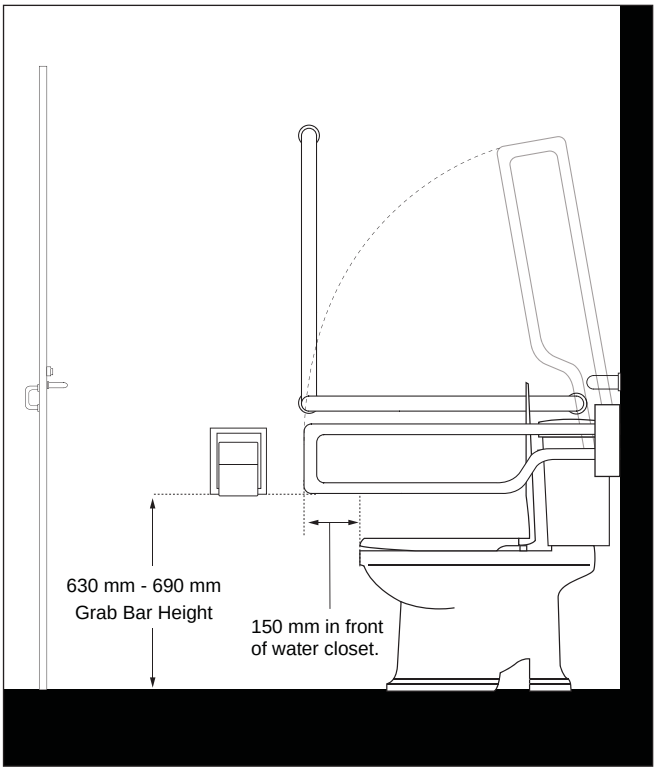


Figure 56b: Fold Down Grab Bars - Elevation View

Best Practice

Automatic faucet control is preferred or single lever faucet handles, 75 mm long (minimum).

4.5.7 Lavatories

Provision of at least one accessible lavatory is required in each accessible washroom facility:

a. ensure centerline of lavatory is 460 mm (minimum) from adjacent side wall **(Figure 57a)**;
b. ensure top surface is continuous and colour contrasted with adjacent wall surfaces;
c. mount top surface of lavatory 820 to 840 mm high above floor **(Figure 57b)**;
d. provide clearances underneath lavatory no less than **(Figure 57b)**:
    i. 920 mm wide;
    ii. 750 mm high at front edge;
    iii. 685 mm high at 205 mm back from front edge; and
    iv. 230 mm toe space height, measured 280 mm depth to 430 mm from front edge;
e. provide automatic control or lever-type faucet without spring loading, located no more than 485 mm depth from edge of basin;
f. provide minimum clear floor space of 915 mm wide by 1370 mm deep (minimum), of which 500 mm depth is allowed under the lavatory **(Figure 57a)**;
g. ensure water pipes are covered or insulated below lavatories **(Figure 57b)**; and
h. ensure water temperature is controlled to a maximum of 43°C.

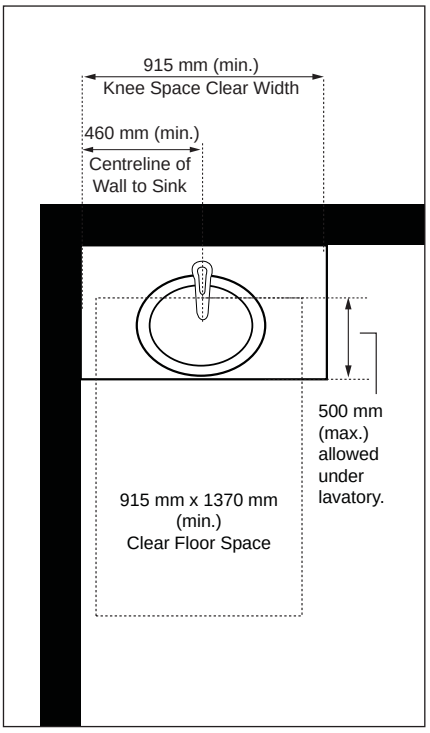


Figure 57a: Lavatories - Plan View

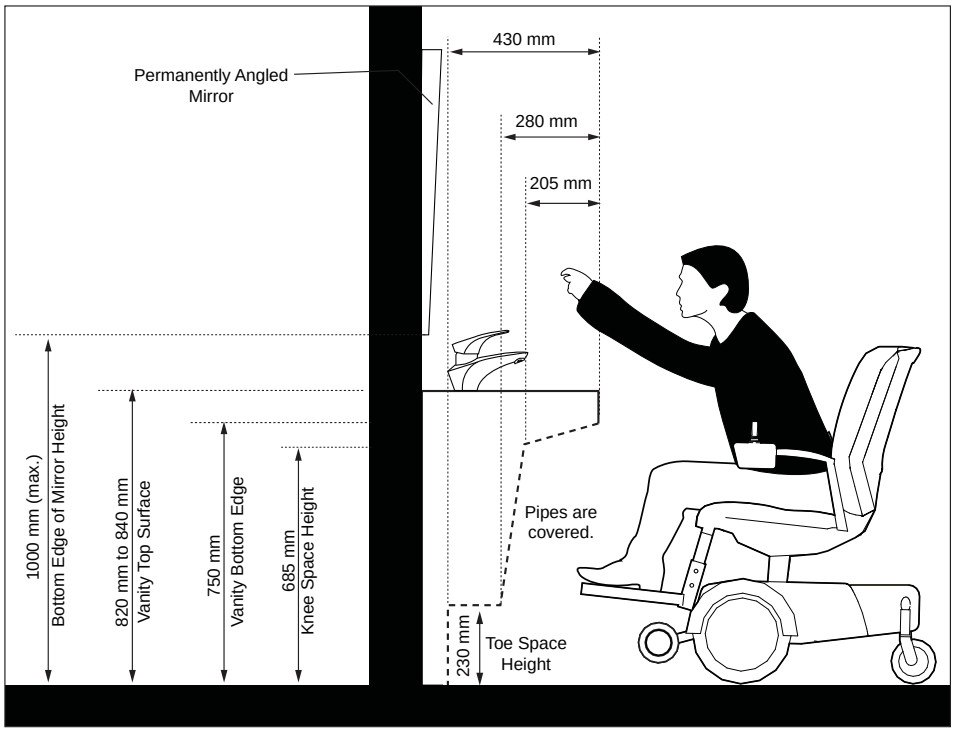


Figure 57b: Lavatories - Section View

4.5.8 Washroom Amenities

Washroom amenities include, but are not limited to, paper towel dispensers, soap dispensers, waste bins, mirrors and change tables. Where provided:

a. ensure wall mounted amenities do not project more than 100 mm from wall along an accessible path of travel;
b. provide colour contrasted finishes between amenities and mounting surfaces;
c. ensure any operating controls are mounted 1200 mm (maximum) high above floor, operable with one closed fist **(Figure 58)**;
d. where amenities are mounted at lavatories (e.g., soap dispensers), ensure reach is 500 mm (maximum);
e. provide clear floor space of 915 mm wide by 1370 mm deep (minimum) to allow front approach; and
f. provide clear floor space of 1525 mm wide by 915 mm deep (minimum) to allow side approach.

Best Practice

Automatic controls are preferred as they are easy to use by a wider range of users.

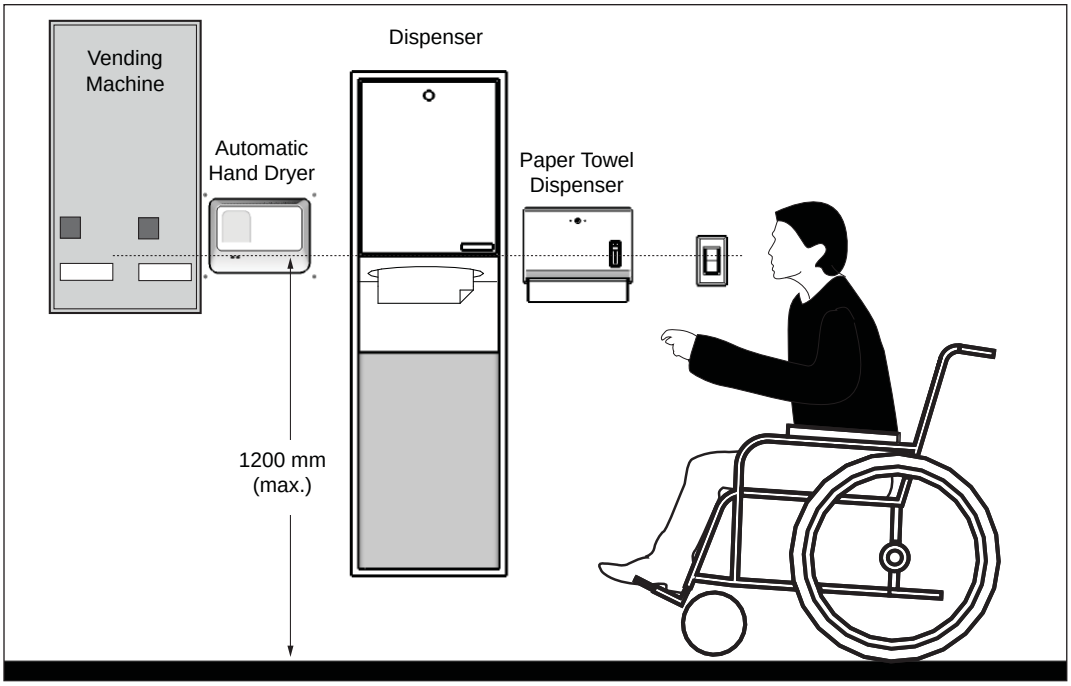


Figure 58: Typical Washroom Amenities

4.5.8.1 Mirrors

a. mount with bottom edge 1000 mm (maximum) high above floor **(Figure 57b)**;
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

Permanently tilted mirrors are also recommended.

4.5.8.2 Shelves

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

4.5.8.3 Adult Change Tables

Where it is assessed that an adult change tables is required to be provided in multi-occupancy washrooms and universal toilet rooms:

a. locate on an accessible path of travel;
b. at least 760 mm wide by 1830 mm long (minimum);
c. mount so that change surface height is between 480 mm and 520 mm high above floor **(Figure 59a)**;
d. ensure controls and operating mechanisms (e.g., latches, handles and pulls) are 1200 mm high (maximum);
e. ensure colour contrast is provided between table and mounting surface;
f. provide a clear floor space of 900 mm wide by 1800 mm deep (minimum) in front of change table for approach and transfer;
g. where a folding change table is provided, ensure they do not project more than 100 mm from wall when in folded position and located along accessible path of travel;
h. where a fixed change table is provide, provide a horizontal grab bar, 1200 mm (minimum) long, mounted 750 to 850 mm high and centered on the long dimension of the table **(Figure 59b)**; and
i. ensure change table can support a minimum load of 250 kg (550 pounds).

Best Practice

Change tables that can accommodate people of all ages (both adults and children) are preferred.

Ensure baby change tables are not located in accessible water closet stalls, especially in high use washrooms. Universal toilet rooms designed with larger floor space are more suitable to accommodate baby and adult size change tables and other attendant care amenities (e.g., shelving or emergency alarms).

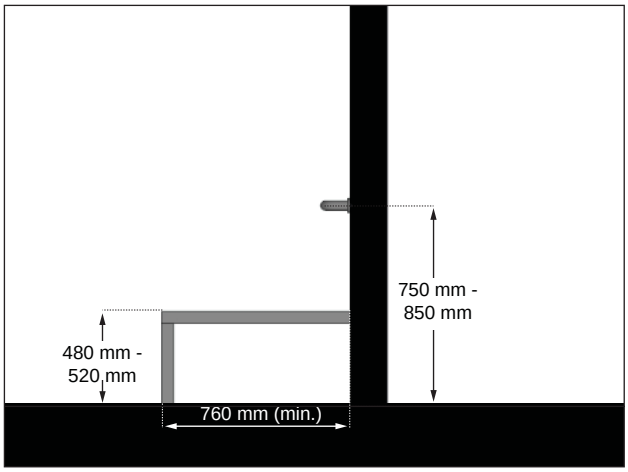


Figure 59a: Fixed Adult Change Table - Section View

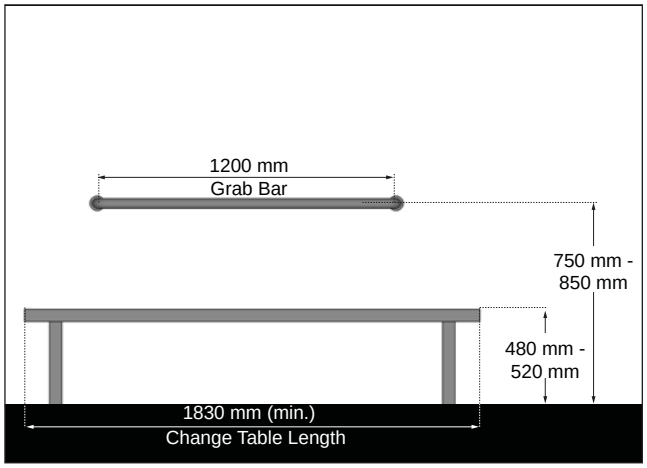


Figure 59b: Fixed Adult Change Table - Front View

4.5.9 Urinals

Where more than one urinal is provided in men's multiple occupancy washrooms, provide at least one accessible urinal:

a. located within accessible path of travel;
b. mount urinal rim 430 mm (maximum) above floor;
c. ensure depth of 345 mm (minimum), measured from the outer face of the urinal rim to the back of the fixture;
d. ensure colour contrast is provided between urinal and mounting surface;
e. provide lever, automatic, or other flush control operable by one hand without tight grasping, pinching or twisting of the wrist (e.g., push button control) mounted 1200 mm (maximum) high above floor **(Figure 60)**;
f. provide clear floor space of 915 mm wide by 1370 mm deep (minimum) in front of urinal for frontal approach;
g. provide accessible grab bars, on each side of urinal **(Figure 60)**:
    i. mount vertically, with lowest end 600 to 650 mm above floor;
    ii. mount 380 mm from centerline of urinal; and
    iii. provide length of 600 mm (minimum);
h. install vertical markers centered above the urinal 50 mm wide (maximum) for users with vision loss **(Figure 60)**; and
i. where privacy screens are required **(Figure 60)**:
    i. provide clearance of 920 mm (minimum) between screens;
    ii. ensure colour contrast between screens and surrounding surfaces; and
    iii. ensure the vertical outer edge is colour contrasted.

Note

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

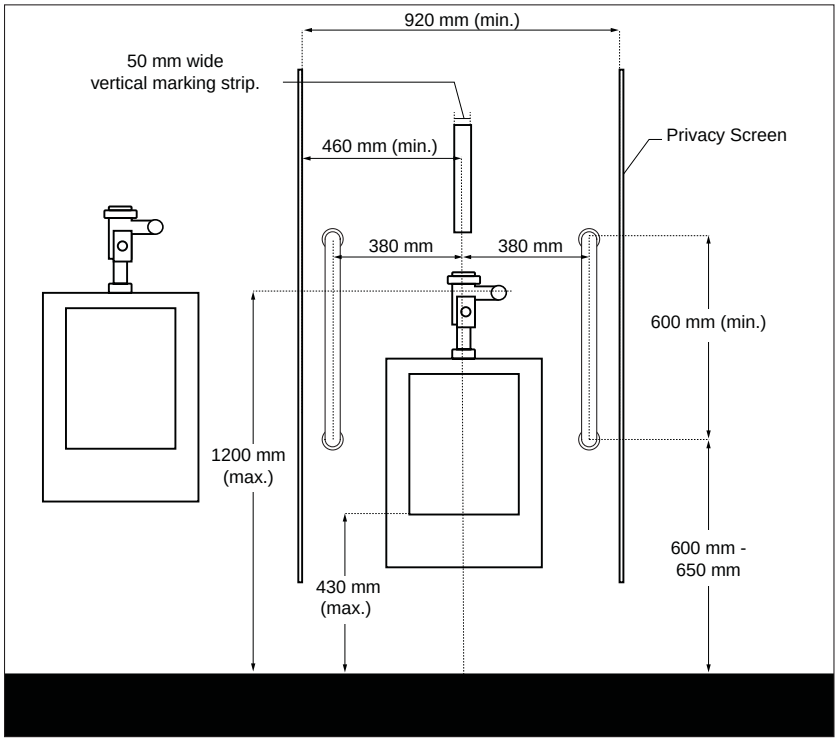
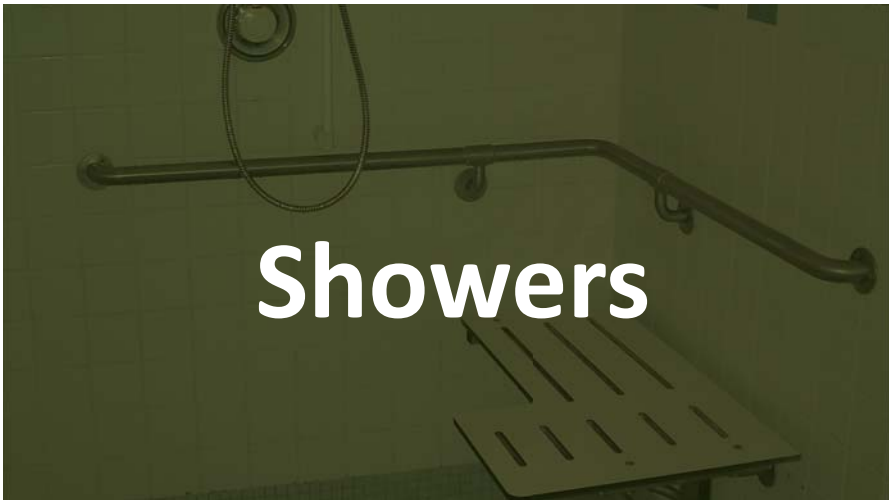


Figure 60: Urinals - Elevation View



Showers

4.6

Application

This section applies to showers provided in public facilities, including but not limited to:

- recreation or community centres (e.g., arenas and pools);
- typical change rooms; and
- office facilities.

Where a group or ‘cluster’ of shower stalls are provided together, at least one accessible shower stall is required for each group.

Reference

Sec. 5.1 Controls and Operating Mechanisms

4.6.1 Design and Layout

a. ensure floor space of 1500 mm wide by 900 mm deep (minimum);
b. provide additional clear floor space of 1500 mm wide by 900 mm deep (minimum) at shower entrance;
c. provide level entry or beveled threshold, 13 mm high (maximum);
d. ensure floor surface is slip-resistant;
e. locate floor drain on opposite side of shower controls and seat, with floor gently sloped for drainage; and
f. ensure lighting level of 100 lux (average), measured at ground level.

Note

Where enclosure screens or curtains are provided, ensure mounting provisions do not obstruct transfer from mobility aids to shower seat.

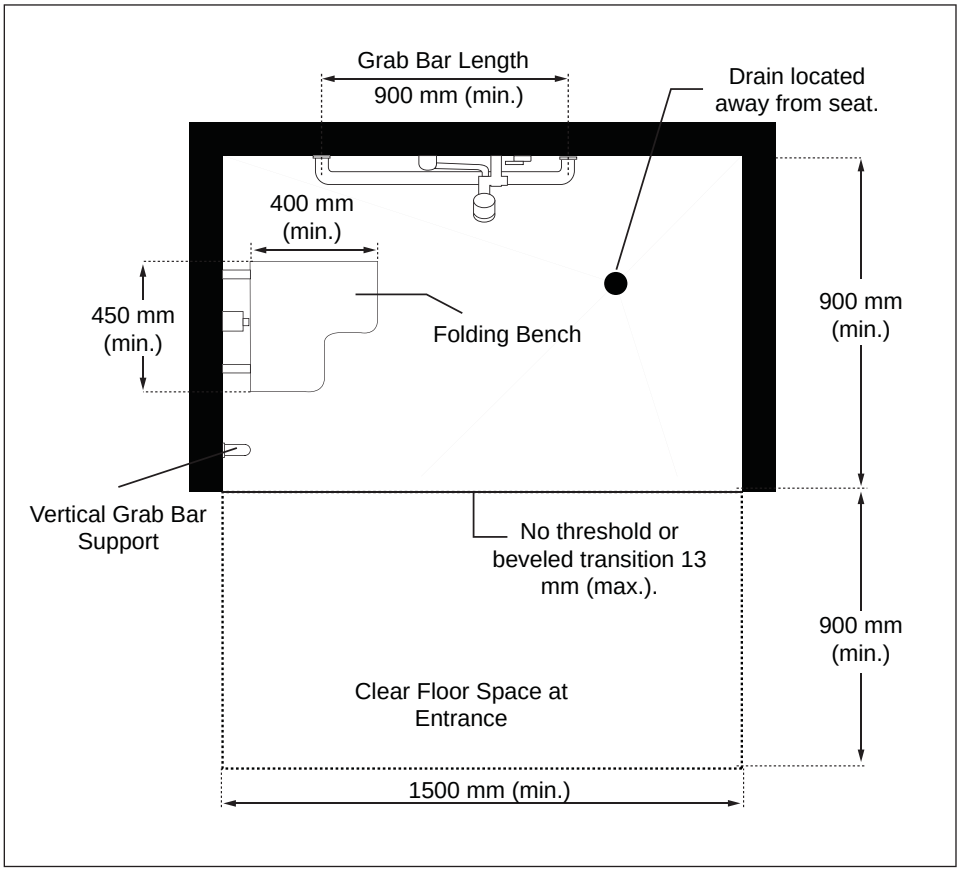


Figure 61: Shower Design and Layout - Plan View

4.6.2 Controls and Accessories

4.6.2.1 General

a. provide lever type or automatic controls that can be operated with a closed fist;
b. provide recessed soap holders, mounted above grab bars between 900 mm and 1200 mm, reachable from a seated position; and
c. provide a pressure equalizing or thermostatic mixing valve to control water pressure, mounted at 1000 mm (maximum) high above floor.

4.6.2.2 Shower Head

a. provide hand-held shower head with flexible hose 1500 mm (minimum) length;
b. provide vertical support to mount shower head to allow operation as a fixed shower head;
c. mount on a vertical support adjustable to 1200 mm (maximum) height above floor, reachable from seated position **(Figure 62)**; and
d. ensure the vertical support placement does not obstruct the use of grab bars.

4.6.2.3 Shower Seat

a. ensure seat is not spring-loaded where hinged;
b. provide surface 450 mm wide by 400 mm deep (minimum) with rear edge 65 mm from wall **(Figure 61)**;
c. mount between 430 mm and 460 mm high above floor, within 500 mm of shower controls **(Figure 62)**;
d. ensure surface is water-resistant and padded for comfort; and
e. mount securely, capable of holding a minimum load of 1.3 kN.

4.6.3 Grab Bars

a. ensure grasping surface is non-abrasive, slip-resistant and colour contrasted compared with mounting surface;
b. provide circular profile, with diameter between 30 and 40 mm;
c. ensure clear space of 30 to 40 mm (minimum) between mounting surface and grab bar, as well as between ends of grab bars and any adjacent wall; and
d. mount securely to withstand a force of 1.3 kN applied in all directions.

4.6.3.1 Horizontal Grab Bars

a. ensure length of 900 mm (minimum) **(Figure 61)**;
b. mount at 850 mm high above floor; and
c. locate on wall opposite to shower entrance, so that at least 300 mm of its length is at one side of the seat.

4.6.3.2 Vertical Grab Bars

a. mount on the side wall adjacent to shower head;
b. ensure length of 900 mm (minimum); and
c. mount with bottom edge between 700 mm and 800 mm high above floor to provide additional support when entering / exiting or when transferring to the seat.

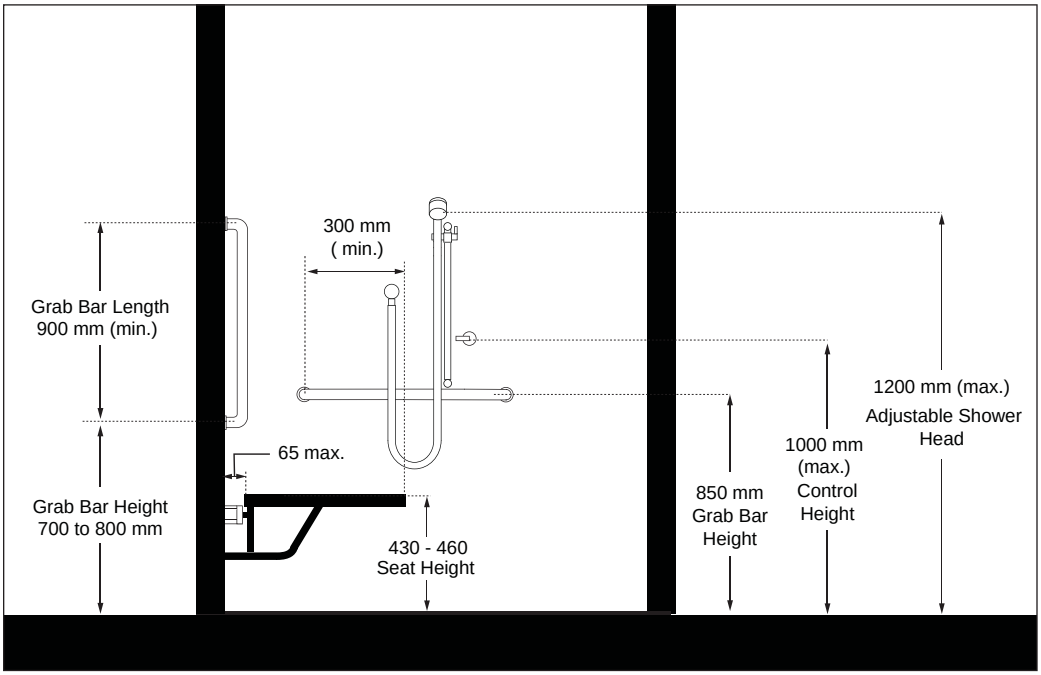


Figure 62: Grab Bars - Section View

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Systems, Controls and Communications

5.0

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Controls and Operating Mechanisms

5.1

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.

Note

For many facilities, system controls and related operating mechanisms (e.g., lighting and ventilation) are centrally controlled and accessibility requirements do not apply.

Best Practice

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

Depending on the type of control, Braille can also be provided.

5.1.1 Design Features

Ensure accessible controls and operating mechanisms address the following:

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 force of 22 Newtons (maximum);
d. where push-button type controls are provided, button surface is not recessed, with minimum diameter of 13 mm;
e. ensure controls are visible from a distance, based on use of colour / tonal contrast between operable parts and adjacent mounting surface of 70% or more is required for colour contrast **(Figure 63)**;
f. for all operating components and features, mount between 400 to 1200 mm high, measured from floor or ground surface **(Figure 64)**; and
g. locate in prominent and obvious locations, for easy identification.

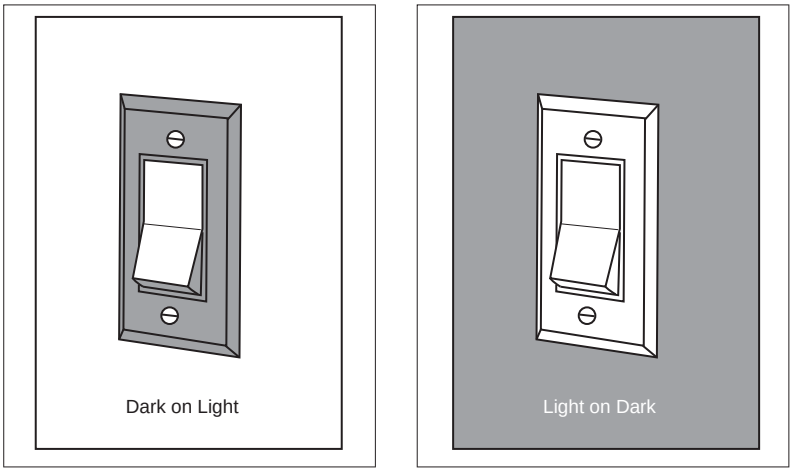

Figure 63: Colour Contrast Between Background and Control

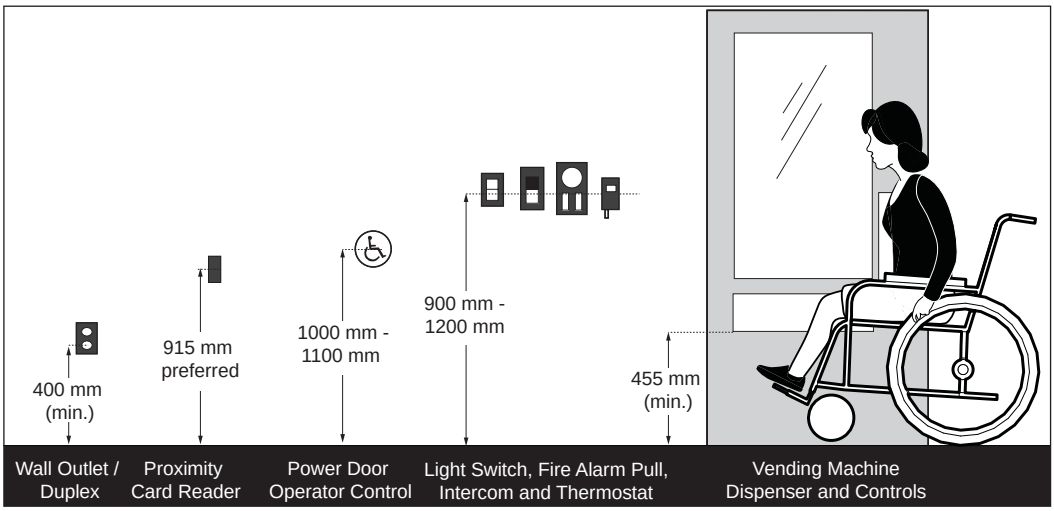

Figure 64: Control Mounting Heights - Elevation View

5.1.2 Floor Space and Reach Requirements

5.1.2.1 Forward Approach and Reach: Unobstructed

a. provide clear floor space or ground surface of 915 mm wide by 1370 mm depth for users of mobility aids;
b. provide high forward reach of 1200 mm (maximum); and
c. provide low forward reach of 380 mm (maximum).

5.1.2.2 Forward Approach and Reach: Obstructed

a. provide clear floor space or ground surface of 915 mm wide by 1370 mm, for users of mobility aids;
b. where forward reach is over an obstruction and the reach depth is 510 mm or less, maximum control height of 1200 mm permitted **(Figure 65a)**;
c. where forward reach is over an obstruction and the reach depth is between 510 to 635 mm, maximum control height of 1120 mm permitted **(Figure 65b)**;
d. ensure clear floor space extends beneath the obstruction for a distance not less than the required depth; and
e. ensure reach depth does not exceed 635 mm.

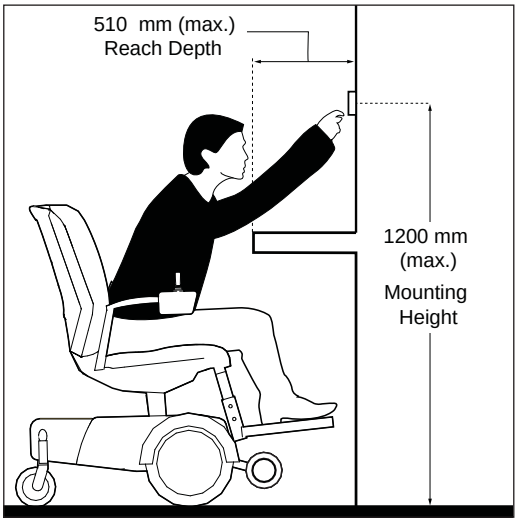

Figure 65a: Obstructed Forward Approach and Reach: Depth 510 mm (Maximum)

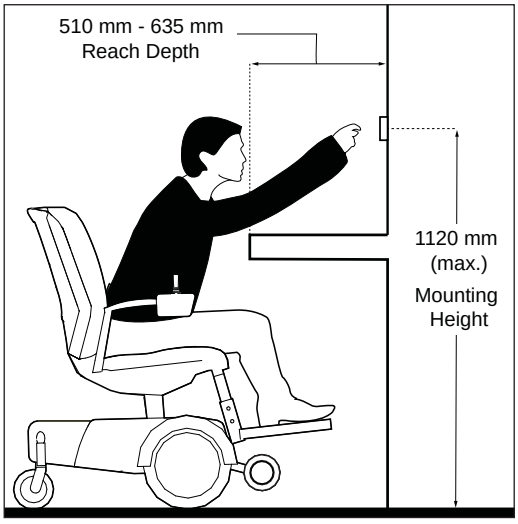

Figure 65b: Obstructed Forward Approach and Reach: Depth 510 to 635 mm (Maximum)

Best Practice

Provide clear floor space or ground surface with turning diameter of 1675 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.

5.1.2.3 Side Approach and Reach: Unobstructed

a. provide clear floor space or ground surface of 1525 mm wide by 915 mm depth for users of mobility aids;
b. provide high side reach of 1200 mm (maximum); and
c. provide low side reach of 380 mm (minimum)

5.1.2.4 Side Approach and Reach: Obstructed

a. provide clear floor space or ground surface of 1525 mm wide by 915 mm depth, for users of mobility aids;
b. where side reach is over an obstruction and the reach depth is 255 mm or less, maximum control height of 1200 mm permitted **(Figure 66a)**;
c. where side reach is over an obstruction and the reach depth is between 255 to 610 mm, maximum control height of 1170 mm permitted **(Figure 66b)**; and
d. ensure reach depth does not exceed 610 mm.

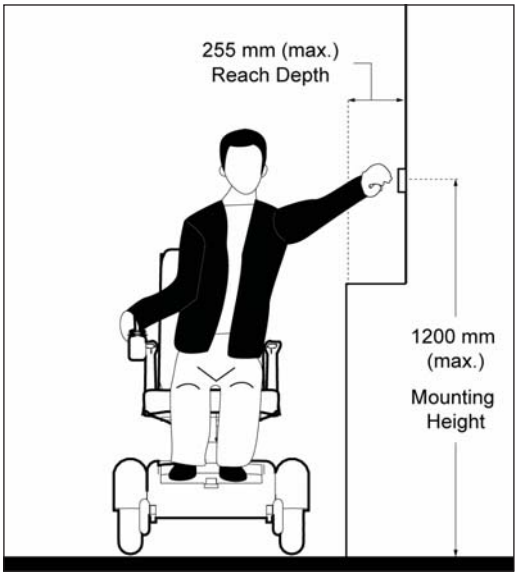

Figure 66a: Obstructed Side Approach and Reach: Depth 255 mm (Maximum)

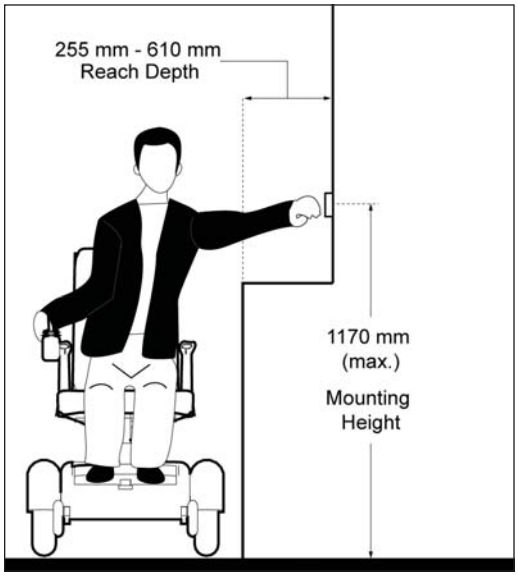

Figure 66b: Obstructed Side Approach and Reach: Depth 255 to 610 mm (Maximum)

Assistive Listening Systems

5.2

Application

This section applies to assistive listening systems, required in assembly areas:

- with an area of 100 square metres or occupancy of seventy-five (75) or more fixed seats;
- where audible communication is integral to the use of the space; and
- where audio amplification devices are used.

Assistive listening systems allow users to sit anywhere in an assembly area and can range in type (e.g., infrared, FM, inductive loop and direct wire systems). Captioning and descriptive video systems enable people who are Deaf, deafened and hard of hearing or people with vision loss to participate.

Reference

Sec. 5.8 Signage and Wayfinding

Note

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

5.2.1 Design Features

For assistive listening systems, whether permanent or portable:

a. ensure system usability encompasses the entire floor area;
b. provide personal amplification control;
c. ensure system performs with or without the use of hearing aids; and
d. install signage with the International Symbol For Hearing Loss pictogram to identify availability of assistive listening system.

Best Practice

Provide options to allow users with hearing loss to select their own devices.

Note

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

5.2.2 Assistive Listening Devices

5.2.2.1 Permanent Assistive Listening Systems

Where permanent systems are provided:

a. ensure receivers are provided, as identified in **Table 4**, based on a minimum ratio of 25% of the total being hearing-aid compatible, or at least one hearing-aid compatible receiver available.

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., enhanced flexibility).

Table 4: Provision of Receivers for Assistive Listening Devices

Capacity of Seating in Assembly Area	Minimum Number of Required Receivers	Minimum Number of Required Receivers to be Hearing-Aid Compatible
50 or less	2	2
51 to 200	2 plus 1 per 25 seats over 50 seats	2
201 to 500	2 plus 1 per 25 seats over 50 seats	1 per 4 receivers
501 to 1000	20 plus 1 per 33 seats over 500 seats	1 per 4 receivers
1001 to 2000	35 plus 1 per 50 seats over 1000 seats	1 per 4 receivers
2001 and over	55 plus 1 per 100 seats over 2000 seats	1 per 4 receivers

Public Address Systems

5.3

Application

This section applies to public address systems that provide information to the public and staff throughout areas within a facility, as well as exterior environments.

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
c. 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.

Note

To prevent confusion, ensure paging systems for use by staff or other key personnel are discreet and low in volume, sounding at devices or locations where people are expected to be located.

Acoustics

5.4

Application

This section applies to the acoustic environment within a facility, which can either enhance or hinder a users' 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

5.4.1 Design Features

For achieving a suitable acoustical environment, which can serve as an additional wayfinding cue for persons with vision and / or hearing loss:

a. integrate the use of sound-reflective or sound absorbent materials to differentiate essential sounds from general background sounds;
b. select floor, wall and ceiling finishes to ensure that occasional noise is not unintentionally amplified (e.g., provision of 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;
e. integrate and include adequate sound insulation in room and space design; and
f. install a permanent inductive loop or similar assistive listening system for high use buildings and areas, especially where the surrounding environment may be noisy.

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.

In general, domed shaped ceilings may distort sound.

Security Systems

5.5

Application

This section addresses the accessibility of typical security systems, which are used to provide and limit access to areas of a facility.

Reference

Sec. 4.2 Doors and Doorways

Sec. 5.1 Controls and Operating Mechanisms

Best Practice

Proximity card readers / activation devices are preferred at controlled entry and exit areas.

Note

A case by case review of accessible security systems is recommended, based on facility types and recognizing the variety of options that are available.

5.5.1 Design Features

Where users control independent entry or exiting to secured areas of facilities:

a. locate controls at a height of 900 mm to 1200 mm from the floor;
b. mount controls at least 300 mm clear of the arc of any door swing, where required;
c. include tactile features where electronic keypads or push button systems are provided, for 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 readers (e.g., swipe cards) are used at doors equipped with power operators, ensure both systems are synchronized; and
f. provide colour contrast on system controls, compared to mounting surface.

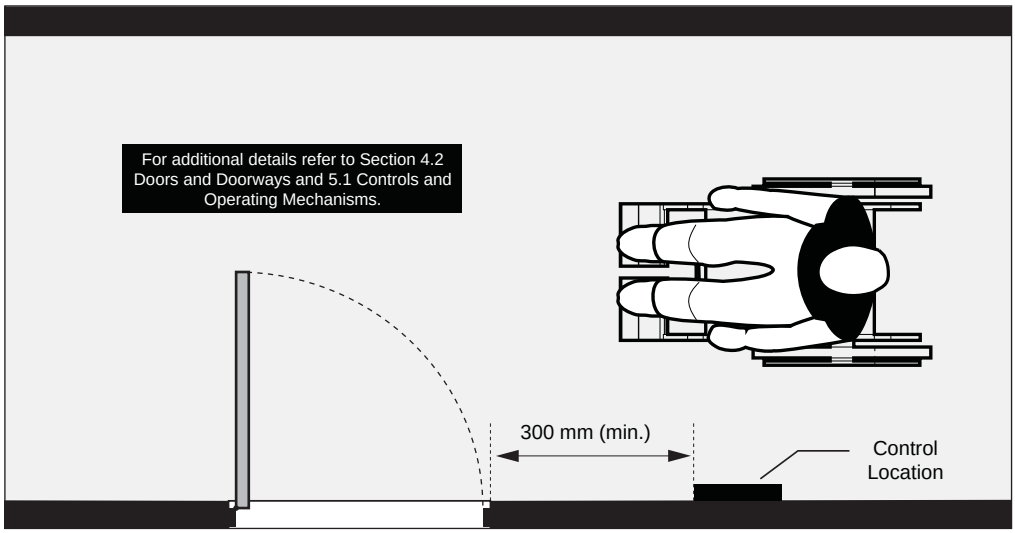

Figure 67: Proximity Card Reader Location - Plan View

Example of large and color contrasted proximity card reader that accommodates diverse users.

Fire and Life Safety Systems

5.6

Application

This section applies to fire and life safety systems, addressing the 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 plans;
- alarm signals (both audible and visual);
- 'Safe Holding Areas' or 'Areas of Refuge'; and
- emergency exits.

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 essential in facilities providing specialized services or programs to seniors and persons with disabilities. Seniors and people with disabilities are groups at greater risk and 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.

Best Practice

Where appropriate, consider installation of a fire fighter's elevator that can be operated by fire department personnel during emergencies.

Consider providing photoluminescent signage (i.e., visible in dark or smoke-filled environments), in addition to regulatory exit signage, throughout exit stairs and at strategic locations along exit routes to assist with evacuation. Additional review may be required to coordinate with Building and Fire Code requirements.

5.6.1 Fire Safety and Evacuation Plans

a. provide a fire and life safety evacuation plan that addresses the needs of users with varying disabilities;
b. ensure all emergency and life safety controls and operating mechanisms (e.g., fire pulls, fire extinguishers, first aid kits and defibrillators) are mounted no higher than 1200 mm from floor;
c. 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., "Buddy System" where staff can help co-workers with disabilities evacuate).
d. ensure evacuation plans are posted no higher than 1200 mm from floor;
e. ensure evacuation plans incorporate a font size of 14 point (minimum);
f. ensure evacuation plans are available in alternate formats; and
g. provide signage to identify evacuation plans.

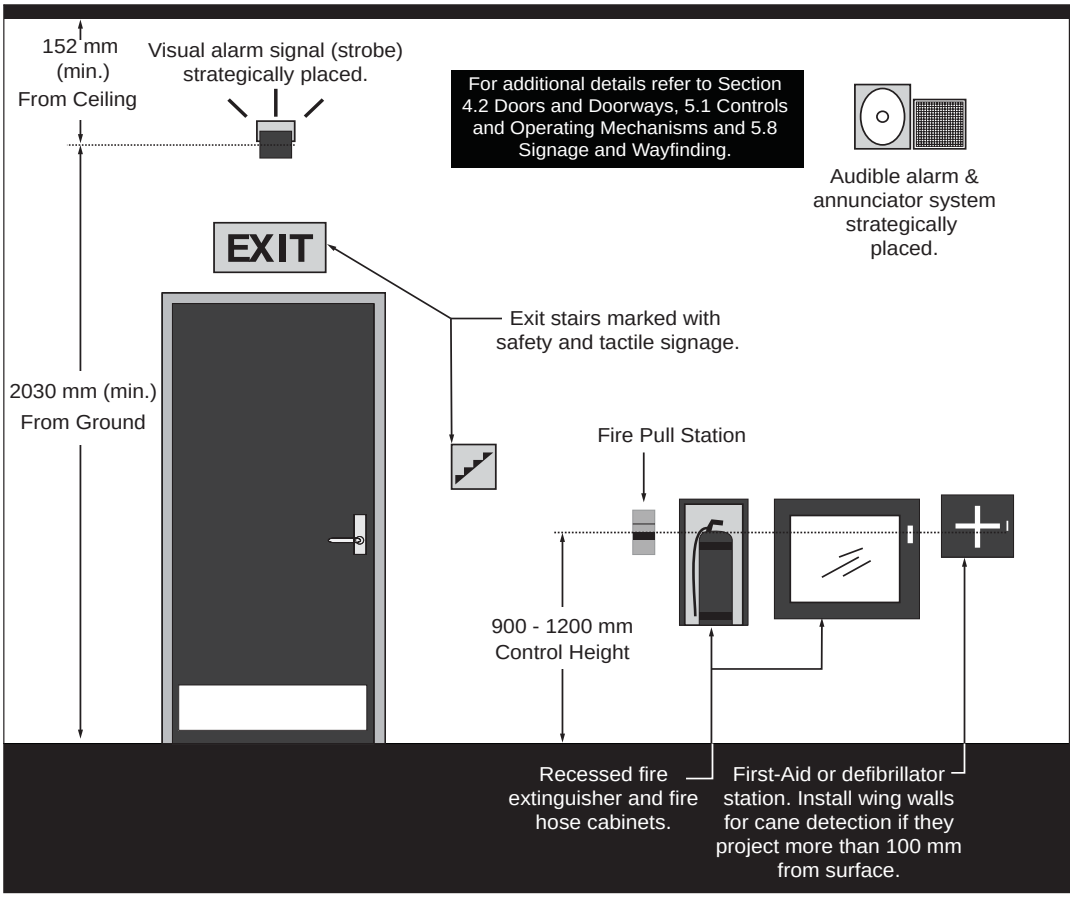

Figure 68: Fire Safety and Evacuation Features - Elevation View

5.6.2 Visual Alarm Signals

a. integrate visual alarm signals with required audible fire alarm system, including during retrofit projects where feasible;
b. mount visual alarm signals in close proximity to audible alarm signals at 2030 mm (minimum) above the highest floor level within a space, or 152 mm below the ceiling **(Figure 68)**;
c. where visual alarms are provided in any common / public corridor, hallway, lobby or room, ensure they are placed no more than 15 metres apart, on the horizontal plane;
d. provide visual alarm signals around the perimeter of large rooms and spaced at a maximum of 30 metre intervals; and
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 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 vicinity to flash at the same time.

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

Best Practice

For existing facilities where fire alarm systems cannot be upgraded, consider the provision of portable, vibrating pager systems for users with vision and hearing loss.

For public facilities, install visual alarm signals in common use areas including, central lobbies, corridors, main assembly areas (e.g., auditoriums, conference rooms and cafeterias) and places where a person may be alone (e.g., universal toilet rooms).

To reduce the likelihood of triggering an epileptic seizure or other photosensitive reaction from multiple unsynchronized visual strobe lights, ensure the flash rate is less than 2 Hertz.

Note

Optimal visual alarm signal placement requires formal study for unique environments, including multi-purpose facilities, libraries, convention / meeting rooms and other facility types to ensure signals are visible from all required areas.

Best Practice

Provide emergency electrical power to ensure adequate emergency lighting levels for the use of elevators and key operating components or other systems during a power outage. Provide in all major areas of the facility, along all paths of travel to exits and in all designated 'Areas of Refuge'.

Note

Stairwells and elevator lobbies are typically used for 'Areas of Refuge', if properly designed with all required features and floorspace to accommodate mobility aids. Detailed review and design is required for provisions in any type of facility, existing or new.

The provision of additional spaces for accommodating mobility aids in an 'Areas of Refuge' is determined by facility occupancy and level of use.

5.6.3 Areas of Refuge

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' or 'Area of Rescue Assistance' and marked with the International Symbol of Accessibility);
d. ensure a clear floor space of at least 1675 mm by 1675 mm is provided 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 linked to the designated fire control centre / 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.

'Areas of Refuge' should be designated with signage, including Braille and tactile features for users with vision loss.

Example of portable elevating device, with platform designed to accommodate mobility aid during evacuation.

Lighting

5.7

Application

This section addresses lighting requirements for both interior and exterior environments.

Note

For additional information on lighting requirements refer to the Illuminating Engineering Society's "The Lighting Handbook 10th Edition", 2011

Best Practice

For emergency lighting over interior stairs and ramps, provide 100 lux (10 foot-candles) preferred illumination, 10 lux (1 foot-candles) minimum, in exits or other paths of travel, measured at the walking surface.

5.7.1 Lighting Level Requirements

For lighting level requirements for interior and exterior environments:

a. ensure lighting levels for elements in both interior and exterior environments are in accordance with Illuminating Engineering Society of North America (I.E.S.N.A.) standards, as summarized in **Table 5**.

Table 5: Lighting Requirements for Exterior and Interior Environments

Locations and Tasks	Lighting Level (lux)	Best Practice (lux)
Exterior Public Circulation Routes		
Routes	10 (avg)	100
Ramps	10 (avg)	100
Stairs	10 (avg)	100
Parking Areas		
Exterior	10 (min)	50
Parking Garage	10 (min)	50
Interior Public Circulation Corridors		
Concourse	50 (avg)	100
Side Arcades	50 (avg)	100
Elevator Lobby	100 (avg)	200
Vertical Circulation		
Elevator Cabs	50 (avg)	100
Stairs and Escalator Runs	50 (avg)	100
Plumbing Facilities		
Washrooms General	50 (avg)	100
Washroom Fixtures	150 (avg)	150
Showers	100 (avg)	150
Multipurpose / Meeting Rooms		
General Assembly	100 (avg)	100
Multi-Purpose / Offices	300 (avg)	50 - 100
Food Court Seating and Circulation		
Cashier Areas	200 (avg)	300 - 500
Food Displays	200 (avg)	500
Common Amenities		
Service Counters	150 (avg)	200
Automatic Teller Machines (ATMs)	200 (avg)	200

Source: Illuminating Engineering Society of North America, 2011.

5.7.2 Exterior Lighting

a. ensure lighting sources 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 casted;
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 standards are mounted high enough to clear normal snow accumulation heights; and
f. ensure overhead light fixtures are mounted with clear headroom of 2100 mm (minimum).

5.7.3 Interior Lighting

a. 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;
b. integrate sources of both artificial and natural lighting to provide comfortable, evenly distributed light at working surfaces and throughout circulation routes;
c. ensure lighting design allows an illumination quality that is as close to a full spectrum as possible to aid in identifying edges and colour contrasts which are used as wayfinding cues (this ensures the warm end of the spectrum provides appropriate colour definition);
d. ensure any leading edge of stairs, steps, ramps or escalators are evenly lit; and
e. ensure sources of light (natural or artificial) are not positioned at the ends of corridors or behind people at reception areas or counters.

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. Transitional lighting options (higher artificial lighting levels near the entrance in daylight and lower levels after dark) should be considered.

Note

Variations in lighting levels can be confusing to many older adults, people with cognitive disabilities and people with vision loss.

Best Practice

Avoid the use of light fixtures with multiple pinpoints of high intensity illumination. They may add an unnecessary source of glare and leave an after image on the retina of people with vision loss.

Do not use high gloss finishes at any times.

Note

Monolithic floor surfaces, such as stone, granite, marble or terrazzo in a matte or honed finish, minimize any potential for reflected glare.

High intensity light sources such as quartz, halogen or other pinpoint sources (e.g., chandeliers) can produce reflected points of glare on shiny surfaces.

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 matte or satin finish;
c. provide matte or satin wall finishes (e.g., paint, vinyl coverings, stone, marble, wood, plastic or laminate) 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.

Example of floor surface and elevator door finishes that minimize glare.

Signage and Wayfinding

5.8

Application

This section applies to signage and wayfinding strategies, where provided in exterior and interior environments.

Use the International Symbol of Accessibility to designate accessible features or elements provided for a facility, including:

- washrooms;
- elevators;
- telephones;
- information kiosks;
- accessible routes;
- ‘Areas of Refuge’; and
- parking facilities.

Recognizing 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.

Best Practice

Control the use of temporary signage, which can render other relevant and accessible signage ineffective, through management procedures / protocols. Temporary signage typically uses improper language, materials and text sizes.

5.8.1 Wayfinding Principles

a. ensure consistent design, strategic placement and ideal mounting heights at key decision-making points along accessible routes for all signage;
b. ensure signage surfaces have matte, eggshell or non-glare finish;
c. provide colour contrast of at least 70% between signage and mounting surfaces for full visibility;
d. ensure there is no information overload or cluttering of signage and related information 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).

Figure 69: Wayfinding Principles - International Symbols of Accessibility

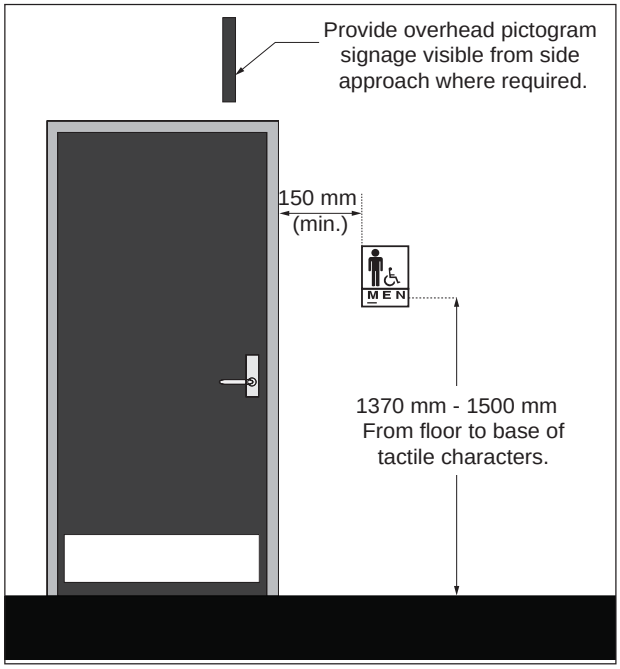

Figure 70: Mounting Height and Provisions of Permanent Signage - Elevation View

Example of accessible signage provided to identify accessible washroom provisions.

5.8.1.1 Permanent Signage Mounting Locations

Where signage is provided to identify and designate permanent routes and spaces:

a. mount consistently, at eye level, between 1370 mm to 1500 mm high measured from floor to base of characters **(Figure 70)**;
b. install on latch side of door within 150 mm (minimum) of door frame;
c. where there is no wall space adjacent to the latch side of the door, including double-leaf doors, install signage on nearest adjacent wall; and
d. allow users to approach within 100 mm of sign location, clear of any door swing or protruding objects.

Note

Where double doors are provided, mount room identification signage on both sides adjacent to the door hinges and clear of the door swing.

Do not mount any signage directly on external glazing which reduces visibility and legibility of text.

5.8.2 Design Features

a. ensure signage surfaces have matte, eggshell or non-glare finish;
b. provide colour contrast of at least 70% between signage and mounting surfaces for full visibility; and
c. ensure lighting level is 200 lux (minimum), measured at ground level.

Note

Character height for room numbers or names shall be no smaller than 25 mm high.

5.8.2.1 Character Features and Sizes

a. ensure text (e.g., letter or number) is sans serif or Arabic;
b. provide width to height ratio between 3:5 and 1:1;
c. provide stroke width to height ratio between 1:5 and 1:10;
d. provide colour contrast of at least 70% between signage and background surface; and
e. ensure directional / informational signage print is legible from normal viewing distance(s), as identified in **Table 6**.

Best Practice

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.

Table 6: Character Height at Maximum Viewing Distance

Minimum Character Height (mm)	Maximum Viewing Distance (mm)
200	6,000
150	4,600
100	2,500
75	2,300
50	1,500
25	750

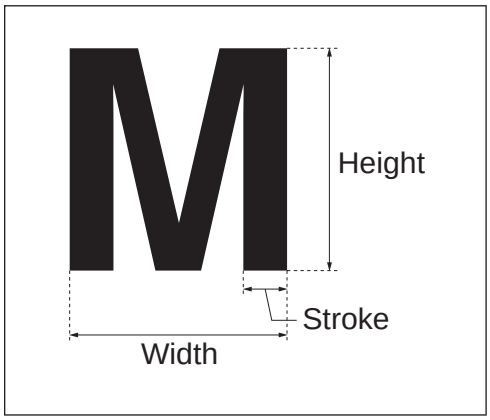

Figure 71: Character Features and Sizes

Note

For Ottawa specific pictograms, refer to Appendix 7.8 "Tactile Signage Standard Pictograms"

5.8.2.2 Pictograms and Symbols

Pictograms and symbols are used to complement text information and identify important facility features, elements or services, including information desks, public washrooms, and elevators. Where pictograms are used:

a. provide an equivalent text description;
b. provide a border dimension of at least 150 mm minimum in height and width;
c. use the International Symbol of Accessibility to identify accessible facility features, spaces, elements and amenities; and
d. use recognized and standardized symbols for accessibility features or other key building elements (e.g., washrooms, telephones and elevators) to facilitate wayfinding for all users **(Figure 72)**.

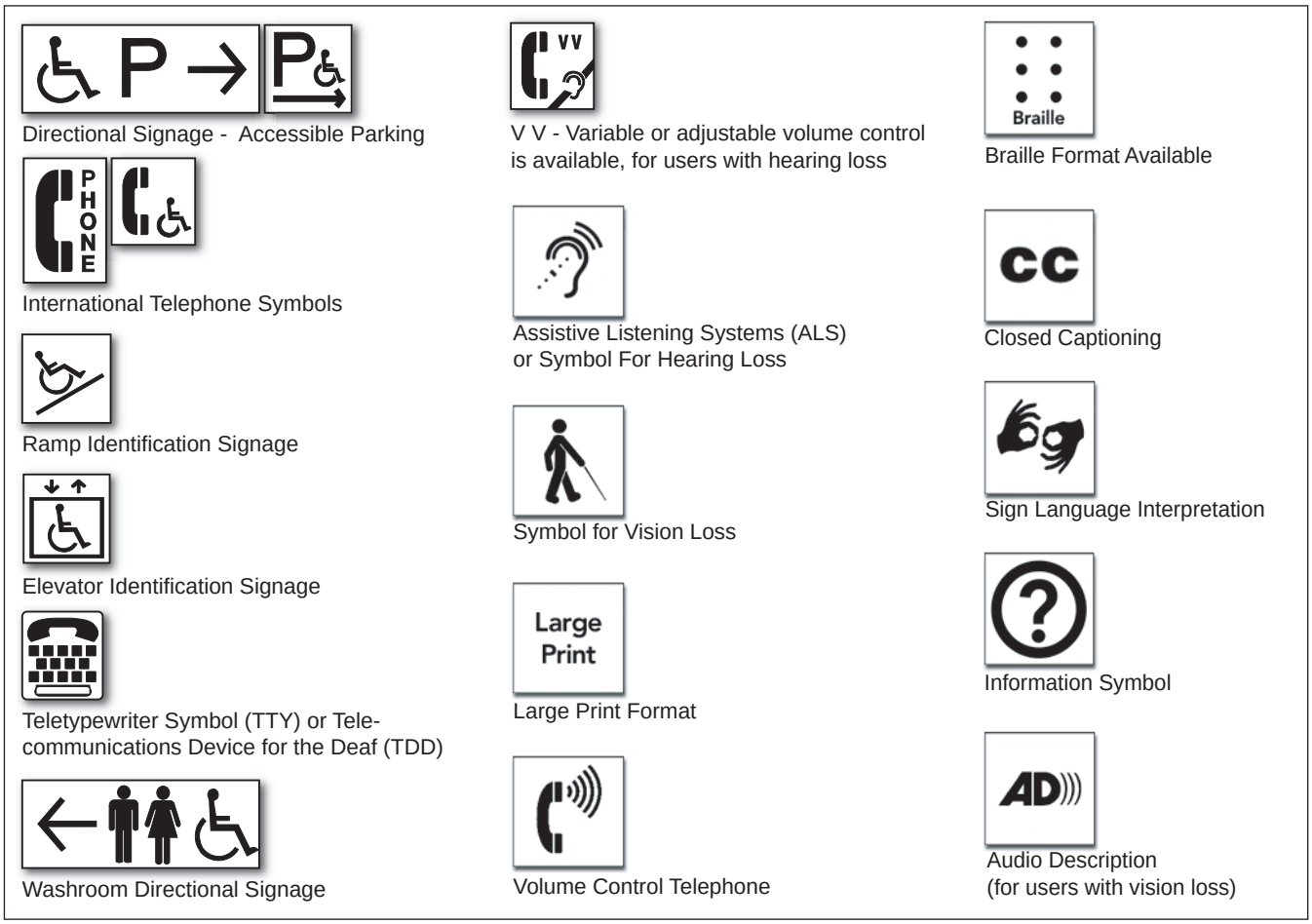

Figure 72: Example of Typical Pictograms and Symbols

5.8.2.3 Tactile / Raised Characters

Where tactile / raised characters are provided, ensure text (e.g., letter or number):

a. is sans serif or Arabic;
b. is raised 0.8 to 1.5 mm above the surface;
c. is 16 to 50 mm high;
d. is colour contrasted with background; and
e. includes clear wall area around the sign, 75 mm wide (minimum) to ensure reading by touch.

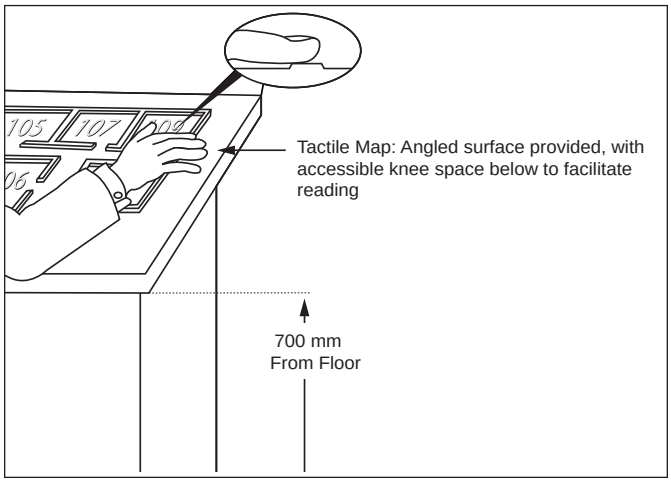

Figure 73: Tactile Map

Best Practice

In larger and complex buildings, such as recreation centres, provide tactile maps on each floor, close to the major point of arrival to the floor (e.g., elevator lobby) to assist with wayfinding for users with vision loss **(Figure 73)**.

Note

Braille or tactile features are only required for signs that can be reached and touched to identify permanent rooms and spaces. These features are not required for overhead or suspended signage (e.g., directional information).

5.8.2.4 Braille

Provide Grade 1 Braille for permanent rooms and spaces:

a. locate immediately below all room numbers, names and pictograms; and
b. provide a clear wall area around the sign, 75 mm wide (minimum) to ensure reading by touch.

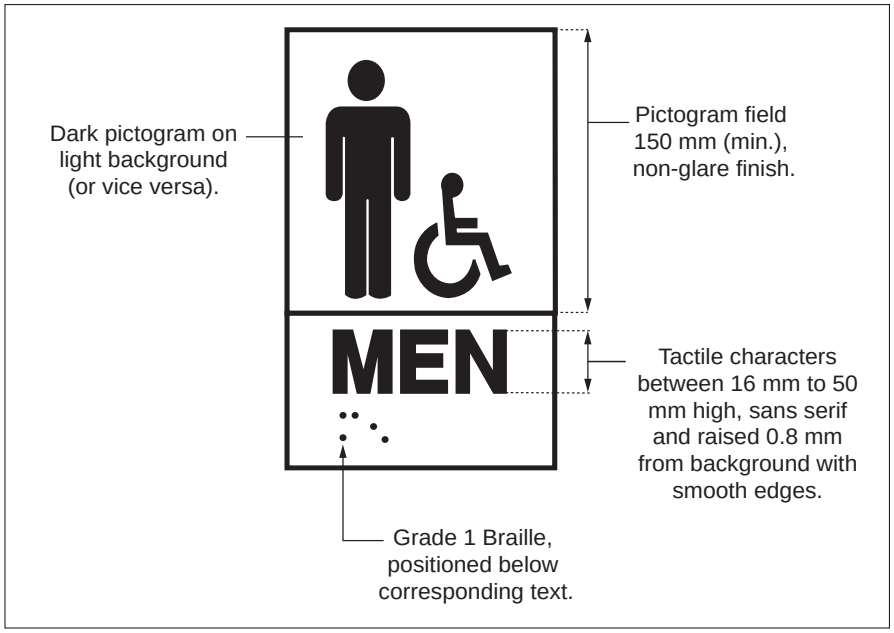

Figure 74: Tactile / Raised Characters

Windows

5.9

Application

This section applies to windows, glazed screens, vision panels in doors, 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.

Best Practice

Floor space with turning diameter of 1675 mm is preferred to accommodate larger mobility aids.

5.9.1 Design Features

For windows, glazed screens and vision panels, designed for the purpose of viewing:

a. provide clear floor space of 915 mm wide by 1370 mm deep (minimum) for forward and 1525 mm wide by 915 mm deep (minimum) for side approach by users of mobility aids;

b. locate bottom sill height no more than 1100 mm above the finished floor;

c. where ventilation controls are provided, mount between 380 mm and 1200 mm above the finished floor to be reachable from a seated position;

d. do not locate horizontal structure (e.g., window transom) between 900 mm and 1300 mm above the floor; and

e. where wall systems include extensive use of glazing, provide horizontal markings:

   i. between 100 and 125 mm in height, extending full width of glazed area, mounted 1350 to 1500 mm above finished floor; and

   ii. ensure strong colour contrast is provided for users with vision loss.

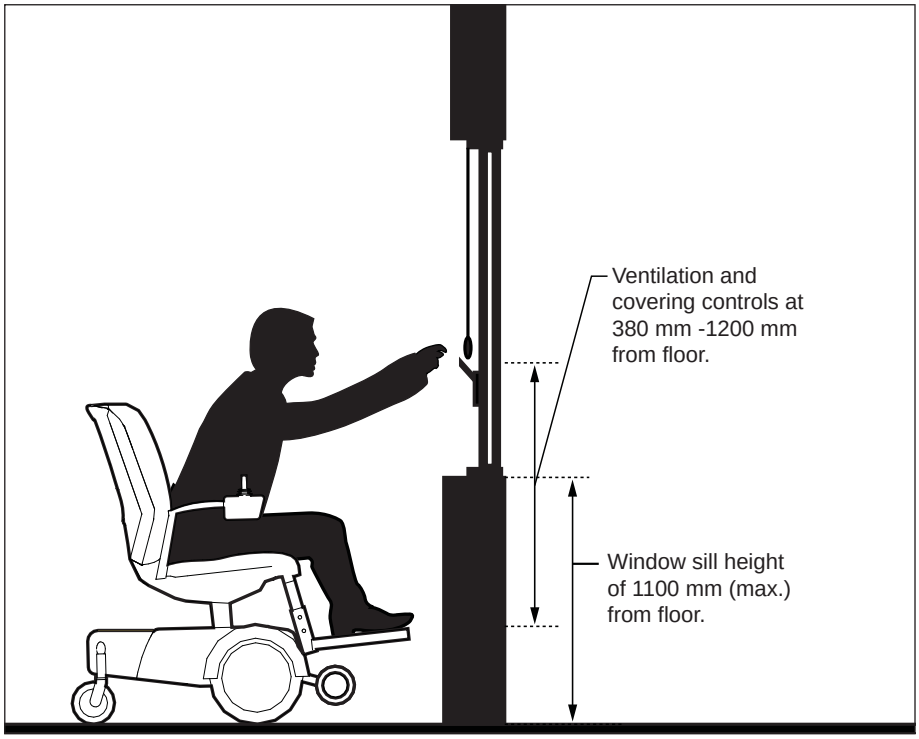

Figure 75: Window Design Features - Elevation View

Special Facilities and Spaces

6.0

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Assembly Areas

6.1

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 7**.

Table 7: Common Assembly Areas

Civic	Entertainment / Cultural	Educational	Sports
Council Chamber	Theatre	Lecture Hall	Arena
Public Meeting or Hearing Room	Places of Worship	Classroom	Stadium
Auditorium	Performing Arts Centre	Conference / Symposium Room	Gymnasia
Multi-Purpose Room (e.g., Community or Recreation Centres)	Museum	Stage / Podium	Grandstand Stage

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. 6.13 Elevated Platforms or Stages

Best Practice

In assembly areas, where lighting is dimmed (e.g., theatres or performing arts centre), ensure steps and accessible routes are illuminated (e.g., marked with lighting strips) to assist with identification.

6.1.1 Design and Layout

a. ensure lighting level is evenly distributed throughout all accessible routes and accessible seating spaces;
b. ensure a consistent accessible path of travel of 1100 mm (minimum) throughout space for circulation;
c. provide accessible seating options for users of mobility aids;
d. provide assistive listening systems, designed for the type of venue and audience; and
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.

Best Practice

Final Proposed AODA requires the number of accessible seating spaces to be at least 3% of seating capacity, rounded up to next whole number (Refer to AODA, Section 9.12.1, July 2010).

Adaptable seating, with armrests that flip up and down at the end of aisle seats, provides assistance to persons transferring from mobility aids.

An increased riser height for accessible seating spaces ensures suitable sightlines and comparable views when users in front are in standing position.

6.1.2 Accessible Seating Spaces

Where fixed seating is available in assembly occupancies:

a. provide accessible seating spaces for users of mobility aids based on total number of fixed seats, as identified in **Table 8**:

Table 8: Accessible Seating Requirements in Assembly Areas

Total Number of Fixed Seats	Minimum Number of Accessible Seats
4 to 25	1
26 to 50	2
51 to 150	4
151 to 300	5
301 to 500	6
501 to 5000	6, plus 1 for each 150, or fraction thereof
Over 5000	36, plus 1 for each 200, or fraction thereof

b. install directional signage in prominent locations to identify location of accessible seating spaces;
c. locate spaces adjoining an accessible path of travel, without infringing on egress from any row of seating;
d. ensure accessible seating spaces are positioned so that they do not obstruct sightlines of other users either sitting or standing;
e. provide at least one fixed companion seat adjacent to accessible seating spaces and within the same row (Note: ensure shoulder alignment for users sitting beside each other);
f. when entering from side, ensure clear floor space at accessible seating spaces is 1525 mm wide by 915 mm deep (minimum);
g. when entering from rear or front, ensure clear floor space at accessible seating space is at least 915 mm wide by 1370 mm deep (minimum) **(Figure 76)**;

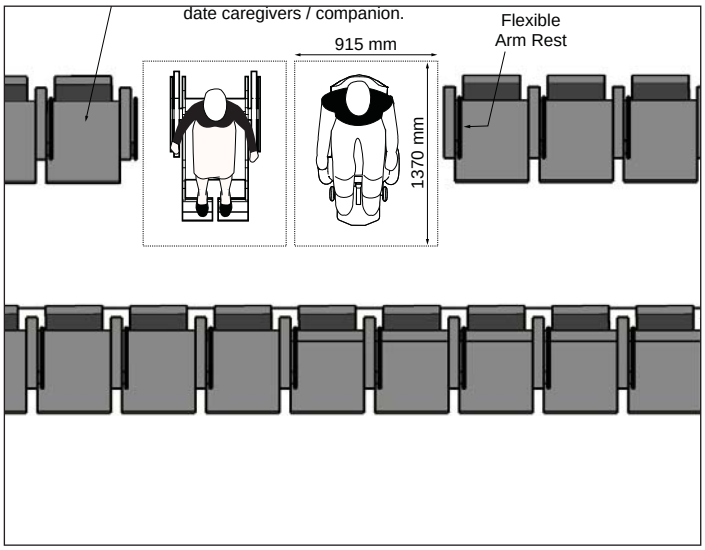


Figure 76: Accessible Seating Space Dimensions

h. ensure at least two accessible seating spaces are provided side by side;
i. where more than one accessible seating space is provided, ensure they are dispersed at a variety of locations on all levels **(Figure 77)**;
j. provide storage space for mobility aids with floor space of 915 mm wide by 1370 mm deep (minimum), located adjacent to accessible seating spaces, on same level; and
k. where accessible seating spaces are provided on an elevated platform, install guardrail below sight lines, at 1100 mm high (maximum), so that views are not obstructed **(Figure 78)**.

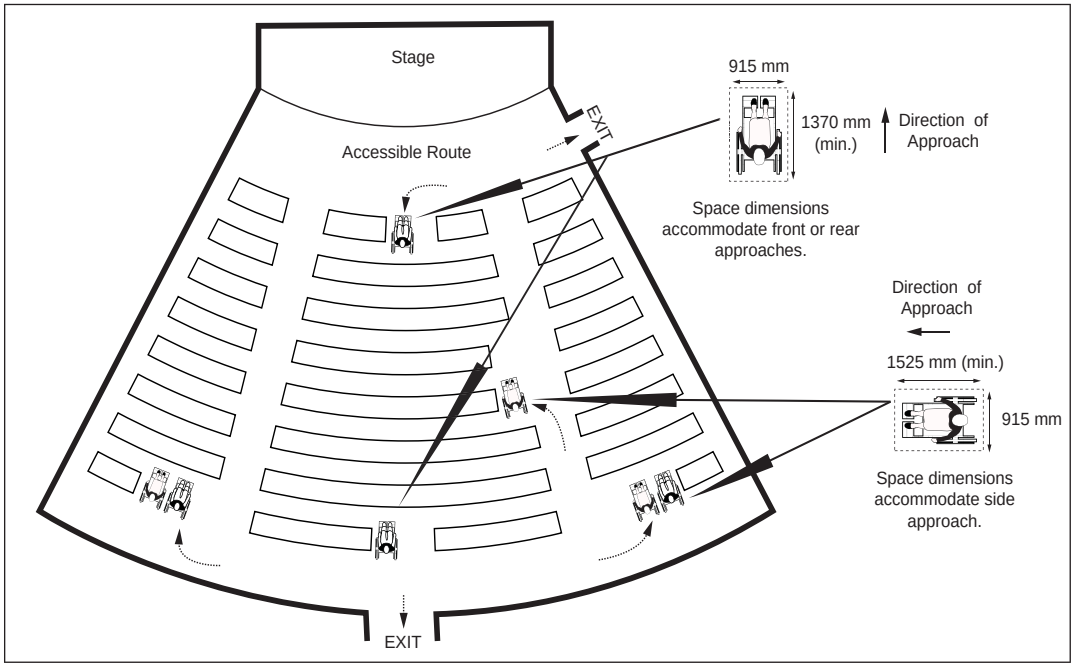


Figure 77: Accessible Seating Plan - Example of Viewing Positions

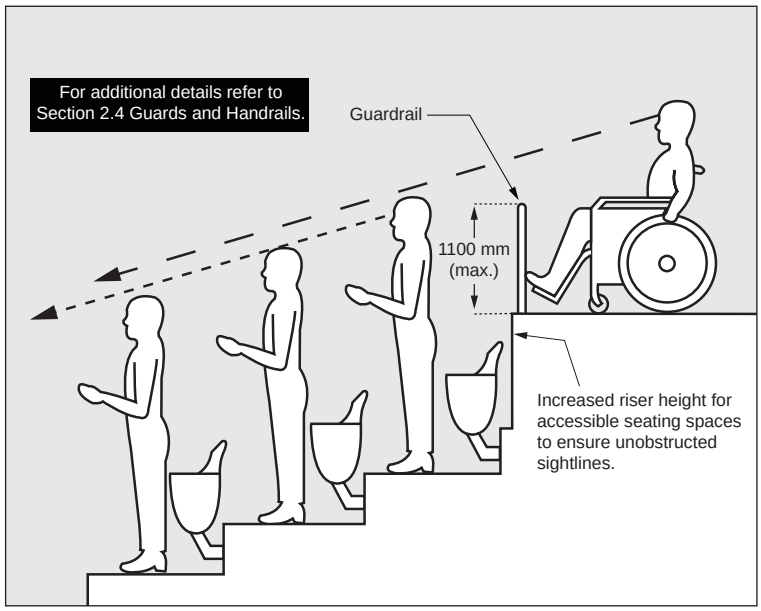


Figure 78: Sightlines

Designated accessible seating area at stadium.

Meeting Rooms

6.2

Application

This section applies to meeting rooms used by public and staff within a facility.

Reference

Sec. 2.10	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

Best Practice

Entrances to large and highly used meeting or multi-purpose rooms to be equipped with power door operators.

Final Proposed AODA requires clear floor space of 2500 mm by 2500 mm within the room. (Refer to AODA, Section 9.4.1, July 2010)

Movable tables and chairs are recommended as they allow flexibility and accommodations to be made.

6.2.1 Design and Layout

a. locate on an accessible path of travel;
b. identify meeting room location with appropriate signage;
c. ensure a consistent accessible path of travel of 1100 mm clear width (minimum) is provided throughout space for circulation;
d. provide a turning diameter of at least 1675 mm within the room;
e. provide accessible tables and work surfaces with suitable knee clearances and seating, as identified in related sections;
f. provide assistive listening systems, identified with signage and International Symbol of Accessibility;
g. where servery or millwork are provided, ensure clear floor space is:
    i. 915 mm wide by 1370 mm deep (minimum) for forward approach; and
    ii. 1525 mm wide by 915 mm deep (minimum) for side approach;
h. ensure all audio-visual equipment, features, controls and related technology is usable by all participants and staff, where applicable, including the provision of instructions and guidance in alternative formats; and
i. ensure lighting level is 200 lux (20 foot-candles) (minimum) at work surfaces.

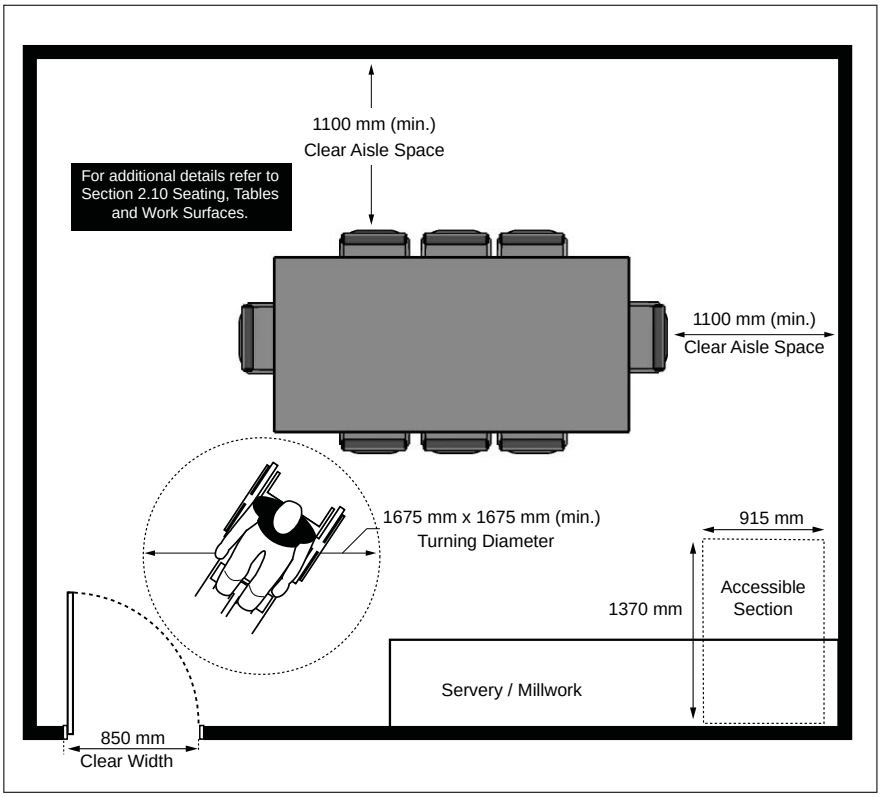


Figure 79: Meeting Room Design and Layout

Cultural and Art Facilities

6.3

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. 2.10	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

Note

The Final Proposed AODA currently does not address heritage facilities. The expectation is that specialized accessibility requirements will likely be developed.

Best Practice

Provide line drawings and photographs that complement any labels or text provided, to aid in comprehension for those with reading difficulties.

Refer to the Ontario Historical Society's "Accessible Heritage: An Accessible Toolkit for Ontario's Heritage Organizations and Institutions."

www.ontariohistoricalsociety.ca

6.3.1 Design and Layout

a. ensure accessible path of travel 1100 mm (minimum) wide throughout circulation space;
b. where exhibits or displays follow a specific order, ensure circulation route is intuitive;
c. provide an accessible floor plan or map to facilitate in 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 915 mm high (maximum) from floor;
    ii. provide clear floor space of 915 mm wide by 1370 mm deep (minimum) for forward approach and 1525 mm wide by 915 mm deep (minimum) for side approach in front of exhibits;
    iii. ensure colour contrast is provided between the items exhibited and adjacent background;
    iv. ensure no glare is reflected from display surfaces or covers or that it is minimized as much as possible;
    v. provide exhibits and display labels in alternative formats (e.g., Braille or audio);
    vi. ensure lighting level between 100 to 300 lux (10 to 30 foot-candles) is provided at display labels for reading; and
    vii. where interactive displays are provided, ensure controls and operating mechanisms are mounted at 1200 mm high (maximum) from floor.

Interactive displays provide an alternative format to experience a space / exhibit.

Cafeteria and Dining Facilities

6.4

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. 2.10	Seating, Tables and Work Surfaces
Sec. 4.3	Interior Accessible Routes
Sec. 5.1	Controls and Operating Mechanisms
Sec. 6.11	Service Counters
Sec. 6.12	Waiting, Line-up and Queuing Areas

Note

Providing accessible customer service is especially important for this type of environment.

Best Practice

Provide clear floor space with turning diameter of 1675 mm, to allow both side and frontal approach of larger wheeled mobility aids such as powered scooters and wheelchairs.

6.4.1 Design and Layout

a. provide a consistent accessible path of travel of least 1100 mm wide throughout spaces for circulation; and
b. where layout of cafeteria amenities are dispersed, ensure clear floor space in front of food displays and dispensing equipment of:
   i. 915 mm wide and 1370 deep (minimum) for forward approach; and
   ii. 1525 mm wide and 915 mm deep (minimum) for side approach.

6.4.1.1 Food Displays and Service Lanes

Where self-service food displays are provided:

a. ensure clear aisle width between tray slide and separating rail is 1100 mm (minimum);
b. provide tray slides mounted between 760 and 865 mm high above floor;
c. ensure at least 50% of shelves are mounted 400 to 1370 mm for unobstructed side approach; and
d. ensure maximum side reach of 500 mm deep.

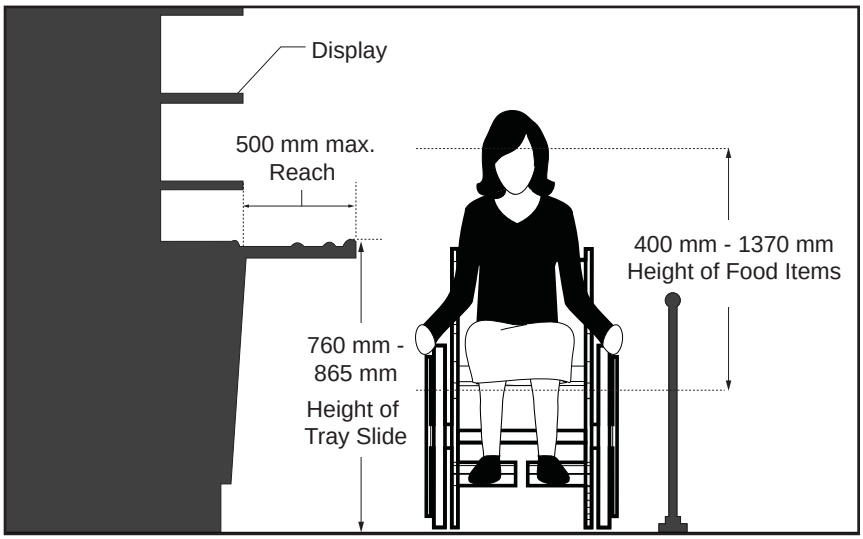


Figure 80a: Food Displays and Tray Slides - Section View

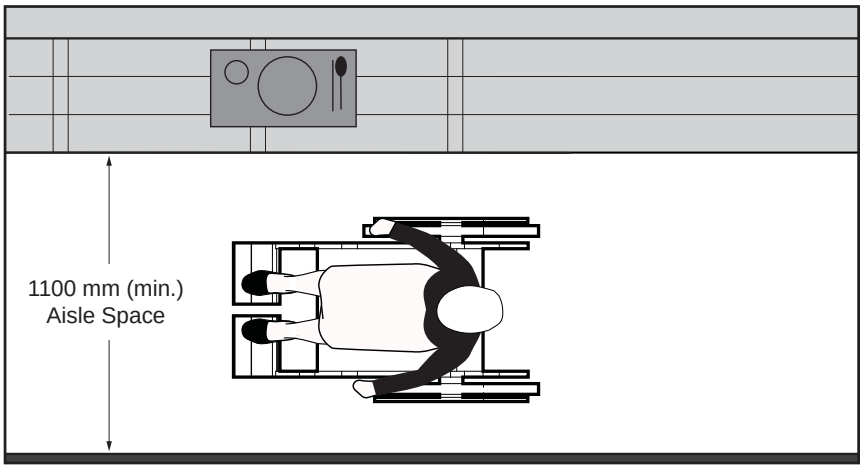


Figure 80b: Aisle Width - Plan View

6.4.1.2 Cash Register Counter

a. where provided, ensure at least one accessible service counter;
b. provide a clear floor space for:
    i. forward approach of 915 mm wide by 1370 mm deep; and
    ii. side approach of 1525 mm wide by 915 mm deep; and
c. if staff are available, ensure they are visible from a seated position, to assist users if required.

6.4.1.3 Dining Areas

a. ensure accessible seating spaces are provided for users of mobility aids;
b. provide dining tables with clear knee space underneath table, as identified in relevant sections;
c. provide a clear floor space of 1675 mm wide by 1675 mm deep (minimum) in front of dining areas; and
d. provide informational and directional signage identifying accessible amenities, with International Symbol of Accessibility.

Accessible cafeteria seating area designated with 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.

Kitchens and Kitchenettes

6.5

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 centres, where multi-purpose activity rooms are provided.

Reference

Sec. 2.1	Ground and Floor Surfaces
Sec. 2.10	Seating, Tables and Work Surfaces
Sec. 4.3	Interior Accessible Routes
Sec. 5.1	Controls and Operating Mechanisms
Sec. 5.7	Lighting

Exception

This section does not address commercial kitchens or kitchens within private residences.

6.5.1 Design and Layout

a. ensure floor surface is slip-resistant and has a non-glare finish; and
b. ensure lighting level is at least 100 lux (10 foot-candles), with task lighting option also available (e.g., under counter).

Best Practice

A turning circle of 2500 mm 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:

a. provide a clearance of at least 1100 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 850 mm clear width.

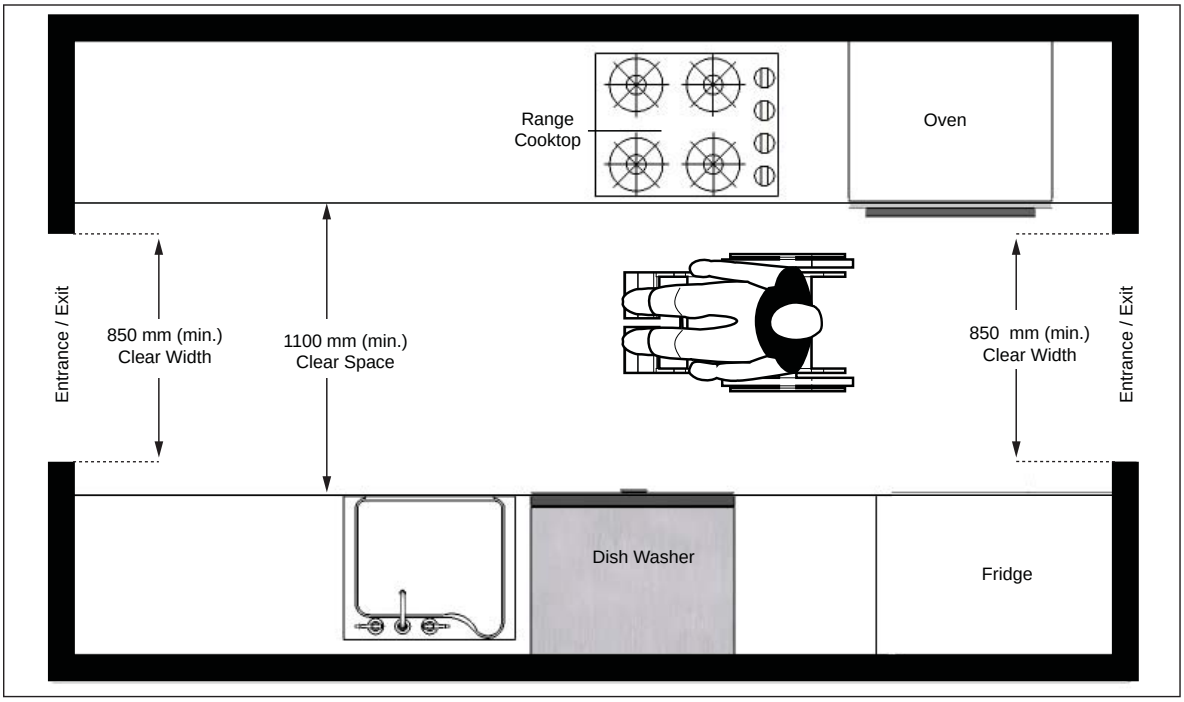


Figure 81: Pass-Through or Galley Kitchen - Plan View

6.5.1.2 U-Shaped Kitchens

Where kitchens are enclosed on three continuous sides **(Figure 82)**:

a. provide a clearance of at least 1500 mm between all opposing base cabinets, countertops or walls within kitchen work areas.

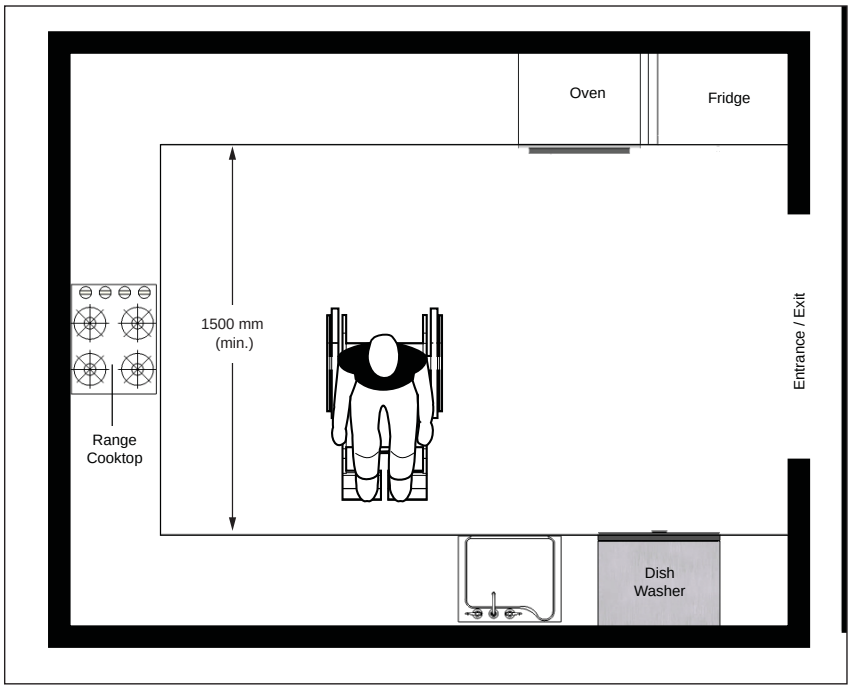


Figure 82: U-Shaped Kitchen - Plan View

6.5.1.3 L-Shaped Kitchens

Where kitchens are L-shaped **(Figure 83)**:

a. provide a clearance of at least 1100 mm between all opposing base cabinets, countertops or walls within kitchen work areas.

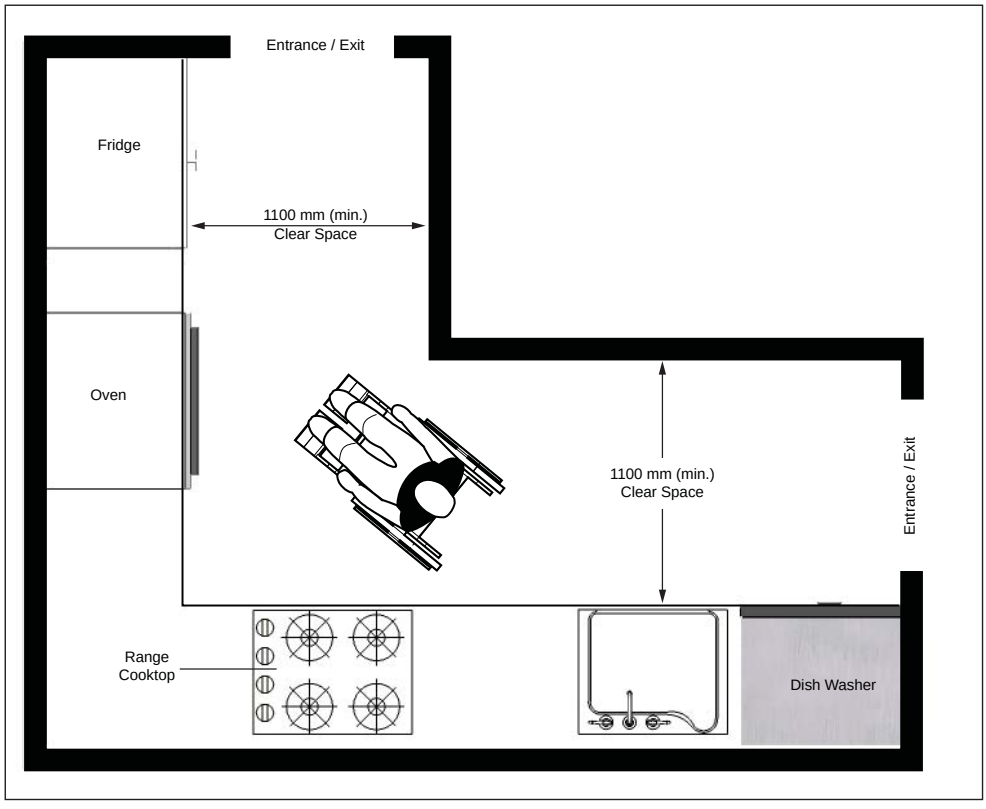


Figure 83: L-Shaped Kitchen - Plan View

6.5.2 Kitchen Amenities

For kitchen amenities, which typically include, but are not limited to counters, cabinets and sinks:

a. provide clear floor space of:
   i. 915 mm wide by 1370 mm deep for forward approach; and
   ii. 1525 mm wide by 915 mm deep for side approach; and
b. ensure all controls and operating mechanisms are mounted no higher than 1200 mm from floor.

6.5.2.1 Counters and Work Surfaces

For accessible food preparation counters and work surfaces:

a. ensure color contrast is provided between all cabinets, countertops, appliances and adjacent wall surfaces;
b. provide an accessible lowered counter at 760 mm to 865 mm high with knee clearances of at least 500 mm deep, 760 mm wide and 700 mm high;
c. ensure lowered counter is continuous; and
d. where kitchen appliances are provided, provide adjacent accessible work surfaces.

Best Practice

Provide a portable, accessible side counter unit for frequently used appliances and related amenities. This can also be an option for existing facilities.

Faucets with flexible hose attachment benefit a wider range of users.

6.5.2.2 Cabinets

Where shelves and storage cabinets are provided:

a. ensure at least 50% are mounted between 380 mm and 1200 mm high from floor;
b. locate no more than 500 mm reach from the counter edge; and
c. ensure accessible cabinet door hardware (e.g., D-pull) that can be easily operated is mounted at 1200 mm high (minimum).

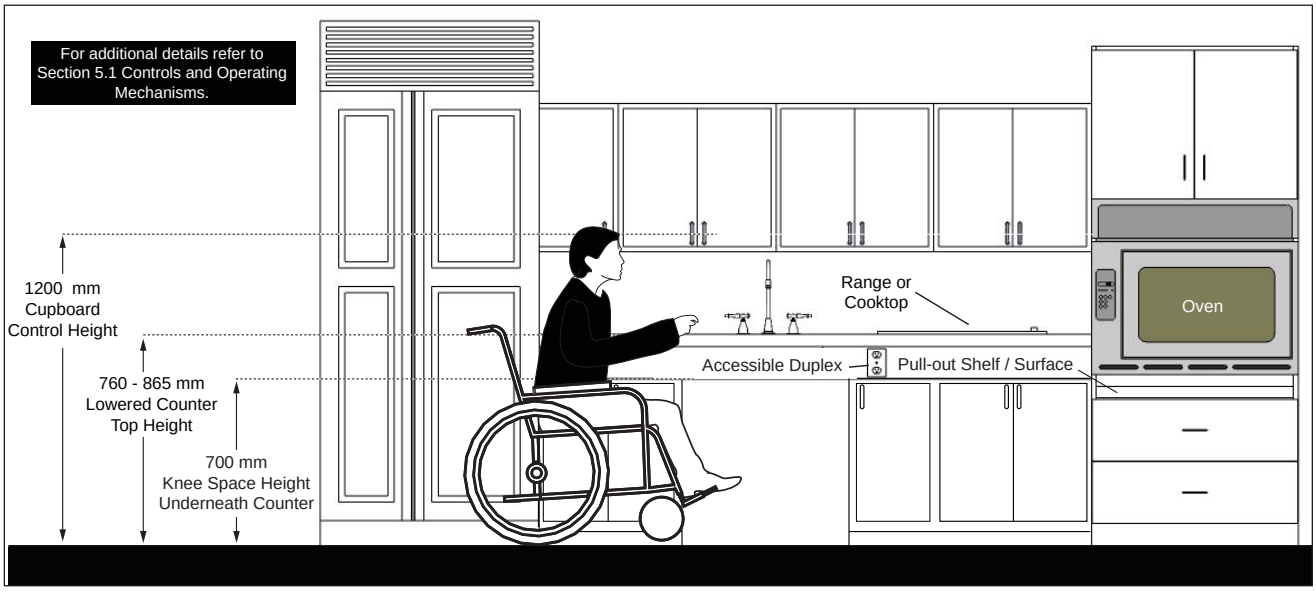


Figure 84: Kitchen Amenities

6.5.2.3 Sinks and Wet Bars

a. provide a designated accessible section of the counter with knee and toe space clearances **(Figure 84)**;
b. provide automatic faucet or lever-type controls that can be operated with one closed fist; and
c. ensure all pipes underneath sink are insulated or covered to protect users.

6.5.3 Kitchen Appliances

For kitchen appliances which include, but are not limited to ranges and cook tops, ovens, refrigerators and freezers:

a. locate on an accessible path of travel;
b. provide clear floor space for:
    i. forward approach of 915 mm wide by 1370 mm deep; and
    ii. side approach of 1525 mm wide by 915 mm deep; and
c. ensure all controls and operating mechanisms are mounted no higher than 1200 mm from floor **(Figure 84)**.

6.5.3.1 Ranges and Cook Tops

a. use appliance models where controls are located away from the burners;
b. provide a work surface on each side of the cook top and at the same height:
    i. width of 400 mm (minimum); and
    ii. ensure surface is heat resistant.

6.5.3.2 Ovens

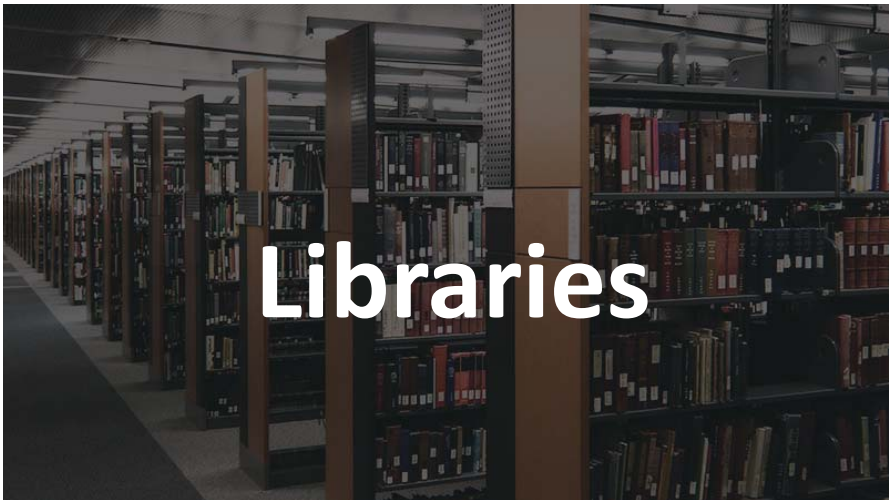
a. use appliance models where controls are located on the front panels of oven;
b. where ovens with side-hinged doors are provided:
    i. provide work surfaces with knee space below, adjacent to the latch side of oven door; and
    ii. incorporate a pull-out shelf below the oven; and
c. where ovens with bottom-hinged doors are provided:
    i. provide work surface on one side of the door.

6.5.3.3 Refrigerators and Freezers

a. ensure 50% of freezer space is reachable at 1200 mm (maximum) high above floor; and
b. provide clear floor space in front of refrigerators / freezers, positioned for parallel approach adjacent to refrigerator / freezer, with the centerline of the clear floor space offset by 610 mm (maximum) from the front face of the refrigerator / freezer.

Note

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.



Libraries

6.6

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 as required.

Reference

Sec. 2.10	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, Line-up and Queuing Areas

6.6.1 Design and Layout

a. provide a consistent accessible path of travel of at least 1200 mm wide throughout spaces for circulation;
b. provide turning diameter of 1675 mm in order to allow users of mobility aids to make a 180° turn;
c. where provided, ensure security gates have a clear width of 915 mm **(Figure 86)**;
d. provide at least one accessible service counter at circulation, information or self-service checkout areas;
e. where online catalogues or other workstations are provided, ensure at least 25% are accessible;
f. ensure lighting level is at least 200 lux (20 foot-candles), measured at floor level;
g. ensure acoustic quality is free of unnecessary background noise;
h. 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); and
i. ensure library staff are provided with disability awareness / sensitivity training.

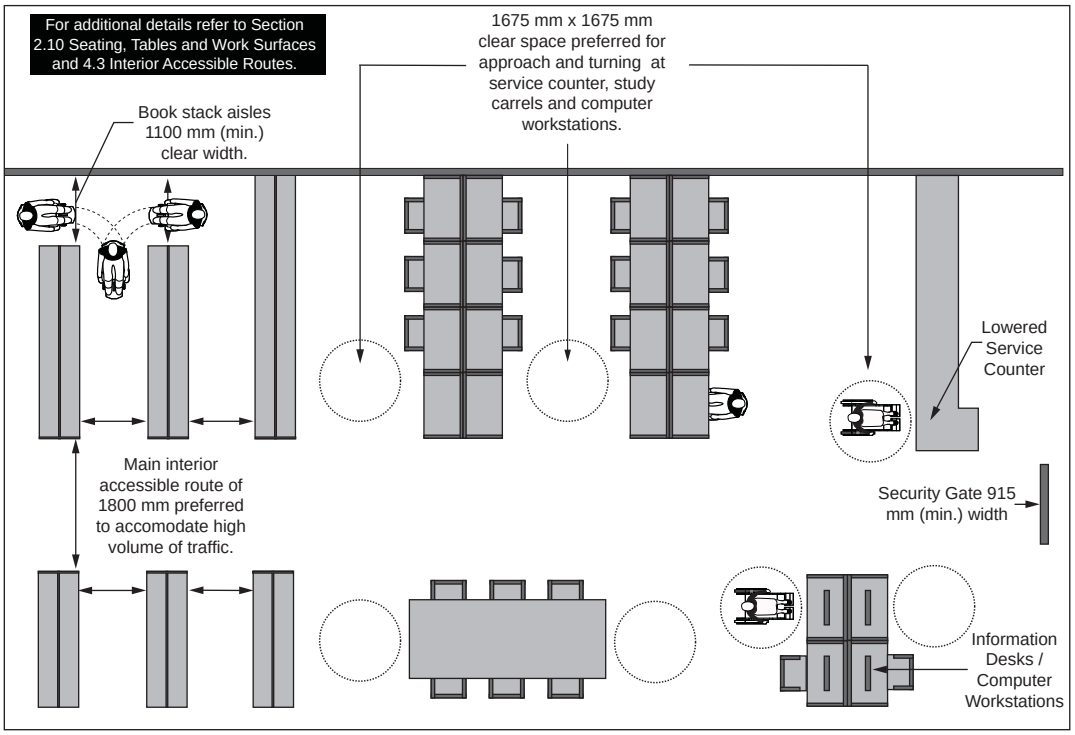


Figure 85: Library Design and Layout - Plan View

Best Practice

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.

Clear width of 1800 mm is preferred at main circulation routes in order to accommodate higher volumes of traffic.

Final Proposed AODA requires clear floor space of 2020 mm to allow users of mobility aids to make a 180° turn within the aisle configuration.

Refer to AODA Customer Service Standard, Ontario Regulation 429 / 07.

6.6.1.1 Book Drop Slots

a. locate on an accessible path of travel;
b. provide clear floor space in front of drop slot:
    i. 915 mm wide by 1370 mm deep for a forward approach; and
    ii. 1525 mm wide by 915 mm deep for a side approach;
c. ensure drop slot is colour contrasted with mounting surface;
d. locate slot between 900 and 1200 mm above the floor; and
e. ensure slot controls are usable with closed fist and operable with one hand.

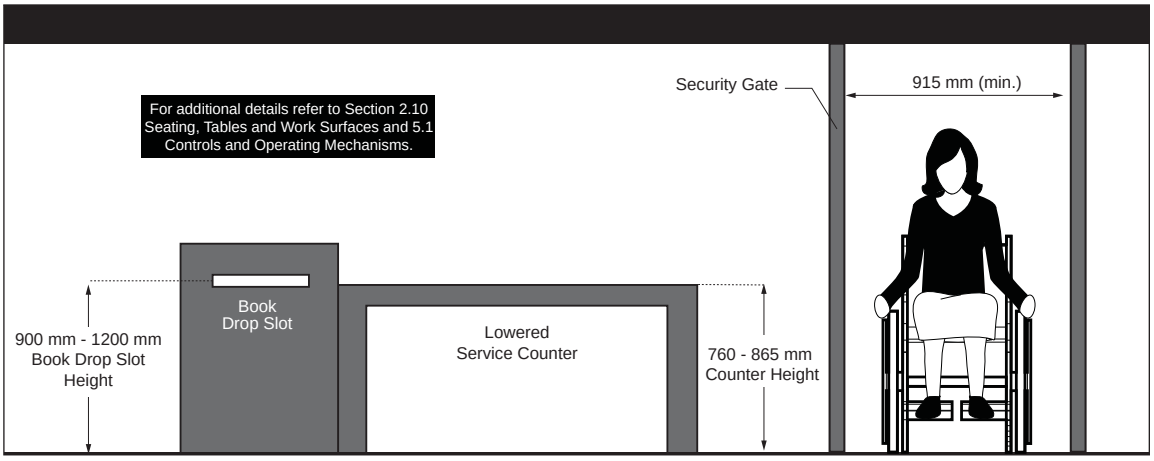


Figure 86: Library Security Gate, Service Counter and Book Drop Slot

Best Practice

Where more frequently used or referenced materials are provided, such as newspapers, periodicals, pamphlets and community brochures for example, a mounting height between 400 mm and 1200 mm high is required to accommodate the reach ranges of diverse users, including small children, seniors and users of mobility aids.

6.6.1.2 Book Stacks or Carousels

a. ensure accessible path of travel of at least 1200 mm between aisles;
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.

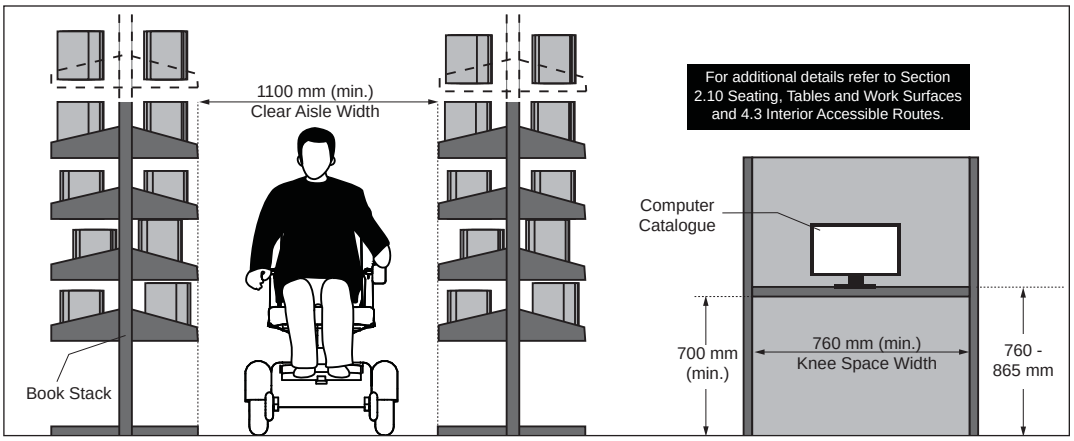


Figure 87: Book Stacks

6.6.1.3 Reading Lounges and Study Areas

a. provide a variety of seating options (e.g., flexible) for all users;
b. ensure furniture provided is colour contrasted with surroundings;
c. ensure all study tables, study carrels and work surfaces provide suitable knee and toe clearances with at least 10% of each surface type fully accessible; and
d. incorporate an electric outlet.

Best Practice

Ensure accessible workstations have height adjustable surface and are equipped with adaptive technology (e.g., flexible mouse control and scrolling feature). Ensure at least one accessible workstation has and specialized equipment for users with vision loss (e.g., screen reader software, scanner and CCTV magnifiers).

Recreational and Community Facilities

6.7

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 pool, 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. 2.10	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.

6.7.1.1 Change Rooms

a. provide a minimum of one accessible change room for each gender, with at least one accessible unisex change room to accommodate parents with children, companions or care givers of the opposite sex.

6.7.1.2 Viewing Area

a. provide level accessible seating spaces to accommodate users of mobility aids; and
b. integrate assistive listening systems or visual equipment, depending on the type of venue.

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 850 mm; and
c. provide level or beveled access to ice pads or skating rinks.

Best Practice

Refer to Sledge Hockey Accessibility Design Guidelines for Arenas: http://www.hockeycanada.ca/index.php/ci_id/54204/la_id/1.htm

6.7.3 Exercise and Fitness Facilities

a. ensure at least one type of each equipment or machine provides accessibility features; and
b. provide a clear floor space of 1675 mm by 1675 mm (minimum) in front or on one side of exercise equipment to allow transfer.

6.7.4 Aquatic Facilities

a. ensure pool deck surfaces are firm, stable, slip-resistant and have a matte finish;
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 1100 mm (minimum) wide;

Best Practice

Provide an area for mobility aids or assistive devices to be stored so they do not obstruct circulation around pool deck.

e. provide tactile walking surface indicators (TWSI) 610 mm wide, at 1000 mm from the edge of pool; and
f. provide colour 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).

Note

Extensions are not required on bottom landing as they can be a bumping hazard for swimmers.

6.7.4.1 Entry and Exit Point

Provide at least one accessible entry and exit point:

a. ensure entry and exit point is located away from any designated swimming lanes; and
b. for large pools with over 98 linear metres of pool wall, provide at least two accessible means of entry and exit.

6.7.4.2 Sloped Entry or Ramp

a. ensure running slope is no more than 1:20 (5%);
b. provide handrails, mounted between 865 mm and 965 mm high from surface, extending at top landing only;
c. ensure the clear width between handrails is 1100 mm (minimum);
d. provide top and bottom landing of at least 1675 mm by 1675 mm; and
e. extend sloped entry to a depth of no more than 760 mm below water level.

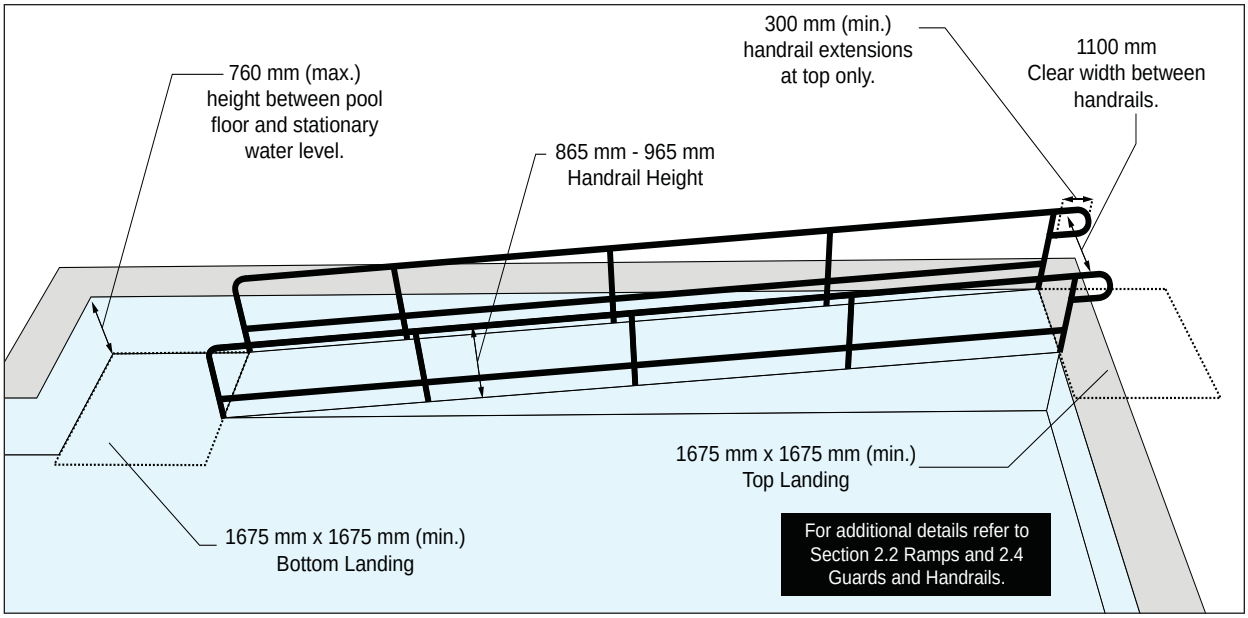


Figure 88: Sloped Entry or Ramp to Swimming Pool

6.7.4.3 Transfer Systems

Stepped transfer systems or transfer walls can be used as secondary entry and exit points to adapt existing inaccessible pools and to provide users with a range of options.

Best Practice

Where possible, minimize the height of transfer step which decreases the distance an individual is required to lift up or move down to reach the next step.

6.7.4.4 Transfer Platform

a. provide at head of each transfer system for a user to make a lateral transfer, with deck features as follows:
   i. provide clear deck space of 1675 mm by 1675 mm adjacent to transfer platform;
   ii. mount platform between 405 mm and 480 mm high above deck;
   iii. 480 mm (minimum) depth by 610 mm (minimum) width; and
   iv. slope 1:50 (2%) (maximum) at base of transfer platform;

6.7.4.5 Transfer Steps

a. tread depth between 355 mm and 430 mm;
b. tread clear width of 610 mm (minimum);
c. riser height of 180 mm (maximum);
d. provide nosings with rounded edges;
e. ensure transfer steps extend into the water 460 mm (minimum) below the stationary water as it allows staff or companion to provide assistance from a standing position in the water if required;
f. ensure transfer step surfaces are slip-resistant; and

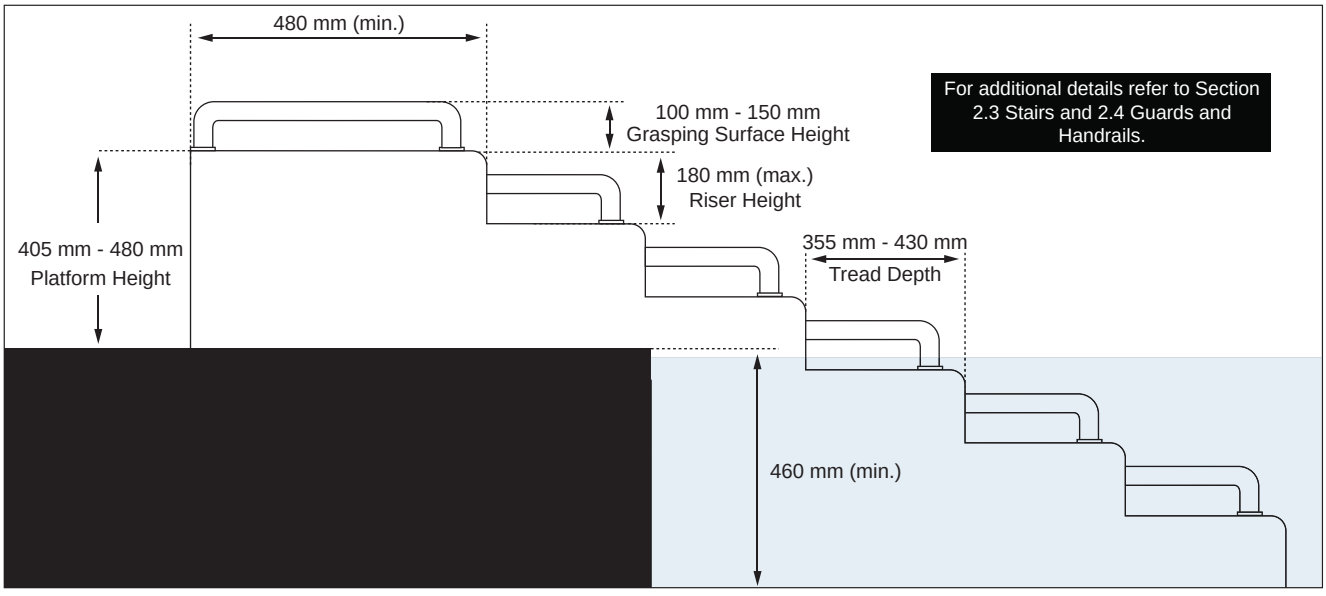


Figure 89: Transfer Stairs or Steps - Elevation View

g. provide continuous colour contrasted grab bars on each transfer step and on transfer platform:
   i. on at least one side of the transfer system;
   ii. locate on transfer platform without obstructing transfer;
   iii. where provided on each step, top of grasping surfaces between 100 mm and 150 mm above each step and transfer platform **(Figure 90)**; and
   iv. where continuous grab bar is provided, the top of the grasping surface should be between 100 mm and 150 mm above the step nosing and transfer step.

6.7.4.6 Transfer Lifts

a. locate pool lifts on an accessible path of travel and in shallow end, where water level does not exceed 1200 mm high;
b. position lift seat on deck at least 400 mm from edge of pool, measured from edge to pool to centerline of seat when lift is in the raised position;
c. ensure pool seat is firm with suitable padding, with a minimum width of 400 mm;
d. provide a clear deck space of 1675 mm by 1675 mm on the transfer side of the lift;
e. ensure controls and operating mechanisms are mounted no higher than 1200 mm from pool deck or water surface; and
f. ensure single user lifts have a minimum weight capacity of 136 kg.

Transfer lifts can be used as a means of assisted entry and exit point where an accessible entry / exit point can not be provided.

6.7.4.7 Transfer Walls

a. provide a clear deck space of 1675 mm by 1675 mm beside transfer walls;
b. provide transfer walls between 405 mm and 485 mm high from finished pool deck surface, 305 mm to 405 mm wide, and a minimum length of 1525 mm;
c. ensure width between grab bars or width between grab bar and edge of wall is 610 mm (minimum);
d. ensure wall surfaces and materials are non-abrasive with all edges rounded;
e. install at least one grab bar on each transfer wall provided, mounted perpendicular to wall and extending full length of wall; and
f. provide clearance of 100 mm to 150 mm between top of wall and grasping surface of grab bars.

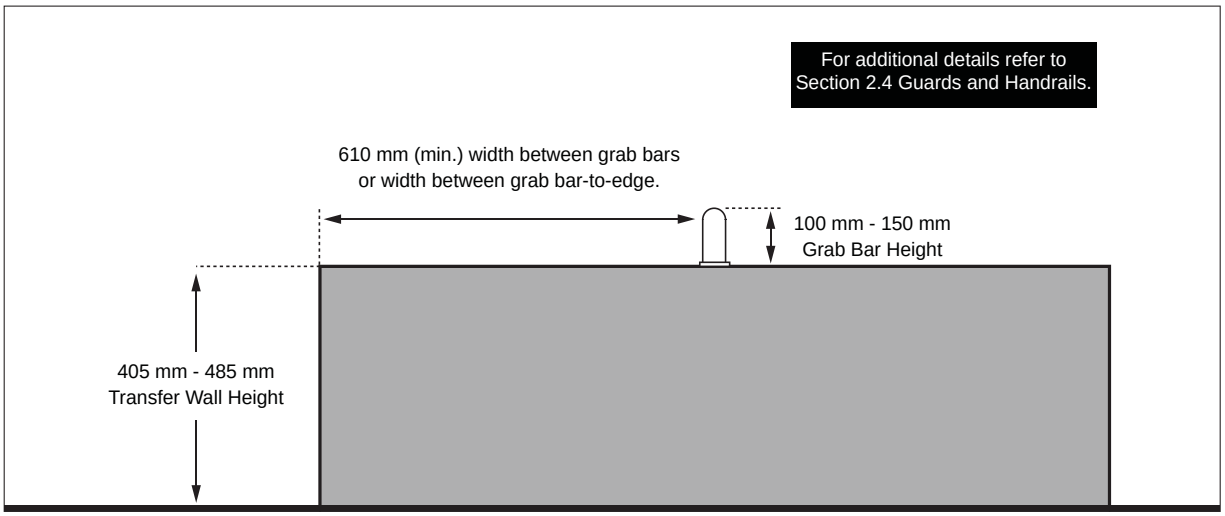


Figure 90: Transfer Wall - Elevation View

Change Rooms

6.8

Application

This Section applies to change rooms, which may also be referred to as dressing / locker rooms or fitting areas, used by public or staff. These spaces share common elements and design features. Typically, change rooms are provided in arenas, pools, fitness centres and related recreation / community centres.

Reference

Sec. 2.1	Ground and Floor Surfaces
Sec. 2.10	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

Best Practice

In recreational facilities, provide both individual and multiple occupancy accessible change rooms, recognizing these spaces typically have a high level of use by people of all ages and abilities – children, youth, adults and seniors.

6.8.1 Provision

Where change rooms are provided:

a. at least 50% but never less than two are required to be accessible;
b. locate on an accessible path of travel;
c. at least 10% or not less than one water closet stall is required to be accessible, where provided;
d. at least 10% or not less than one shower stall is required to be accessible, where provided; and
e. at least 10% or not less than one lavatory is required to be accessible, where provided.

Note

In Arenas, where a separate referee change room is provided, at least one of these change rooms is required to be accessible, on each level, where provided.

6.8.2 Design and Layout

a. provide a consistent accessible path of travel 1100 mm (minimum) wide throughout spaces for circulation;
b. ensure floor surface is slip-resistant and allows suitable drainage (e.g., if required for pools);
c. ensure at least 10% but not less than one of each type of amenity is accessible;
d. ensure illumination of 100 lux (10 foot-candles) (minimum), measured at floor level; and
e. where a building has a monitored security system, provide an emergency alarm device in change room:
    i. with signage that identifies its availability, including instructions in large print;
    ii. mount activation control / call mechanism no higher than 1200 mm from floor;
    iii. ensure alarm controls are colour contrasted with mounting surface;
    iv. connect device to a central switchboard that is monitored at all times; and
    v. provide both audible and visual signals that indicate “help is on the way”.

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 430 to 460 mm above finished floor to allow users of mobility aids to transfer;

b. ensure seat depth between 510 to 610 mm, with back support, unless seat surface is permanently positioned against a wall; and
c. ensure colour contrasted finishes are used to assist with distinguishing bench surfaces from surroundings (e.g., light on dark or dark on light colour contrast).

Best Practice

Support on both sides of bench is recommended and can include horizontal, vertical or L-shaped grab bar configurations.

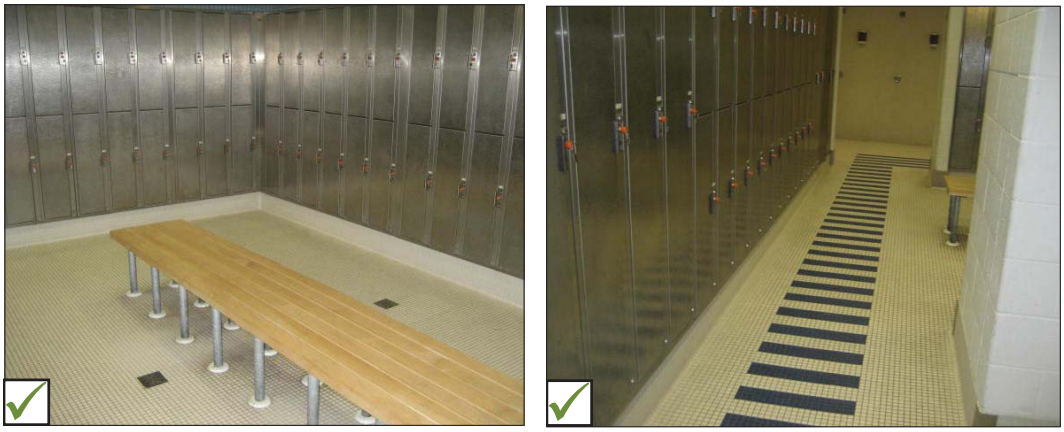
Note

Height of bench seat allows persons using mobility aids to transfer.

6.8.3.2 Lockers

Where lockers are provided:

a. ensure at least 10% of the total number of lockers but never less than one in a change room are accessible;
b. provide clear floor space in front of lockers of 915 mm wide at 1370 mm deep (minimum) to allow for a forward approach and 1525 mm wide by 915 mm deep (minimum) to allow a side approach;
c. mount bottom shelf between 455 mm and 1200 mm high from the floor; and
d. ensure locking mechanism is mounted between 915 mm and 1065 mm high above floor, with identification / number signage:
    i. mounted no higher than 1500 mm (centre);
    ii. with lettering or number print size between 13 mm and 19 mm high, with either raised or recessed lettering; and
    iii. ensure signage is colour-contrasted from background.



Consistent accessible path of travel, space for circulation and lockers mounted at different heights.

6.8.4 Universal Change Room

a. provide one for each cluster of men's / women's change rooms;
b. identify clearly with signage;
c. provide a turning diameter of 1675 mm (minimum) **(Figure 92a)**;
d. ensure floor surface is firm, level and slip-resistant;
e. provide an accessible entrance door, with power operator and locking mechanism;

f. provide locking mechanism that can be opened from the exterior during emergency conditions;
g. mount power operator control and locking mechanism between 1000 mm and 1100 mm above finished floor;
h. where door swings outwards, provide a door closer, spring hinges or gravity hinges, so that door closes automatically;
i. provide adult change bench 1830 mm long, 760 mm wide and mounted at 450 to 500 mm high;
j. provide L-shaped grab bars on the side, with vertical component, 150 mm (minimum) from front edge of seat and clearance of 150 mm (minimum) above the bench seat;
k. provide a horizontal grab bar, 1200 mm long, mounted between 750 mm and 850 mm high above the floor;
l. provide motion sensor for automatic illumination of interior; and
m. include full length mirror.

Best Practice

Universal Change Rooms can accommodate larger mobility aids and users with attendants / caregivers.

Final Proposed AODA Accessible Built Environment Standard requires a 2500 mm turning diameter inside universal change room.

Note

A universal change room can also be designed to include features of a universal toilet room.

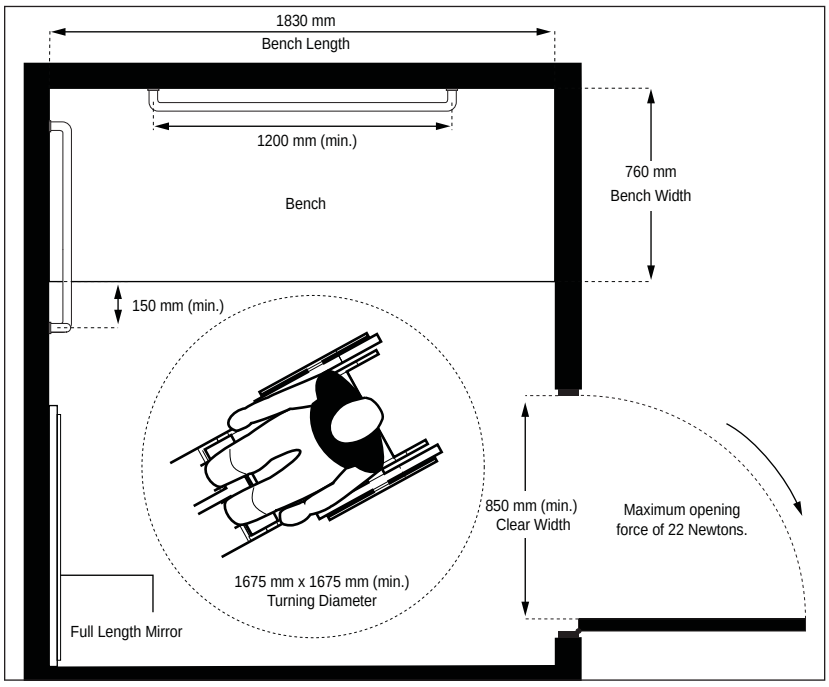


Figure 91a: Universal Change Room - Plan View

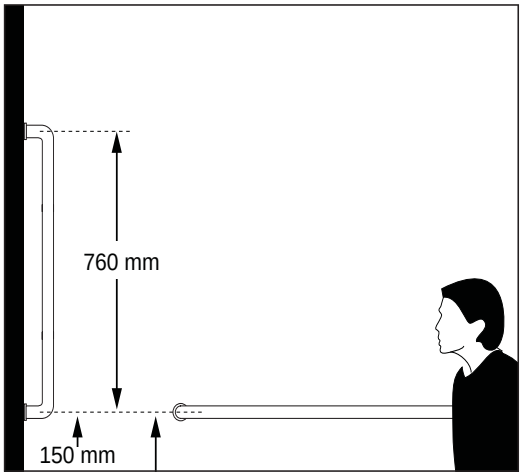


Figure 91b: Grab Bar Dimensions

Balconies and Terraces

6.9

Application

This section addresses spaces that may be used as exits and areas of refuge from public facilities, such as common-use balconies and terraces.

Reference

Sec. 2.1 Ground and Floor Surfaces

Sec. 2.4 Guards and Handrails

Sec. 3.3 Exterior Accessible Routes

Sec. 4.2 Doors and Doorways

Exception

This section does not address balconies and terraces within private residences.

6.9.1 Design and Layout

a. locate on an accessible path of travel;
b. ensure ground or floor surfaces are firm, slip-resistant with maximum gradient of 1:50 (2%) to permit drainage;
c. provide depth of 2000 mm (minimum);
d. ensure threshold is beveled at slope of 1:2 (50%) (maximum), where transition is between 6 to 13 mm; ensure door stops and door sweeps do not prevent maneuverability;
e. where doors open directly into a path of travel, provide cane detectable guards or other protective barriers located perpendicular to the door; and
f. where guards are provided, design to facilitate visibility from seated position.

Note

Where spacers for drainage are provided, on ground surface, ensure maximum width of 6 mm between each.

Guards at balconies and terraces may consist of vertical pickets or glass.

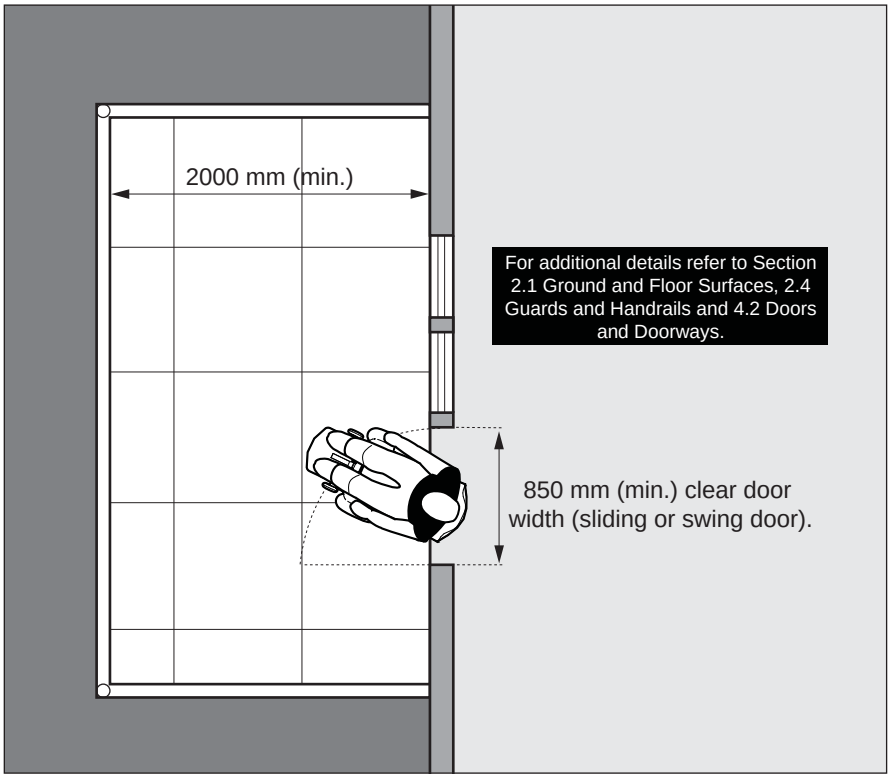


Figure 92: Balcony / Terrace - Plan View

Service Counters

6.10

Application

This section applies to service counters used by both the public and staff. Service counters may include, but are not limited to:

- reception desks;
- check-out stations;
- teller counters;
- security stations;
- information desks or kiosks; and
- food vendor counters.

Reference

Sec. 2.9	Public Telephones
Sec. 2.10	Seating, Tables and Work Surfaces
Sec. 4.3	Interior Accessible Routes
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 Design and Layout

a. locate on an accessible path of travel;
b. provide clear floor space in front of service counters of:
    i. 760 mm wide by 1370 mm deep to allow forward approach by users of mobility aids; and
    ii. 1525 mm wide by 915 mm deep to allow side approach by users of mobility aids;
c. ensure service counter surface is colour contrasted compared with adjacent surfaces to identify counter when approaching;
d. ensure lighting level is 150 lux (15 foot-candles) (average), measured at floor level; and
e. provide a lowered counter usable from seated position:
    i. with top surface mounted between 760 mm and 865 mm high above floor;
    ii. ensure a clear knee space under the counter of at least 500 mm deep by 760 mm wide by 700 mm high;
    iii. ensure a clear toe space under the counter of at least 600 mm deep by 760 mm wide by 350 mm high; and
    iv. ensure maximum forward reach of 635 mm deep across top.

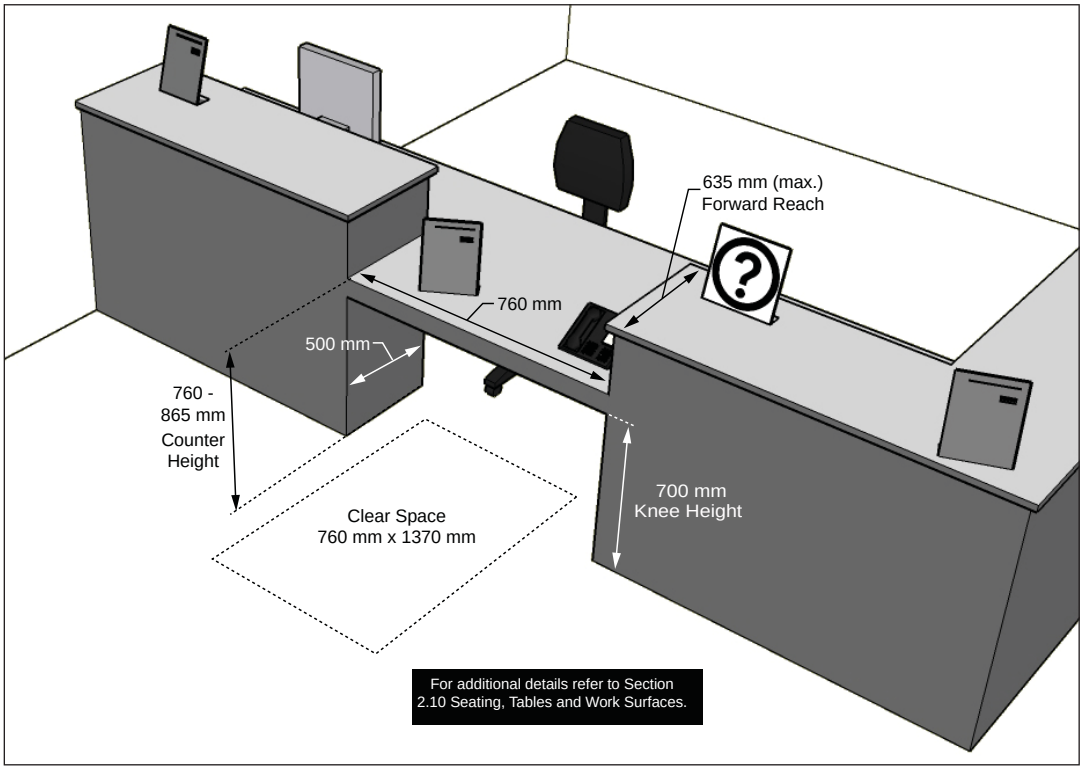


Figure 93: Service Counter

Best Practice

Provide clear floor space or ground surface with turning diameter of 1675 mm, to allow both side and front approaches by users of mobility aids, including larger wheeled mobility aids, such as powered scooters and wheelchairs.

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.

Ensure clear floor space, knee space and toe space is provided on each side of service counters for both public and staff use.

Ensure accessible service counters / desks are not used as storage space.

Best Practice

Provide disability awareness / sensitivity training for staff where communication systems are provided to ensure proper use and interaction with customers with disabilities.

6.10.2 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 at 1065 mm high (maximum) from floor level;
c. where no staff person is available, provide an information phone or call bell with information signage, with controls mounted at 1200 mm (maximum);
d. integrate TTY service or alternate devices for visitors who are Deaf, deafened or hard of hearing; and
e. 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.

6.10.3 Additional Resources

- Ministry of Community and Social Services: Accessible Standards for Customer Service: www.mcss.gov.on.ca/en/mcss/programs/accessibility/customerservice/
- Toronto Association of Business Improvement Areas “Missed Business”: www.toronto-bia.com/resources/accessibility/Missed_Business.pdf

Waiting, Line-up and Queuing Areas

6.11

Application

This section applies to all interior and exterior waiting, line-up and queuing areas, whether permanent or temporary.

Reference

Sec. 2.4	Guards and Handrails
Sec. 2.10	Seating, Tables and Work Surfaces
Sec. 4.1	Entrances
Sec. 4.3	Interior Accessible Routes
Sec. 5.8	Signage and Wayfinding

Best Practice

Where line-up guides are permanent and where there is a change in direction, directional indicators at floor level are recommended for users with vision loss.

Note

Use of rope is not recommended for queuing lines, as they are difficult to detect with a long cane and are unstable.

6.11.1 Design and Layout

a. locate on an accessible path of travel;
b. provide directional and informational signage to identify location of queuing area;
c. ensure clear width of 1100 mm (minimum) between guides;
d. provide clear floor space of 1675 mm wide by 1675 mm deep (minimum), where line-up guides change direction and where they begin and end;
e. ensure guides are cane-detectable, mounted at or below 680 mm from floor, with stable supports;
f. ensure colour contrast is provided between guide surfaces and surroundings (e.g., for enhanced visibility); and
g. ensure guides have a glare-free finish.

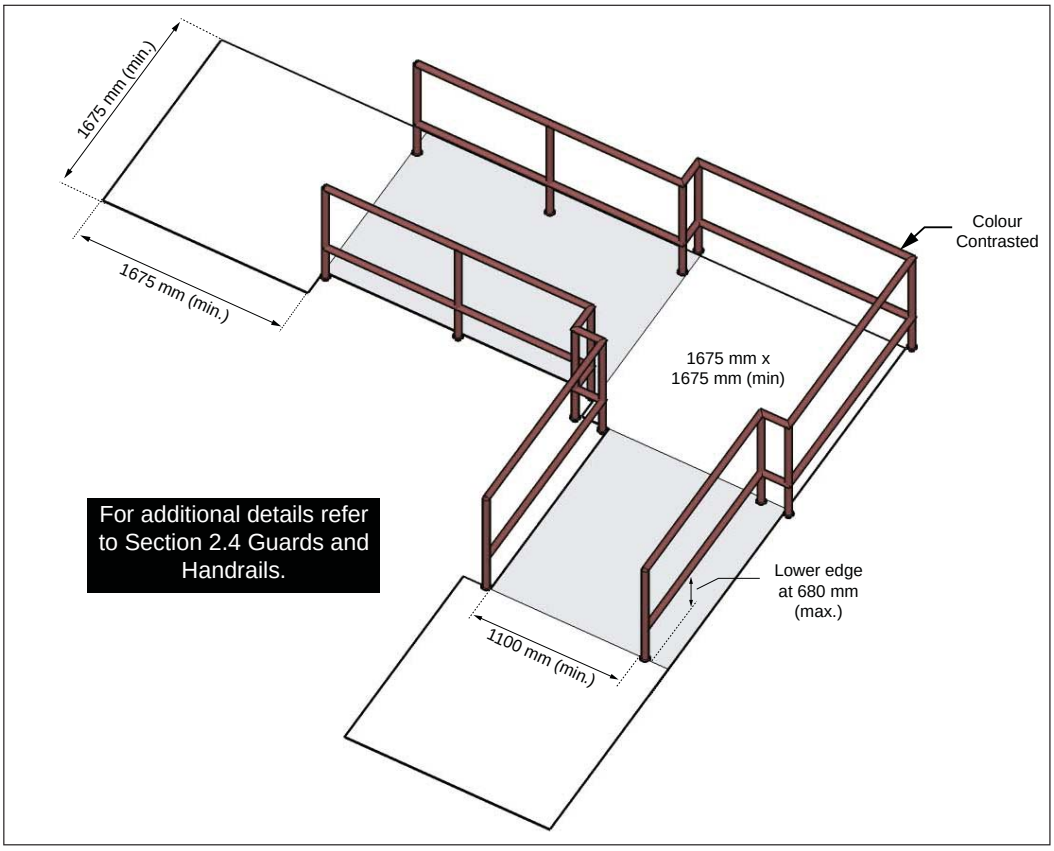


Figure 94: Waiting, Line-up and Queuing Areas

6.11.2 Seating

a. ensure 3%, minimum one (1), of the total seating spaces provided are accessible (e.g., clear floor space);
b. locate adjacent and connected to an accessible path of travel; and
c. ensure a variety of seating is provided for different users.

Elevated Platforms or Stages

6.12

Application

This section applies to elevated platforms or stages for both interior and exterior environments. 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. 2.7	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.

Best Practice

Lighting level of 200 lux (20 foot-candles) is recommended. This is beneficial for users who lip read or use Sign Language Interpretation.

Provide space for sign language interpreters and captioning on stages near speakers.

6.12.1 Design and Layout

a. locate on an accessible path of travel;
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. ensure lighting level is 100 lux (10 foot-candles) maximum, including provision of secondary task lighting sources that can be used as required; and
e. provide tactile walking surface indicators (TWSI):
    i. 610 mm from edge of elevated platform or stage, extending full length; and
    ii. depth of 610 mm (minimum).

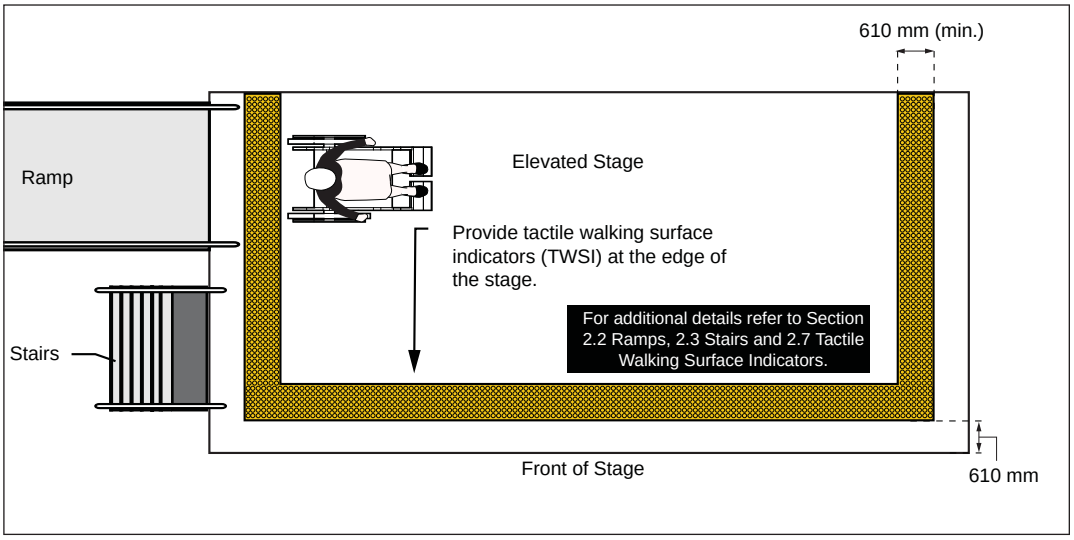


Figure 95: Elevated Platform or Stage - Plan View

Residential

6.13

Residential

This section is reserved for a future update of these Accessibility Design Standards.

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Picnic Areas

6.14

Application

This section applies to picnic areas which are typically provided for public facilities.

Reference

Sec. 2.6	Rest Area
Sec. 2.7	Tactile Walking Surface Indicators
Sec. 2.10	Seating, Tables and Work Surfaces
Sec. 3.3	Exterior Accessible Route
Sec. 4.5	Washrooms

Best Practice

Where picnic areas are provided, a minimum of 20% are required to be accessible.

6.14.1 Design and Layout

a. ensure minimum of 20% of tables and no fewer than one (1) are accessible;
b. locate on an accessible path of travel or trail;
c. ensure ground surface is firm, stable and no steeper than 1:50 (2%) for drainage;
d. provide directional signage at strategic locations to identify picnic area(s);
e. provide accessible picnic area furniture (e.g., tables and seating) with a variety of seating options and / or clear floor space for persons using mobility aids to transfer onto a seat;
f. provide a clear space of 2000 mm (minimum) from the edge of a fixed seat or other picnic area element, to the edge of the designated picnic surface;
g. where washrooms are provided, ensure accessible features (e.g., at least one universal toilet room, per cluster of regular washrooms); and
h. where heat generating elements (e.g., barbecue grills or fire pits) are provided, provide clear space on all sides with:
    i. width of 1500 mm (minimum); and
    ii. tactile walking surface indicators (TWSI) installed, 600 mm from the leading edge of the heat-generating element.

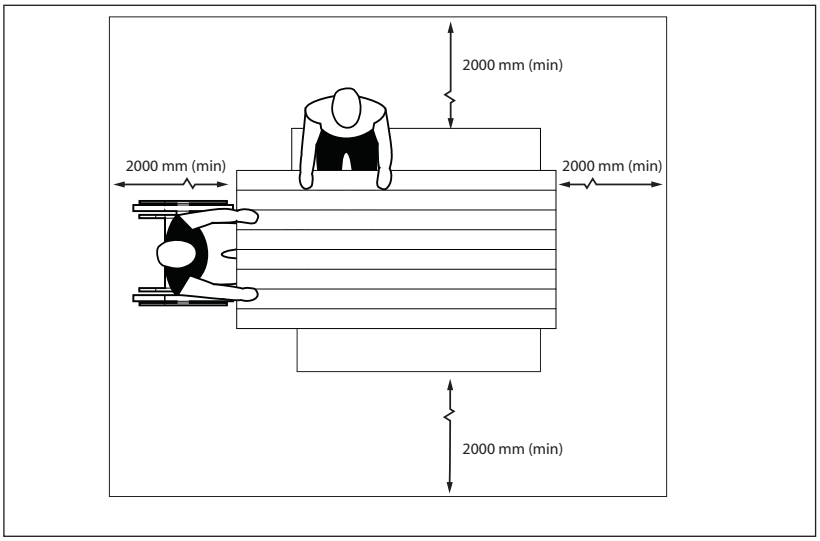

Figure 96a: Picnic Table Design and Features - Plan View

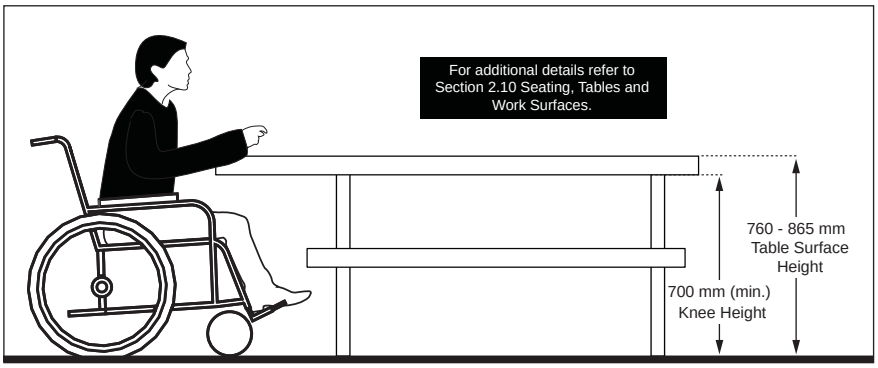

Figure 96b: Picnic Table Design and Features - Elevation View

Trails and Beach Access Routes

6.15

Application

This section applies to trails that are designed, designated or constructed as pedestrian routes for recreational use, for people travelling by foot or users of mobility aids.

As an example, trails include, but are not limited to:

- A trail through a forested park;
- a shared-use path; or
- a back country trail.

Trails are distinguished from regular exterior walkways and routes because they are not typically designed to provide an essential route to outdoor facilities and environments used daily.

Typical types of trails may include hiking, biking or trails used for nature / scenic tours.

This section also applies to beach access routes, including both permanent and temporary routes that can be removed for the winter months.

Note

Trails are not considered the same as exterior routes, paths and walkways. Trails do not include pathways such as public sidewalks or pathways between buildings.

Reference

Sec. 2.1	Ground and Floor Surfaces
Sec. 2.4	Guards and Handrails
Sec. 2.5	Overhanging and Protruding Objects
Sec. 3.3	Exterior Accessible Routes
Sec. 5.8	Signage and Wayfinding

Exception

Accessibility requirements in this section apply to recreational trails designated for pedestrian use, with the following exceptions, where compliance would:

- cause substantial harm to cultural, historic, religious or significant natural features or characteristics (e.g., environmentally sensitive areas);
- substantially change the intended experience provided;
- require construction methods or materials that are prohibited by federal, provincial or local legislation;
- be impractical due to physical terrain; or
- compromise volunteer activity (Note: This will ensure that volunteers can continue to build and maintain these parks and trails without having to perform work that is beyond their capacity).

Refer to AODA “Design of Public Spaces” Standard for further information on exceptions.

Best Practice

Trails with options for entry and exit at multiple trailheads typically can enhance accessibility when requirements of this section are integrated.

Note

A trailhead is a designated point of access that may contain a parking area, information kiosks, information signage, rest areas, washrooms, water fountains or other user amenities, which are typically reached by vehicular or pedestrian access.

Exception

Permanent design features, (e.g., bollards or decorative boulders) to be positioned to allow required clear width for users of mobility aids.

Note

Where tread width is minimal, ensure this occurs for the shortest distance possible.

6.15.1 Designated Trailheads

a. ensure designated trailheads with information signage are integrated as part of the trail design, at key entrance and exit points along the trail, intermediate areas on lengthy trails or decision points (e.g., changes in elevation or offers choice to go in multiple directions) where required. Typically, a case by case review and analysis is required, based on trail type, location and other conditions.

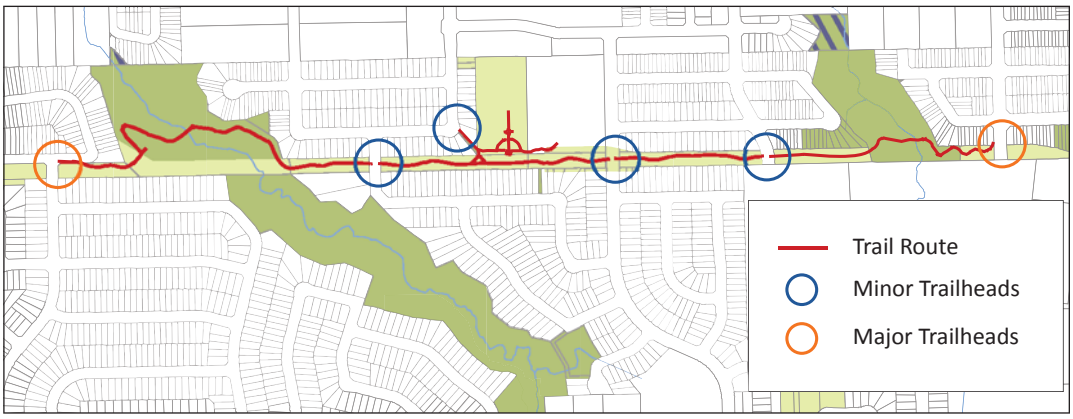

Figure 97: Example of Trail with Multiple Trailhead Options

6.15.2 Tread Clear Width and Height

a. provide 1500 mm (preferred); or
b. provide 1200 mm (minimum) which is permitted as a variance for locations with site constraints, with passing space of 1830 mm (minimum) wide by 1830 mm (minimum) long, at intervals of 50 m or less **(Figure 99)**;
c. provide 850 mm to 1000 mm clear opening at entrances (e.g., gate, bollard or other entrance design);
d. provide 2100 mm (minimum) clear head room above the trail; and
e. ensure no obstructions or projections along trail.

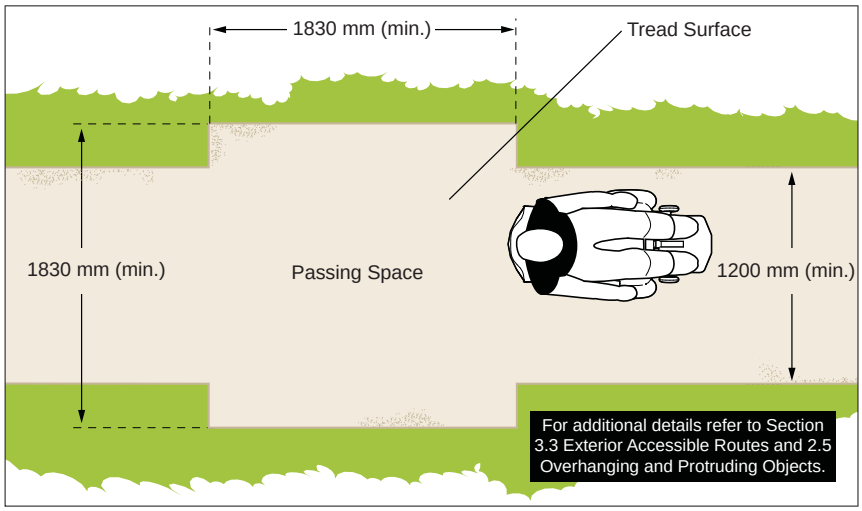

Figure 98: Tread Clear Width

6.15.3 Tread Running Slope

a. unless criteria for exception apply, ensure gradients are:
   i. 5% or less for any distance;
   ii. 5.1% to 8.33% for a maximum distance of 61 metres;
   iii. 8.34 to 10% for a maximum distance of 9 metres; and
   iv. 10 to 12% for a maximum distance of 3 metres; and
b. must be the minimum gradient permitted by the terrain.

Note

For detailed guidance on trail surface design and slope requirements for unique conditions, refer to "Ontario's Best Trails" resource document.

6.15.4 Tread Cross Slope

a. ensure gradient does not to exceed 1:20 (5%), unless criteria for exceptions are applicable; and
b. must be the minimum gradient permitted by the terrain.

Best Practice

Where running or cross slopes exceed 1:20 (5%), provide level rest areas, 1500 mm by 1500 mm (minimum), every 50 m.

6.15.5 Ramps

a. if provided, ensure maximum running slope of 1:10 (10%).

Note

Where exceptions allow a steeper gradient, the gradient must not exceed 1:10 (10%).

6.15.6 Tread Surface

a. ensure surface is firm, stable and slip-resistant;
b. provide bevel, with maximum slope of 1:2 (50%), where there is level change between 20 to 75 mm;
c. ensure that no openings are greater than 13 mm in any direction and that any elongated openings are oriented approximately perpendicular to the direction of travel;
d. ensure resistance to damage by normal weather conditions, with ability to sustain typical wear and tear between planned maintenance cycles; and
e. ensure type of surface used and expected conditions that may change over time are identified in information signage provided at trailhead.

Note

The life-cycle of different trail surfaces (e.g., concrete versus asphalt) typically impacts the level of maintenance that is required over time to ensure accessibility is monitored.

6.15.7 Edge Protection

a. provide where trails or related boardwalks / paths of travel are adjacent to water features or elevated areas;
b. ensure the top of the edge protection is 50 mm minimum above the trail surface;
c. ensure the design allows suitable drainage of tread surface; and
d. ensure colour or texture contrast is integrated to assist with identification.

Best Practice

Existing trails for which information has not been developed should be marked (e.g., temporary site signage) to indicate that the information is not yet available and the expected date it will be available.

Use multiple communication strategies to provide trail information, including on site (e.g., maps, trailhead kiosk or vertical signage), in alternate formats at key City locations, or online (e.g., City website or trail related websites, such as "Trail Explorer", www.trailexplorer.org).

Provide contact information at trailheads where the public can report any damages, safety hazards or vandalism on the trail.

Trail accessibility features should be assessed using the Universal Trail Assessment Process (UTAP).

Note

The placement of signage and information must be objective to allow users with or without disabilities to make an informed decision before using a trail. This recognizes varied conditions in trail environments but it also encourages the maximum use of trails.

Example of edge protection where there is a large elevation change or trail is adjacent to water feature.

6.15.8 Signage

a. ensure all regulatory, non-regulatory, information or directional signage is provided along trail;
b. provide trail information at strategic locations, including entrances, exits, decision points and trailheads, in order to objectively describe typical trail and tread conditions, including:
    i. length;
    ii. average and minimum tread width;
    iii. average and maximum running and cross-slopes;
    iv. surface type;
    v. extreme or unique conditions (e.g., steep slopes, obstacles or narrow widths); and
    vi. features and amenities along the trail
c. ensure signage is high colour-contrasted with its background and has the appearance of solid characters; and
d. provide the same information where other media is used to provide information about a trail, such as website and brochures.

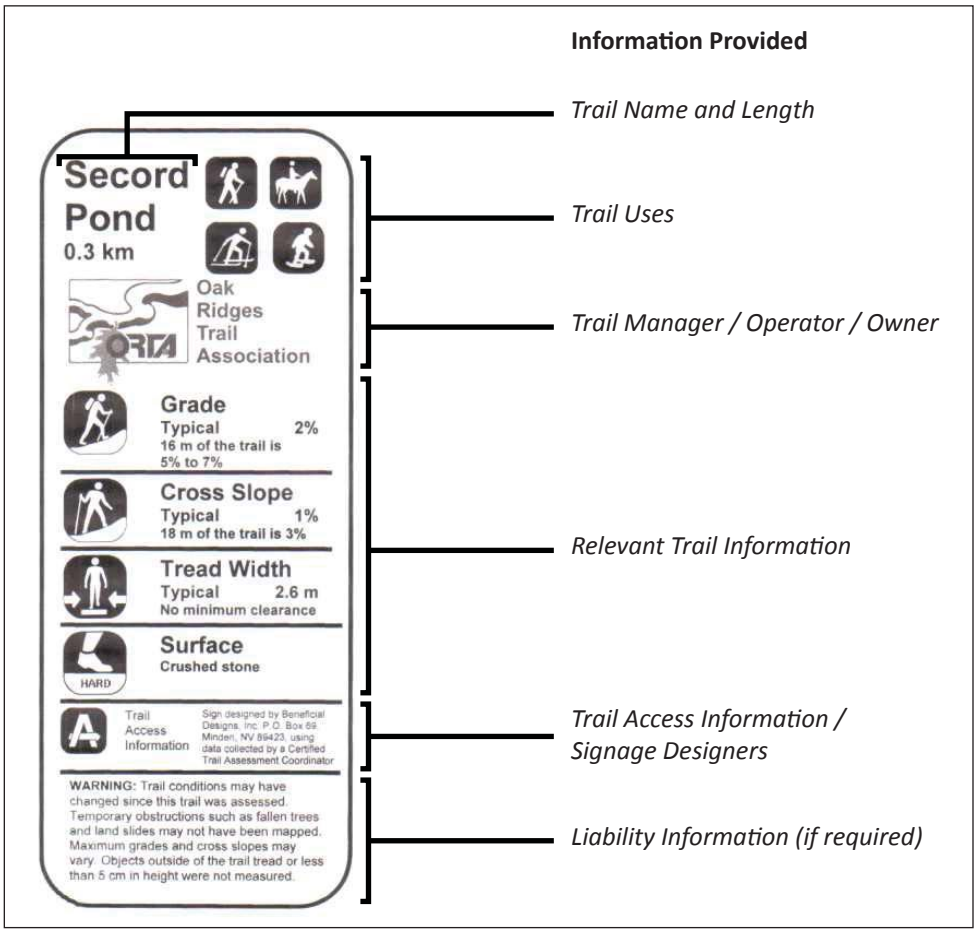

Figure 99: Example of Typical Universal Trail Assessment Process (UTAP) Signage

6.15.9 Beach Access Routes

a. provide sufficiently clear width to permit people using mobility aids to access the land portion of a beach where recreation normally occurs and turn around;
b. where the surface of the route is constructed (e.g., not natural), the surface must:
    i. have a 1:2 bevel at changes in level between 6 mm and 13 mm;
    ii. provide a cross slope of 1:50 (2%) (maximum);
    iii. provide a running slope between 1:10 (10%) and 1:12 (8.33%) at changes in level between 14 mm and 200 mm;
    iv. provide a ramp where changes in level are greater than 200 mm;
    v. ensure no gaps in the route larger than 13 mm with any elongated openings oriented perpendicular to the direction of travel;
c. ensure cross slope is minimum required for drainage;
d. ensure slope does not exceed 1:10 (10%) (maximum); and
e. provide a clear opening of 850 mm to 1000 mm at beach access route entrances.

6.15.10 Boardwalks

Where a recreational trail or beach access route is equipped with a boardwalk:

a. provide 1000 mm (minimum) clear width;
b. ensure no gaps in the route larger than 13 mm;
c. provide edge protection 50 mm high (minimum); and
d. provide a ramp where runnings slopes are greater than 1:20 (5%).

6.15.11 Consultation

Before developing new or redeveloping existing recreational trails ensure the City:

a. consults with the Accessibility Advisory Committee, the public, and persons with disabilities on:
    i. the slope of the trail and; and
    ii. the need for, location and design of rest areas, passing areas, viewing areas, and trail amenities.

Note

For more information about the UTAP tool kit and materials, visit:

http://www.beneficial-designs.com/trails/utap.html

6.15.12 Understanding the Universal Trail Assessment Process (UTAP)

The UTAP was developed by Beneficial Designs Inc. and is considered an objective method of documenting trail conditions and evaluating trails accessibility levels.

The UTAP method relies on systematically evaluating trail measurements and data collected by auditors. Auditors begin at a station point (e.g., trailhead) and mark subsequent station points along the trail, which define trail segments. Typically, station points occur where there is a change in the trail characteristics, such as at the beginning / end of a slope, at an intersection, or at a major feature. For each trail segment, key measurements (e.g., running slope, cross slope, surface, width and length of trail) are gathered using the “Segment Data Collection Sheet”.

After collection, the data is entered into the “Trailware” software, which formally evaluates the data based on the UTAP methodology and generates a Trail Access Information (TAI) report. This report can then be used to provide trail accessibility information to all users.

6.15.13 Additional Resources

- Ontario’s Best Trails: www.abilitiescentre.org/trails
- Trail Explorer: www.trailexplorer.org
- Universal Trail Assessment Process (UTAP): www.beneficialdesigns.com/trails/utap.html

Inclusive Playspaces

6.16

Application

This section applies to playspaces designed for children with varying disabilities. Playspaces can be located in a variety of public settings (e.g., parks, schools, childcare facilities or community / recreation centres). Playspaces typically require consideration for accessibility features related to:

- the number and types of play structures, equipment, elements and features provided;
- designated play areas surrounding the play structures; and
- site amenities and features surrounding the playspace.

Criteria provided in this section is intended to summarize key features for inclusive playspaces and reference to applicable standards. Detailed planning and design is required for provision of inclusive playspaces.

Reference

Sec. 2.3	Stairs
Sec. 2.4	Guards and Handrails
Sec. 2.8	Drinking Fountains
Sec. 3.1	Parking
Sec. 3.3	Exterior Accessible Routes
Sec. 4.5	Washrooms

Note

Inclusive playspaces ensure that children with disabilities have equal opportunities for peer interaction and development of socialization skills. They also provide an opportunity for parents with disabilities to interact with their children.

Note

The scope of this Section does not address requirements related to the area surrounding or beyond the playspace, including, but not limited to, parking lots, washrooms, drinking fountains, and recreation facilities.

6.16.1 Design Requirements

Ensure the design of inclusive playspaces and features meet the requirements of CAN / CSA Z614-07, Annex H, including:

a. H.1 Scope;
b. H.2 Reference Publications;
c. H.3 Reference Definitions;
d. H.4 Playspaces (e.g., ground-level and elevated play components, accessible routes, transfer systems, play components and ground surfaces); and
e. other applicable sections of these Standards, as required.

6.16.2 Consultation Requirements

Before developing new or redeveloping existing outdoor playspaces:

a. ensure that consultation takes place with the Accessibility Advisory Committee, the public, and persons with disabilities on the needs of children and caregivers with disabilities.

Playspaces are typically designed for different age groups as they provide age-specific play components.

6.16.3 Summary of Key Design Considerations

The information in the following sub-sections is intended to highlight key considerations only, not detailed specifications. Refer to requirements of the Canadian Standards Association (CAN / CSA Z614-07, Annex H). This information is not intended to duplicate existing standards, but is focused on presenting best practices for accessibility.

6.16.4 Entry and Exit Points

Provide a minimum of two accessible ingress / egress points:

a. located as part of an adjacent accessible route;
b. ensure accessible connections provided to playspace surfaces are firm, stable and slip-resistant, as well as providing direct connections to individual play components; and
c. provide clear width of 1500 mm.

Note

A level approach, gradually sloped route or ramps are examples of types of accessible entry / exit points to a playspace.

An example of accessible entry / exit point and accessible route leading to elevated play components.

6.16.5 Accessible Routes

a. provide at least one accessible route within the boundary of the playspace, connecting ground-level play components and elevated play components, including entry and exit points of the play components;
b. ensure clear width of accessible route is 1500 mm; and
c. ensure the maximum slope gradient for an accessible route connecting ground-level play components within the boundary of a playspace is 1:16.

Note

Refer to exceptions and detailed requirements, including gradient, clear width and reduced width criteria, identified in CSA, Annex H.

6.16.6 Playspace Ground Surface

a. provide accessible surface materials for playspaces include poured-in-place rubber, accessible turf, rubber mats and tiles, bonded and engineered wood fibers and shredded rubber, as example.

Examples of inclusive playspace ground surfaces. From left to right: poured-in-place rubber, engineered wood fibre and shredded rubber.

6.16.7 Play Components

a. provide colour / tonal contrast of at least 70%, between a play component and its surroundings.

6.16.8 Elevated Play Components

An elevated play component is a play component reached from above or below grade, and is part of a composite play structure.

a. ensure at least 50% of elevated play components are connected to a ramp or transfer system, or as identified in **Table 9**.

Table 9: Percentage of Elevated Play Components Required to be Connected to Transfer Systems

Total Number of Elevated Play Components	Total Percentage of Elevated Play Components Requiring Ramp or Transfer System
20 or more	50% minimum (25% ramp and ramp or transfer system 25%)
Less than 20	50% minimum (ramp or transfer system)

Examples of elevated play components.

6.16.9 Transfer Systems

a. provide transfer systems to connect elevated or ground-level play components (e.g., transfer steps or platforms);
b. ensure transfer steps are used where movement is intended from a transfer platform to a level that provides elevated play components on an accessible route; and
c. provide a minimum clear floor space of 915 mm wide by 1370 mm long adjacent to all transfer locations onto play components.

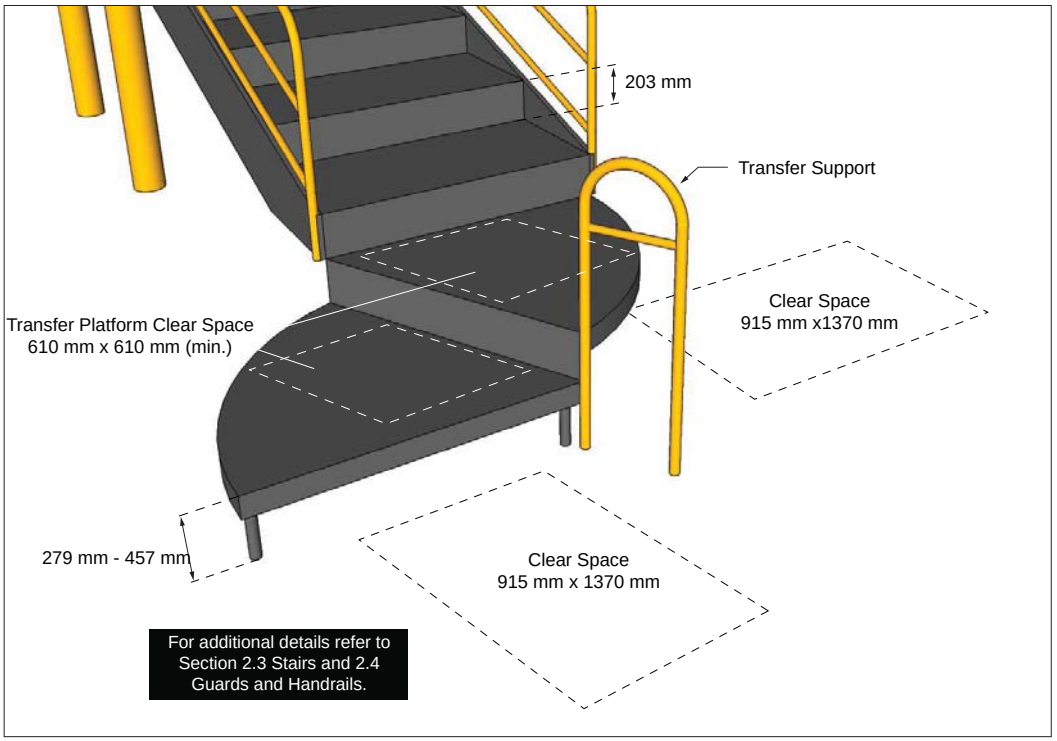

Figure 100: Transfer Systems

6.16.10 Turning Space

a. provide clear turning space for mobility aids at 1675 mm preferred or 1500 mm (minimum) diameter or, on the same level as play components.

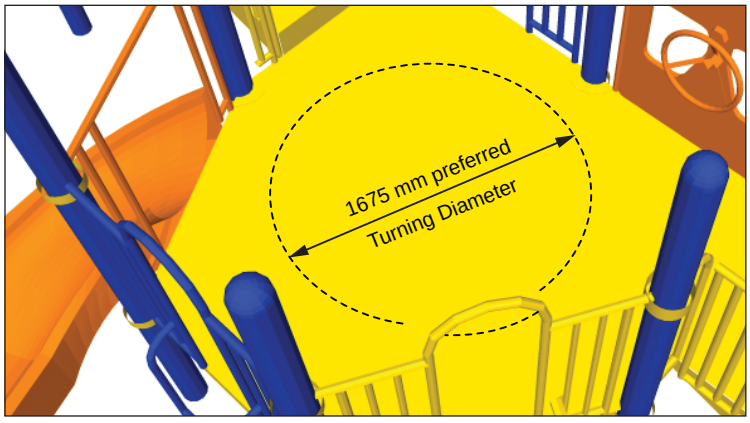

Figure 101: Turning Space - Plan View

Best Practice

The distance covered by the transfer steps should be the shortest possible.

Note

A transfer platform is used where transfer is intended from a wheelchair or other mobility aid. Refer to detailed requirements, including means of support and, surface sizes for example, identified in CSA, Annex H.

Examples of supports include a rope loop, a loop-type handle, a slot in the edge of a flat horizontal or vertical member, poles or bars, or solid D-shaped rings affixed to corner posts.

6.16.11 Ground-Level Play Components

A ground level play component is a play component that is approached and exited at the ground level.

a. provide the ratio of ground-level play component alternatives, compared to elevated play components, as identified in **Table 10**.

Table 10: Ground-Level Play Component Alternatives to Elevated Play Components

Number of Elevated Play Components provided	Minimum number of ground-level play components required to be on an accessible route	Minimum number of different types of ground-level play components required to be on accessible route
1	n/a	n/a
2 to 4	1	1
5 to 7	2	2
8 to 10	3	3
11 to 13	4	3
14 to 16	5	3
17 to 19	6	3
20 to 22	7	4
23 to 25	8	4
More than 25	8 plus 1 for each additional 3 over 25, or fraction thereof	5

Examples of ground-level play components.

Trail Design Checklist

6.17

Application

The information in this Checklist is intended to assist City Staff when reviewing key design options for providing accessible trails for users of all ages and abilities.

A formal accessibility assessment of trails, using the Universal Trail Assessment Process (UTAP), is recommended for existing trails. The UTAP is considered an objective method of documenting trail conditions and evaluating accessibility levels for diverse users and is recognized as a current best practice.

Best Practice

The most significant barrier to trail accessibility is a lack of information about trail conditions. Providing such information will encourage participation and increase independence in trail use. Information on conditions affecting accessibility (e.g., grade, surface and obstacles) will also allow enhanced planning for assistance if required.

Note

Refer to Section 6.15 Trails, of the City's Accessibility Design Standards for detailed information on accessibility criteria for trails and the UTAP.

Trail Design Checklist

The following checklist is intended for use by City Staff when reviewing key accessibility design options for new trails. Additional considerations are required for reviewing existing trails (e.g., applying the UTAP), recognizing the variety of trail types and environments that are available.

General Information

Reference (I.D # / Park Name): _____

Reviewed By

Name: _____

Title / Position: _____

Department: _____

1. Key Trail Features			
1.1 Trailhead			
1.1.1	Are there multiple **TRAILHEADS** to allow accessible entry and exit points along the trail? Identify number and location of trailheads.	Y N	Comments:
1.1.2(a)	Are **EXTERIOR AMENITIES** provided at trailheads (e.g., parking, accessible routes, public washrooms, etc.)? If yes, identify provisions and location of amenities	Y N	Comments:
1.1.2(b)	If provided, have the City's amenities been reviewed for compliance with relevant sections of the Ottawa Accessibility Design Standards?	Y N N/A	Comments:
1.2 Tread Clear Width			
1.2.1	Is the **CLEAR WIDTH** of the trail tread at least 1200 mm (1500 mm preferred)? Note: Ensure placement of vegetation and permanent design features (e.g., bollards and decorative boulders) does not create obstruction and projection along accessible route.	Y N	Comments:
1.2.2	Where there are changes in level along the trail, are edge protection provided and edges clearly marked (e.g., colour and texture contrast) to assist identification?	Y N N/A	Comments:
1.3 Tread Running Slope (Grade)			
1.3.1(a)	Is the **RUNNING SLOPE** no more than 1:20 (5%)? Note: Slopes of up to 10% may be used when required by topography or to maintain natural drainage patterns.	Y N	Comments:
1.3.1(b)	If no, have permitted exceptions as per the Ottawa Accessibility Design Standards been identified as part of design process with accessible trail segments provided wherever feasible? Note: Each trail is unique and may require detailed review to determine impacts topography may have related to meeting accessible slope requirements.	Y N N/A	Comments:
1.3.2	Are **LEVEL AREAS** 1500 mm by 1500 mm provided on or adjacent to the trail at intervals of 50 metres (maximum), whenever a trail tread slope (running or cross slope) exceeds 5%?	Y N N/A	Comments:

1.4 Tread Cross Slope			
1.4.1	Is the **CROSS SLOPE** no more than 1:20 (5%), consistently throughout trail?	Y N	Comments:
1.5 Tread Surface			
1.5.1	Is the **TRAIL SURFACE** firm and stable? Identify type of surface and material used to meet accessibility compliance.	Y N	Comments:

2. Signage

2.1(a)	Is there suitable **TRAIL NAME / IDENTIFICATION SIGNAGE** at trailheads and key access points, with accessibility features (e.g., large print, use of strong colour contrast and pictograms) identifying amenities that may be available?	Y N	Comments:
2.1(b)	If yes, does the signage include the following information: Trail Name Trail Map Trail Length Tread Surface Type Tread Running Slope (Grade) Tread Cross Slope Trail Manager / Operator <u>Note</u>: Identifying this information in accessible format allows users of all ages and abilities to make an informed decision about using the trail. Refer to Section 6.18 Trails for more information on the UTAP.	Y N Y N Y N Y N Y N Y N Y N	Comments:
2.2	Have any barriers to accessibility (e.g., steep slopes or difficult topography) along the trail been identified on signage at strategic locations where possible? If yes, describe information to provide on signage.	Y N	Comments:

3. Additional Considerations

3.1	Does the trail reflect the varied needs of users, the varied natural landscape and the shared desire for varied trail experience? <u>Note</u>: Design should incorporate both sustainable and universal design features to ensure the widest range of users can benefit.	Y N	Comments:
3.2	Does the trail offer areas for rest and options for shorter or longer on-trail adventures so that trail users can choose the experience that most suit them?	Y N	Comments:
3.3	Is there a policy in place to address maintenance issues for trails designed for year-round use (e.g., removal of debris and obstructions on trail surfaces etc)?	Y N	Comments:
3.4	If reviewing the design of an existing trail and related environments, has the UTAP been implemented to address the needs of diverse trail users of all ages and abilities?	Y N	Comments:

Inclusive Playspace Design Guide

6.18

Application

This design guide is provided for use by City Staff when designing new inclusive playspaces.

How to Use the Guide

The **Inclusive Playspace Design Guide** identifies key design features for planning and designing an inclusive playspace, with a focus on the main accessibility features that are required to meet the diverse needs of users of all ages and abilities, including children using the playspace as well as caregivers and companions. Additional design considerations may also be required related to the broader playspace context and environment, including requirements for the site and park where the playspace is located (e.g., seating and viewing areas for parents or caregivers). Overall, this Guide is intended to welcome and address the needs of children, caregivers and users of all age and abilities, emphasizing opportunities for inclusive and shared play.

Reference

Sec. 2.2	Ramps
Sec. 2.3	Stairs
Sec. 2.4	Guards and Handrails
Sec. 2.8	Drinking Fountains
Sec. 2.10	Seating, Tables and Work Surfaces
Sec. 3.1	Parking
Sec. 3.2	Passenger Loading Zones
Sec. 3.3	Exterior Accessible Routes
Sec. 4.5	Washrooms
Sec. 5.7	Lighting

Note

This guide does not provide all requirements for designing an inclusive playspace; only key requirements are provided. Refer to Section 6.16, Playspaces of these Standards and CAN / CSA Z614-07 (Annex H), for more details.

Designing an Inclusive Playspace

Key Features of an Inclusive Playspace

Playspaces that offer children of all abilities the opportunity to interact and play with each other are essential to promoting diversity and inclusion.

The following diagram identifies important best practices when designing an inclusive playspace.

Key features are numbered on the diagram and described in this guide.

1. Accessible Routes
2. Entry / Exit Points
3. Ground Surfaces
4. Elevated Play Components
5. Ground-Level Play Components

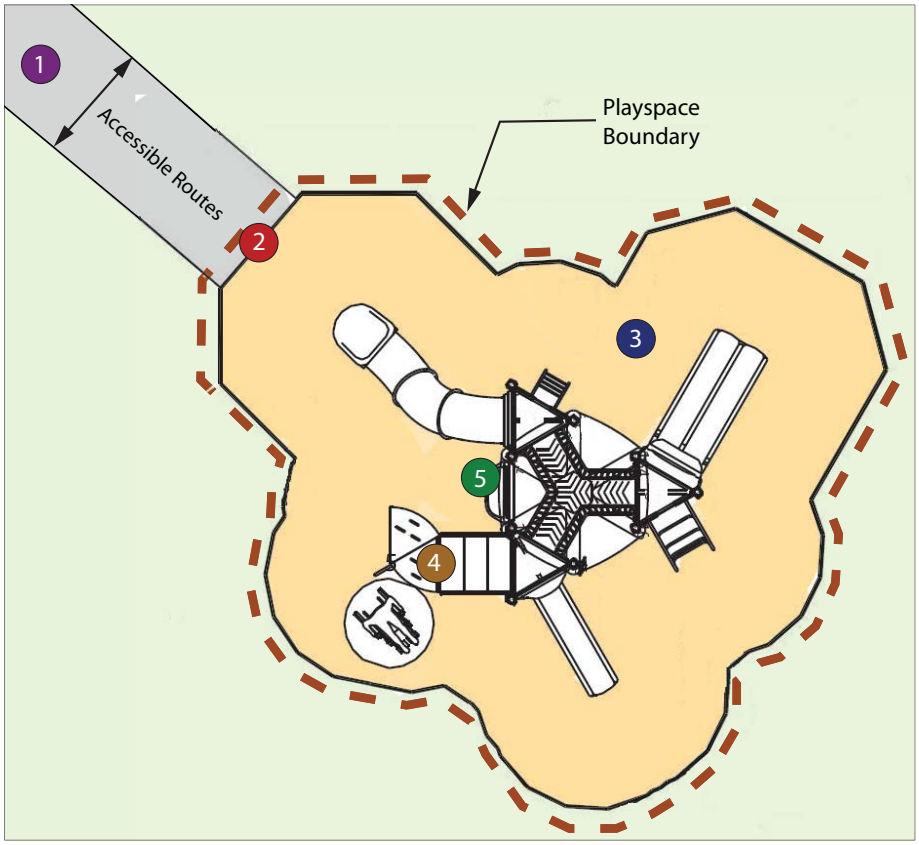

Diagram of Typical Playspace Features

Note: Playspaces come in different shapes and sizes. This diagram is provided for guidance and reference only.

Summary of 5 Key Features

The following provides a summary of the 5 key design features when designing an inclusive playspace.

1 Accessible Routes

Accessible route(s) connecting to the playspace boundary from the parking lot, sidewalk and other adjacent routes and buildings are essential for easy access to the playspace.

Key Consideration:
Is there at least one accessible route leading to the playspace?

Accessible route connecting to playspace.

Accessible route connecting to playspace.

2 Entry / Exit Points

Entry / exit points from an accessible route along the boundary of the playspace for users of mobility aids to access play components, where there is a change in level.

Key Consideration:
Is there at least one entry / exit point (2 or more preferred) into the playspace?


Playspace is at-grade with accessible route.


Curb ramp into playspace where there is a level change between accessible route and playspace.

3 Ground Surfaces

Surfacing is a key component in designing safe and accessible playspaces. **Accessible surfaces** include poured-in place rubber, shredded rubber and engineered wood fiber.

Key Consideration:
Is the playspace ground surface accessible?


Shredded Rubber.


Engineered Wood Fiber.


Poured-in-Place Rubber.

4 Elevated Play Components

An **elevated play component** is a play component reached from above or below grade, and is part of a composite play structure.

Note: Ramps, transfer systems, steps, stand alone slides, decks and roofs are not considered elevated play components.

Two common methods for providing access to elevated play components are **ramps** and **transfer systems.**

Key Consideration:
Are at least 50% of elevated play components located on an accessible route and connected by a ramp or transfer system?


Example of play structure with elevated play components.


Example of play structure with elevated play components.


Ramp connected to elevated play components.


Transfer system to connect elevated play components.

5 Ground-Level Play Components

A **ground-level play component** is a play component that is approached and exited at ground level.

When designing an inclusive playspace, one of the design features is the provision of play components along the accessible routes for users who may not be able to access components located on elevated platforms.

The number and variety of ground-level play components required to be an accessible route is determined by the number of elevated play components provided in the playspace.

Key Consideration:
Are the minimum number and variety of ground-level play components required to be along an accessible route provided?

Note: A calculator to determine the required number and variety of ground-level and elevated play components required in an inclusive playspace is provided in CAN / CSA Z614-07, (Annex H) and can be adapted by the City.

Example of a ground-level play component.

Example of an accessible swing.

STEP-BY-STEP GUIDE ON APPLYING ANNEX H

Step-by-Step Guide

The following step-by-step guide has been provided to assist in evaluating a playspace for meeting the minimum requirements of Annex H. The guide has been arranged in two steps and provides spaces to fill in numeric values of play components for evaluating a specific playspace design.

Step 1) Total # Of Elevated Play Components =

Assess Present Situation	
Total # Of Components Along Accessible Route (answer = item "A")	Variety Of Play Types Along Accessible Route (answer = item "X")
Assess What Is Needed (from Table H.1)	
Min. # Of Ground Level Components Required Along Accessible Route (answer = item "B")	Variety Of Different Play Types Required Along Accessible Route (answer = item "Y")
How To Get There	
Total # Of Components To Be Added (item "B" minus item "A")	Total Variety Of Play Types To Be Added (item "Y" minus item "X")

*A negative number in the either bottom box means that there is more than the minimum number already on s te

Step 2) Assess Access to Elevated Components

Total # of Elevated Components =

- If 20 or more components then ramps to 25% and ramp or transfer to an additional 25%
- If 19 or fewer components than transfer system or ramp to 50% of components

CAN / CSA Z614-07 (Annex H) Play Component Calculator.

Additional Considerations

Directions to be provided to play equipment supplier when selecting play equipment:

1. Provide age range and number of children using playspace;
2. Describe the vision for the proposed playspace. Provide a Design Program which outlines the goals and objectives for the play space;
3. Describe the site context - what is around the play area and how it will be used;
4. Provide a budget for the equipment, keeping in mind costs for landscaping and natural features;
5. Follow CAN / CSA Z614-07, Annex H accessibility standards and Section 6.16 Playspaces; and
6. Emphasize equipment should fit into site plan, not vice versa.

Source: Adapted from "*Let's Play: Creating Accessible Playspaces: A Tool Kit for School-Based Groups", Rick Hansen Foundation.*

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Inclusive Playspace Checklist

6.19

Application

The information in this Checklist is intended to assist with reviewing key design options for providing inclusive playspaces. Information in this checklist may be updated based on new design standards identified during implementation.

Use this Checklist when reviewing individual areas of each playspace, depending on the overall layout, features and type of equipment that is provided.

Note

Refer to Sections 6.16 Inclusive Playspaces and 6.18 Inclusive Playspace Design Guide of the City's Accessibility Design Standards and CAN / CSA Z614-07 (Annex H) for detailed information and accessibility criteria when designing a new inclusive playspace.

Inclusive Playspace Checklist

The following checklist is intended for use by City Staff when reviewing key design options for inclusive playspace. The items in this Checklist are colour coded to match the information in Section 6.19 Inclusive Playspace Design Guide.

General Information

Reference (I.D # / Park Name):_____

Playspace Type: Junior | Senior | Adventure | Combination | Water Features

Identify Total Number of Play Areas or Zones:_____

Reviewed By

Name: _____

Title / Position: _____

Department: _____

1. Key Design Consideration			
1.1 Accessible Routes			
1.1.1	Is there at least one (1) **ACCESSIBLE ROUTE** within the boundary of the playspace?	Y N	Comments:
1.2 Entry / Exit Points			
1.2.1	Is there at least one (1) **ENTRY / EXIT POINT** to the playspace (2 or more preferred) connected to an accessible route?	Y N	Comments:
1.3 Ground Surfaces			
1.3.1	Is the playspace **GROUND SURFACE** accessible (specify surface type)? If yes, does ground surface material meet CSA standards for equipment and layout?	Y N	Comments:
1.4 Elevated Play Components			
1.4.1	Are at least 50% of **ELEVATED PLAY COMPONENTS** located on an accessible route and connected by a **RAMP** or **TRANSFER SYSTEM**?	Y N	Comments:
1.5 Ground-Level Play Components			
1.5.1	Are the minimum number and variety of **GROUND-LEVEL PLAY COMPONENTS** required to be along an accessible route provided? Note: Use calculator identified in CAN / CSA Z614-07 (Annex H) to determine required number of play components.	Y N	Comments:
2. Additional Considerations			
2.1	Are **CREATIVE FEATURES** that stimulate the senses provided (Examples include: water and sand features, scent gardens, wind chimes and winding pathways)? If yes, provide a description, including site context and amenities provided adjacent to playspace or in the park.	Y N	Comments:
2.2	Does play equipment foster inclusive play and allow children of all ages and abilities to be part of the action / activities? If yes, describe.	Y N	Comments:
2.3	Does **PLAYSPACE EQUIPMENT** meet accessibility requirements of CAN / CSA Z614-07 (Annex H)? Note: A detailed assessment may be required.	Y N	Comments:

Public Transit

6.20

Application

This section applies to the design of facilities designated as a Transitway within the City of Ottawa. These design criteria are intended to conform to applicable accessibility standards and codes of practice. Designers shall verify all accessibility design criteria based on a review of the applicable standards and codes, and the most stringent criteria shall take precedence. Where feasible, more stringent requirements can be used as required and the designer shall review the potential impacts with OC Transpo.

Additional design criteria for bus stops and shelters are currently being developed by OC Transpo and will be incorporated into this document at a later date.

Reference

Sec. 2.2	Ramps
Sec. 2.3	Stairs
Sec. 2.4	Guards and Handrails
Sec. 2.6	Rest Area
Sec. 2.7	Tactile Walking Surface Indicators
Sec. 2.10	Seating, Tables and Work Surfaces
Sec. 3.3	Exterior Accessible Route
Sec. 4.2	Doors and Doorways
Sec. 4.4	Elevating Devices
Sec. 5.1	Controls and Operating Mechanisms

6.20.1 Transitway Station Requirements

6.20.1.1 Access to Buildings and Platforms

a. ensure station buildings and platforms are interconnected to adjacent streets, sidewalks and pathways by a barrier free path of travel.
b. provide at least one fully accessible route to each station platform (i.e. inbound and outbound platform).
c. ensure the slope of concrete platforms is uniform and where parallel to the Transitway, maintains the same slope and direction with a maximum average cross-slope of 1:50 (2%).

6.20.1.2 Elevators

a. where the primary means of vertical circulation in a station is mechanical (e.g. elevator), ensure redundancy is incorporated into the design, where feasible, by means of an additional elevator or exterior walkways to provide an alternative means of vertical access in the event of elevator outages or maintenance; and
b. ensure all passenger elevators or lifts comply with the guidelines outlined in:
    i. CAN / CSA B44-07: Safety Code for Elevators and Escalators (Appendix E); and
    ii. CAN/CSA B355-09: Lifts for Persons with Physical Disabilities.

6.20.1.3 General Accessibility Criteria and Design Parameters

Accessible Routes

a. ensure minimum clear width of 1800 mm for sidewalks and accessible exterior paths;
b. ensure minimum clear width of 1100 mm (1200 mm preferable) for interior accessible routes;
c. ensure ground and floor surfaces are firm, stable and slip-resistant;
d. ensure a maximum running slope gradient of 1:20 (5%) and a maximum cross slope gradient of 1:50 (2%);
e. ensure that joints between surfaces are no wider than 6 mm and that no opening along the path of travel (e.g. gratings) is greater than 13 mm, in one direction; and
f. mount operable items, such as emergency callboxes and shelter heating controls, at a maximum height of 1200 mm.

Doors and Doorways

a. provide door opening of a minimum clear width of 850 mm (915 mm preferable);
b. ensure maximum threshold height is 13 mm with tapered edges;
c. ensure maximum door opening force of 38 Newtons for exterior hinged

doors and 22 Newtons for interior hinged doors;

d. ensure minimum height of transparent vision panels in doors is 900 mm from floor, and that panels are 75 mm minimum in width and 250 mm from latch side of door; and
e. provide controls for door operators: with a face dimension of no less than 150 mm incorporating the International Symbol for Accessibility; and mounted at a height of 1000 to 1100 mm from the ground or floor surface.

Ramps

a. provide minimum clear ramp width of 1100 mm;
b. ensure maximum ramp gradient of 1:15;
c. ensure minimum dimensions of landings at the top and bottom of ramps are 1675 mm by 1675 mm;
d. where overall length of ramp exceeds 9000 mm, provide intermediate landings; and
e. provide a tactile walking surface indicator at the top landing.

Guards and Handrails

a. mount handrails at a height of 865 mm (minimum) to 965 mm (maximum), measured from leading edge of stair treads or from top of ramp surface;
b. ensure handrails are continuous with grasping surface, uninterrupted by mounting brackets, newel posts or any other construction elements;
c. provide outside diameter of no less than 30 mm and not more than 40 mm for circular cross-section, which is preferred;
d. provide clearance of 50 mm (minimum) between grasping surface and any adjacent surface; increase to 65 mm for a rough adjacent surface;
e. mount stair handrails on both sides of stairs, and ensure colour contrast is provided between handrails and mounting surfaces for improved visibility;
f. provide an intermediate handrail where stairs or ramps are more than 2000 mm wide, with a maximum of 1650 mm between handrails; and
g. ensure that handrails extend horizontally 300 mm at top and bottom landings and are designed to return to the guard/rail, wall or floor install to resist a maximum of 0.9 kN/m lateral force and a uniform load of 0.7KN/m.

Stairs

a. ensure uniform riser heights and tread depths;
b. provide riser height of 125 mm to 175 mm, and tread depth of 280 mm to 355 mm;
c. provide horizontal marking strips on stair nosings; and
d. provide tactile walking surface indicators: at the top of stairs, at a distance of one tread depth back from stairs, and with surface depth of 600 to 650 mm, extending the full length of the stairs.

Public Telephones

a. where public telephones are present, equip at least one public telephone with a text telephone device (TTY).

6.20.2 Transitway Shelters

a. locate on uniform concrete pads approximately at the same elevation as the sidewalk, walkway or accessible route;
b. provide minimum 1200 mm clearance around at least two sides of the shelter, including the landing pad side;
c. provide a clear view of oncoming traffic;
d. incorporate sufficiently clear floor space to accommodate a person using a wheelchair or scooter;
e. ensure all ground and floor surfaces are firm, stable and slip-resistant;
f. provide at least one seat with backrest and armrests, and a seat height between 450 mm and 500 mm;
g. have an unobstructed clear floor area of 1500 mm by 1500 mm within the perimeter of the shelter;
h. where no door is provided, have a clear opening at least 920 mm wide; and
i. ensure all glazed panels surrounding station shelters incorporate decals and other safety features, including:
    i. a horizontal row of red decals or a continuous stripe, minimum 50 mm wide, mounted with its centre line at a height of 1350 mm to 1500 mm from the floor or ground;
    ii. where decals are used, locate at a maximum of 150 mm from center to center;
    iii. ensure decals used are 50 mm square or round, and/or of a special design (e.g., a logo) provided the solid portion of the decals provides high colour contrast and is easy to identify by persons with vision loss;
    iv. where etched or patterned glass is used, provide decals or a stripe of highly contrasting colour;
    v. where frameless glass panels are used, identify exposed edges with a vertical molding of high colour contrast, applied to cap the end glass panel.

6.20.3 Transitway Platforms

a. provide a firm, stable and slip-resistant surface, and have its grade with no slope steeper than 1:50 (2%);
b. ensure each loading position intended for persons using mobility devices, provides a clear length of 2400 mm, measured perpendicular to the curb

or vehicular route edge and a clear width of at least 1500 mm, measured parallel to the vehicular route;

c. provide coloured concrete with a stamped pattern placed in a recess, 600 to 650 mm in width and colour-contrasted with its surroundings, along the front edge behind the steel facing for the full length of the platform;
d. provide tactile walking surface indicator, composed of truncated domes, at:
    i. unprotected drop-off edge (i.e., transit platform) where the change of elevation is greater than 250 mm and the slope is steeper than the ratio of 1:3 (33.3%);
    ii. at curb ramps; and
    iii. an entry into a vehicular route or area where no curbs, or other elements separate it from the pedestrian route of travel such as traffic islands and pedestrian crosswalks;
e. ensure the tactile walking surface indicator has a detectable tactile warning strip of 600 to 650 mm minimum width across the full length of the drop-off; and
f. ensure lighting levels at all platforms are at least 100 lux.

6.20.4 Transitway Seating

a. provide a seat height between 450 mm and 500 mm from the ground;
b. provide armrests and backrests;
c. ensure benches are colour contrasted with surroundings to enhance visibility; and
d. ensure benches or seats are set back from the route of travel in order to accommodate a person using a wheelchair, service animal, stroller, walker, etc.

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Appendices

7.0

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Glossary

7.1

Term	Definition
Access Aisle	Refers to an accessible and safe pedestrian space or route used for loading and unloading from vehicle, as well as safe travel to and from designated accessible parking spaces to 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 the use of mobility aids or assistive devices. Can also refer to services, practices and programs.
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.
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. Accommodating an individual's needs through differential treatment must be achieved in a manner that maximizes integration and dignity.
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.
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 that typically increase 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 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 (or Rescue Assistance)	A safe holding area which 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 on 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 which 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, infrared and radio frequency systems are types of listening systems which are appropriate for various applications. Refer to Induction Loop or Infrared Assistive Listening Systems.

7.1 Glossary of Terms

Term	Definition
Audible Signals	Signals which 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).
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 of 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 which 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.
Change Room	See Dressing Room.
Circulation Route or Path	An exterior or interior pedestrian way used for traveling from one place to another.
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
Colour Contrast	Colour contrast is calculated in percent between foreground and background (e.g., light color on dark background). Light reflectance value (LRV) is a relative term used to describe how well a surface reflects light. A LRV of at least 70% is considered to provide a suitable level of colour contrast and it is determined using a scientific formula.
Common Use	Refers to those interior and exterior rooms, spaces or elements that are made available for regular 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 and Systems	Devices that enable or enhance the ability of people to receive or transmit information, usually electronically, for communication.
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 that 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.
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.
Dressing Room	Home or visiting team locker rooms that are not for the general public, but dedicated to the group using the playing areas (e.g., hockey arena, soccer field or basketball court). Generally contains showers, benches and washroom amenities.
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.
Elevator Lobby	The waiting area in front of an elevator.

Term	Definition
Entrance	An access point into a building or portion of a building or facility used for the purpose of entering. An entrance includes the approach, the vertical access leading to the entrance platform, the entrance door, landing area, vestibules (if provided), the entry door or gate, and the hardware of the entry door or gate. The principal or main entrance of a building or facility is the door through which most people typically enter (e.g., highest level of use).
Exit	The part of a means of egress, including doorways, that 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.
Flare 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)	Refer 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 that is calculated by dividing the vertical change in elevation by the horizontal distance covered.
Guard	Protective barrier to prevent accidental falls at openings in floors and at the open sides of stairs, landings, balconies, mezzanines and ramps. Handrail supports often act as guards.
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.
Illumination	The combined amount and intensity of lighting provided, measured in foot-candles or lux.
Kilonewton (kN)	Equals 1000 Newtons.
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 necessary. 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.
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.
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.

Term	Definition
Newtons (N)	The amount of force needed to move 1 kilogram of an object 1 meter per second squared.
Operable Control	The part of equipment or appliances that is used to insert or withdraw objects, to activate or deactivate, or to adjust the equipment or appliance (e.g., a coin slot, pushbutton 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.
Passenger Loading Zone	Designated and signed area used for loading and unloading of passengers into or out of a waiting vehicle.
Pedestrian Access	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 a control. The door also remains in the “open” position for a set period of time to allow safe passage. See Automatic Door.
Public Entrance	An entrance that is not a service entrance or a restricted entrance.
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 Ottawa.
Ramp	A walking surface with a running slope steeper than 1:20.
Running Slope	The slope that is parallel to the direction of travel expressed as a ratio of rise to run. Opposite of cross-slope.
Service Counter	A raised surface on which business is transacted. Service counters can be compromised 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.
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 clear, 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.
Slip-Resistant	A surface that provides sufficient frictional counterforce to the forces exerted in walking to permit safe ambulation.
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 travelling 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.
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.
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.
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 which convey one aspect of the work.
Transfer Space	An unobstructed area adjacent to a fixture or furniture, allowing the positioning of a mobility aid to assist users with transferring to the fixture or furniture.
TTY, Teletypewriter or Text Telephone	TTY is the abbreviation for "teletypewriter" and refers to a means of electronic communication between deaf people or deaf and hearing people using interactive, text-based communication. Used in conjunction with a telephone, this device transmits and received typewritten messages using coded signals across the standard telephone network. The term TTY also refers to devices known as "text telephones" and TDD's.
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).

Term	Definition
Universal Trail Assessment Process or UTAP	An objective method of documenting trail conditions for universal access. The UTAP: - documents actual trail conditions; - enhances user safety through accurate information about trail conditions; - increases access for people of all abilities; - identifies maintenance needs; - creates accessibility information; - enhances environmental protection; - facilitates trail planning and budgeting; - enables informed choice of trails based on interests and abilities; - inventories trails and facilities; and - documents patterns of trail use.
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 of the signs.
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 which allows people to see through to the other side without opening the door.
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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Exterior Maintenance Checklist

7.4

Application

The following checklist is designed for use by City Staff for conducting regular reviews of maintenance issues that may impact on accessibility.

Exterior Maintenance Checklist

A regular maintenance schedule should be identified by the City (e.g., daily, weekly, monthly etc.), based on departmental responsibilities.

1. Signage *(Ref. Section 5.8 Signage and Wayfinding)* — *This section does not apply* ☐

Item	Requirements	Compliance	Accessibility Issues	Location Reference
1	Are site and facility signage (e.g., facility name and street address) clearly visible from the street and sidewalk and kept free of obstructions?	Y N N/A		
2	Where provided, is signage (e.g., directional, identification signage) throughout exterior maintained and clearly visible?	Y N N/A		
3	Is signage properly illuminated to ensure legibility?	Y N N/A		
4	Is signage provided to identify amenities (e.g., public telephone) and is it clearly visible?	Y N N/A		

2. Accessible Parking Spaces and Passenger Loading Zones
(Ref. Section 3.1 Parking and 3.2 Passenger Loading Zones) — *This section does not apply* ☐

Item	Requirements	Compliance	Accessibility Issues	Location Reference
5	Is the proper use of designated accessible parking spaces by drivers with disabilities (e.g., with valid permits displayed) enforced?	Y N N/A		
6	Are parking spaces, including access aisles, kept clear of obstacles and other obstructions (e.g., garbage, gravel / grit, snow and ice). **NOTE**: Ensure the entire area of the parking space is maintained during winter when snow and ice is on the ground.	Y N N/A		
7	Is the parking surface in good condition (e.g., free of disrepair such as cracks, heaving, uneven surfaces, potholes)?	Y N N/A		
8	Are pavement markings provided at parking spaces legible?	Y N N/A		

2. Accessible Parking Spaces and Passenger Loading Zones *continued* *(Ref. Section 3.1 Parking and 3.2 Passenger Loading Zones)*			*This section does not apply* ☐	
Item	**Requirements**	**Compliance**	**Accessibility Issues**	**Location Reference**
9	Is vertical signage provided at designated accessible parking spaces clearly visible and in good condition?	Y N N/A		
10	Where provided, are curb ramps kept free of obstructions (e.g., gravel / grit, snow and ice)?	Y N N/A		
11	Are accessible routes from parking spaces leading to facility entrance clearly marked and free of obstructions?	Y N N/A		
12	Is vertical signage provided at designated passenger loading zones clearly visible and in good condition?	Y N N/A		

3. Exterior Accessible Routes *(Ref. Section 3.3 Exterior Accessible Routes)*			*This section does not apply* ☐	
Item	**Requirements**	**Compliance**	**Accessibility Issues**	**Location Reference**
13	Are accessible routes kept free of obstructions (e.g., garbage, street furniture, snow / ice)? **NOTE**: Ensure the width of exterior accessible routes is maintained during winter when snow is on the ground.	Y N N/A		
14	Are accessible routes in good condition (e.g., free of disrepair such as cracks, heaving, settling, which cause uneven surfaces and potential tripping hazards)?	Y N N/A		
15	Where provided, are curb ramps kept free of obstructions (e.g., gravel / grit, snow and ice)?	Y N N/A		
16	Are trees and other vegetation maintained (e.g., trimmed) to ensure that an overhead projection of 2100 mm is provided throughout exterior?	Y N N/A		

4. Lighting *(Ref. Section 5.7 Lighting)*			*This section does not apply* ☐	
Item	**Requirements**	**Compliance**	**Accessibility Issues**	**Location Reference**
17	Are all accessible routes, designated accessible parking spaces and passenger loading zones properly illuminated?	Y N N/A		

Notes:

Interior Maintenance Checklist

7.5

Application

The following checklist is recommended as a starting point for City Staff when conducting maintenance audits of interior environments.

Interior Maintenance Checklist

A regular maintenance schedule should be identified by the City to address the requirements identified within this checklist (e.g., daily, weekly, monthly etc.).

1. Facility Entrance *(Ref. Section 4.1 Entrances)*			*This section does not apply* ☐	
Item	**Requirements**	**Compliance**	**Accessibility Issues**	**Location Reference**
1.1	Are power door operators in good working condition?	Y N N/A		
1.2	Is building directory signage (including maps / floor plans) kept up to date?	Y N N/A		

2. Accessible Parking Spaces (where provided in parking garage, underground parking) *(Ref. Section 3.1 Parking)*			*This section does not apply* ☐	
Item	**Requirements**	**Compliance**	**Accessibility Issues**	**Location Reference**
2.1	Is the proper use of designated accessible parking spaces by drivers with disabilities (e.g., with valid permits displayed) enforced at all times?	Y N N/A		
2.2	Are parking spaces, including access aisles, kept clear of obstacles and other obstructions (e.g., garbage)?	Y N N/A		
2.3	Is the parking surface, including access aisles, in good condition (e.g., free of disrepair such as cracks, heaving, uneven surfaces, potholes)?	Y N N/A		
2.4	Are pavement markings provided in good condition?	Y N N/A		
2.5	Is vertical signage provided at designated accessible parking spaces clearly visible and in good condition?	Y N N/A		
2.6	Where provided, are curb ramps kept free of obstructions?	Y N N/A		
2.7	Are accessible routes from parking spaces leading to facility entrance clearly marked and free of obstructions?	Y N N/A		

3. Interior Accessible Routes *(Ref. Section 4.3 Interior Accessible Routes)*				*This section does not apply* ☐
Item	**Requirements**	**Compliance**	**Accessibility Issues**	**Location Reference**
3.1	Is the width of accessible routes maintained to ensure easy maneuverability for users of mobility aids?	Y N N/A		
3.2	Are routine inspections undertaken to ensure junctions between different flooring materials do not become worn or uneven and present potential tripping hazards?	Y N N/A		
3.3	Are floor surfaces routinely inspected to ensure glare issues are reduced?	Y N N/A		
3.4	Are suitable cleaning products used to ensure polished floors are not slippery when wet and / or cause glare?	Y N N/A		
3.5	Where applicable, are overhead projections no lower than 2100 mm?	Y N N/A		
3.6	Where provided, are power door operators in good working condition?	Y N N/A		
3.7	Are all elevators regularly serviced by qualified personnel (e..g, based on a regular maintenance schedule)?	Y N N/A		
3.8	Are considerations made prior to redecoration to maintain a careful colour scheme with suitable colour contrasts?	Y N N/A		

4. Accessible Washrooms *(Ref. Section 4.5 Washrooms)*				*This section does not apply* ☐
Item	**Requirements**	**Compliance**	**Accessibility Issues**	**Location Reference**
4.1	Are accessible washrooms and stalls kept clear at all times?	Y N N/A		
4.2	Is lighting level maintained and suitable in accessible washrooms?	Y N N/A		
4.3	Are all washroom accessories in good working condition?	Y N N/A		
4.4	Are grab bars securely fixed with no obstructions along grasping surface?	Y N N/A		
4.5	Where applicable, are emergency alarms and controls routinely checked by qualified personnel?	Y N N/A		

5. Systems and Controls *(ref. Section 5.0 Systems, Controls and Communications)*				*This section does not apply* ☐
Item	**Requirements**	**Compliance**	**Accessibility Issues**	**Location Reference**
5.1	Are mechanical systems / units maintained to reduce background noise that is problematic for people with hearing loss?	Y N N/A		
5.2	Are Assistive Listening Systems (e.g., induction loops and infra red systems) identifiable with appropriate signage and checked regularly, where provided in assembly rooms, multi-purpose rooms, etc.?	Y N N/A		
5.3	If applicable, is the central TTY monitored routinely and is there someone designated to monitor it?	Y N N/A		
5.4	Is staff awareness training re: disability issues implemented to ensure they can provide assistance if required?	Y N N/A		

6. Fire and Life Safety Systems *(Ref. Section 5.6 Fire and Life Safety Systems)*				*This section does not apply* ☐
Item	**Requirements**	**Compliance**	**Accessibility Issues**	**Location Reference**
6.1	Are emergency exit routes regularly checked for potential barriers and obstructions?	Y N N/A		
6.2	Are maps of the facility's evacuation routes and related safety plan information kept up to date (e.g., when offices or other spaces are reconfigured)?	Y N N/A		

6. Fire and Life Safety Systems *continued* *(Ref. Section 5.6 Fire and Life Safety Systems)*			*This section does not apply* ☐	
Item	**Requirements**	**Compliance**	**Accessibility Issues**	**Location Reference**
6.3	Are alarm systems regularly checked by qualified inspectors? **NOTE**: If visual alarms are provided, ensure a flash rate within frequency range of 1 - 3 Hz is provided to minimize the risk of triggering epileptic seizure.	Y N N/A		
6.4	Is there an emergency exiting strategy in place for staff and visitors with disabilities, who may require assistance?	Y N N/A		
6.5	Are emergency exiting strategies checked regularly to ensure effectiveness and efficiency?	Y N N/A		

7. Signage *(Ref. Section 5.8 Signage and Wayfinding)*			*This section does not apply* ☐	
Item	**Requirements**	**Compliance**	**Accessibility Issues**	**Location Reference**
7.1	Where new signage is provided, is it integrated effectively with existing accessible signage?	Y N N/A		
7.2	Is temporary signage removed immediately after use? **NOTE**: Temporary signage is not recommended and can be confusing for users new to the facility. Use of temporary signage should be minimized and monitored to ensure it is used short term only.	Y N N/A		
7.3	Is there a service disruption notification protocol in place to keep visitors and users informed of temporary service disruptions? **NOTE**: This is required as part of Customer Service Standard / AODA.	Y N N/A		

Notes:

Site Plan Checklist 7.6

Application

The following checklist is designed for use by City Staff when reviewing accessibility issues related to Site Plan applications.

Site Plan Checklist

Project Information

Project name / reference no.: _____

Municipal address: _____

Application number: _____

Type of application: New construction ☐

Renovation ☐

Submission date : / / Date reviewed: / /

Notes : _____

Applicant Contact Information

Name: _____

Phone number: _____

Address: _____

_____

_____

Reviewed By

Staff name: _____

Title / Position: _____

Department: _____

Phone Number: _____

Approval verification:

[Stamp]

Reviewed by Ottawa Accessibility Advisory Committee? Y ☐ N ☐

Date of AAC review / /

AAC feedback received and addressed? Y ☐ N ☐

Staff signature _____

Date / /

1. Accessible Parking Spaces *(Ref. Section 3.1 Parking)*

This section does not apply ☐

Standard Ref.	Requirements	Compliance	Comments
3.1.1	**PROVISION**: Minimum ratio of accessible parking spaces to regular parking spaces, as per standards.	Y N N/A	
	PATH OF TRAVEL: 1800 mm wide to accessible entrance.	Y N N/A	
3.1.2	**LOCATION**: within 30 m of accessible entrance.	Y N N/A	
	SURFACE: firm, stable and slip-resistant.	Y N N/A	
	RUNNING SLOPE: 1:50 (maximum).	Y N N/A	
	CROSS-SLOPE: 1:50 (maximum).	Y N N/A	
	OVERHEAD CLEARANCE: 2100 mm.	Y N N/A	
	LENGTH 5800 mm x **WIDTH** 3400 mm (Type A) or 2400 mm (Type B)	Y N N/A	
	ACCESS AISLE: 1500 mm wide, clearly marked, adjacent to accessible parking space. *Note: Two adjacent accessible parking spaces may share an access aisle.*	Y N N/A	
	DIRECTIONAL SIGNAGE: provided to guide users to nearest accessible entrance.	Y N N/A	
	LIGHTING: 50 lux (50 foot-candles) (minimum).	Y N N/A	
3.1.2.1	**VERTICAL SIGNAGE**	Y N N/A	
	Width 300 mm x Height 450 mm.	Y N N/A	
	Mounted 1500 to 2500 mm high at centre.	Y N N/A	
	Marked with International Symbol of Accessibility.	Y N N/A	
3.1.2.2	**PAVEMENT SIGNAGE**	Y N N/A	
	Marked with International Symbol of Accessibility.	Y N N/A	
	Length 1525 mm x Width 1525 mm (minimum).	Y N N/A	

2. Passenger Loading Zone *(Ref. Section 3.2 Passenger Loading Zones)*

This section does not apply ☐

Standard Ref.	Requirements	Compliance	Comments
3.2.1	**LOCATION**: within 30 m of accessible entrance.	Y N N/A	
	LENGTH 7000 mm x **WIDTH** 2000 mm, clearly marked.	Y N N/A	
	VERTICAL CLEARANCE: 2750 mm throughout vehicular pull-up space and passenger loading zone.	Y N N/A	
	PATH OF TRAVEL: 1800 mm wide to accessible entrance.	Y N N/A	
	DIRECTIONAL SIGNAGE: provided to guide users to nearest accessible entrance.	Y N N/A	
3.2.1.1	**VERTICAL SIGNAGE**:	Y N N/A	
	Width 300 mm x Height 450 mm;	Y N N/A	
	Mounted 1500 to 2500 mm high at centre.	Y N N/A	

3. Exterior Accessible Routes *(Ref. Section 3.3 Exterior Accessible Routes)*

This section does not apply ☐

Standard Ref.	Requirements	Compliance	Comments
3.3.1	**SURFACE**: firm, stable and slip-resistant.	Y N N/A	
	LIGHTING: 100 lux (10 foot-candles) (minimum).	Y N N/A	
3.3.2	**CLEAR WIDTH**: 1800 mm.	Y N N/A	
3.3.3	**RUNNING SLOPE**: 1:20 (5%) (maximum). *Note: If walkways exceed 5%, a ramp is required.*	Y N N/A	
	CROSS-SLOPE: 1:50 (2%) (maximum).	Y N N/A	
	REST AREA: provided at every 30 m along path of travel.	Y N N/A	
3.3.4	**EDGE PROTECTION OR GUARDS**: provided at changes in level.	Y N N/A	
2.1.5	**GRATINGS AND OPENINGS**: 13 mm (maximum) wide in direction of travel.	Y N N/A	

4. Curb Ramps *(Ref. Section 3.4 Curb Ramps)*

This section does not apply ☐

Standard Ref.	Requirements	Compliance	Comments
3.4.1	**SURFACE**: firm, stable and slip-resistant.	Y N N/A	
	CLEAR WIDTH: 1500 mm (minimum), exclusive of flared sides.	Y N N/A	
	TRANSITION AREA: 1500 mm (minimum) in diameter at top and bottom.	Y N N/A	
3.4.1.1	**RUNNING SLOPE**: 1:12 (8%) (maximum); 1:20 (5%) (preferred).	Y N N/A	
3.4.1.2	**CROSS-SLOPE**: 1:50 (2%) (maximum).	Y N N/A	
3.4.1.3	**TACTILE WALKING SURFACE INDICATORS (TWSI)**: 600 to 650 mm deep, at 150 mm to 200 mm from edge of curb.	Y N N/A	
3.4.2.2	**FLARED SIDE** (where provided): 1000 mm wide; slope 1:15 to 1:10 (6.66% to 10%).	Y N N/A	

5. Ramps *(Ref. Section 2.2 Ramps)*

This section does not apply ☐

Standard Ref.	Requirements	Compliance	Comments
App.	Provided where **ELEVATION** is greater than 1:20 (5%).	Y N N/A	
2.2.1	**RUNNING SLOPE**: 1:15 (6.67%).	Y N N/A	
	CROSS-SLOPE: 1:50 (2%).	Y N N/A	
	SURFACE: firm, stable and slip-resistant.	Y N N/A	
	CLEAR WIDTH: 1100 mm (minimum) between handrails.	Y N N/A	
	EDGE PROTECTION: provided, where ramps and landings are not level or where there is no solid enclosure or guard.	Y N N/A	
	COLOUR CONTRASTING STRIP: provided at slope changes, 50 ± 10 mm wide colour-contrasted and slip-resistant strips equal to the width of the ramp.	Y N N/A	

5. Ramps Continued *(Ref. Section 2.2 Ramps)*			This section does not apply ☐
2.2.1	**LIGHTING**: 100 lux (10 foot-candles) (minimum).	Y N N/A	
2.2.2	**LENGTH**: 9000 mm (maximum) or provide landing.	Y N N/A	
	LANDING:	Y N N/A	
	Provided at top, bottom, intermediate level or where there is any directional change.	Y N N/A	
	1675 mm turning circle.	Y N N/A	
2.2.3	**HANDRAIL**: 865 to 965 mm high on both sides. *Note: Refer to Section 2.4, Guards and Handrails for detailed requirements.*	Y N N/A	

6. Stairs *(Ref. Section 2.3 Stairs)*			This section does not apply ☐
Standard Ref.	**Requirements**	**Compliance**	**Comments**
2.3.1	**SURFACE**: slip-resistant and non-glare.	Y N N/A	
	TREAD: 280 to 355 mm deep, uniform.	Y N N/A	
	RISER: 125 to 175 mm high, uniform.	Y N N/A	
	OPEN RISER: not permitted.	Y N N/A	
	NOSING PROJECTION: 38 mm (maximum).	Y N N/A	
	NOSING STRIP: 50 mm deep; colour contrasted, at leading edge of tread, extending full width of tread.	Y N N/A	
	TACTILE WALKING SURFACE INDICATOR (TWSI): 600 - 650 mm deep, at top of stairs, one tread back. *Note: Refer to Section 2.7, Tactile Walking Surface Indicators for detailed requirements.*	Y N N/A	
	LIGHTING: 100 lux (10 foot-candles) (minimum).	Y N N/A	
2.3.2	**HANDRAIL**: 865 to 965 mm high on both sides. *Note: Refer to Section 2.4, Guards and Handrails for detailed requirements.*	Y N N/A	

7. Building Entrance *(Ref. Section 4.1 Entrances)*			This section does not apply ☐
Standard Ref.	**Requirements**	**Compliance**	**Comments**
4.1.1	**PROVISION**: At least one (1) accessible entrance or 50% of the total number of building entrances. (All main entrances to be accessible (preferred), with level access) *Note: Refer to Standards for Interior Maintenance Checklist.*	Y N N/A	

Feedback Form

7.7

The City of Ottawa would like to receive comments and information related to any proposed changes to these Accessibility Design Standards.

Please include section referencing, revised wording and reasons for proposed changes.

Submit to:

City of Ottawa
Accessibility Office
110 Laurier Av. West, 1st Floor Client Service Centre
Ottawa, Ontario
K1P 1J1
accessibilityoffice@ottawa.ca

Submitted by:

Name: _____

Company / Organization: _____

Phone Number: _____

Address: _____

_____

Email: _____

Proposed Changes and Rationale: _____

Tactile Signage Standard Pictograms

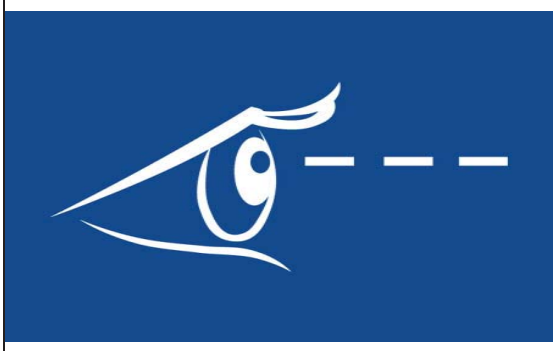
7.8

Application

Standard tactile signage pictograms that are used across the City's portfolio of facilities are provided in this Appendix for reference.

Reference

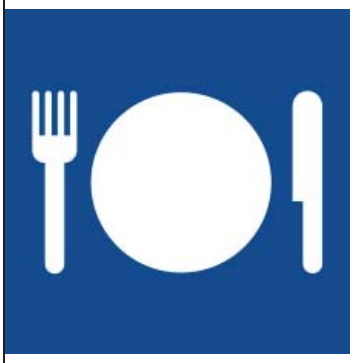
Sec. 5.8 Signage & Wayfinding

English	French	Pictogram
Accessible	Accessible	
Accessible unisex washroom	Toilettes mixte accessibles	
Arena	Aréna	
Arena viewing	Vue sur l'aréna	
Assistive workstation	Poste de technologie d'aide	

English	French	Pictogram
Auditorium	Auditorium	
Bar	Bar	
Baseball diamond	Terrain de jeu	
Bathroom stalls	Toilettes	
Boardroom	Salle de conférence	

English	French	Pictogram
Café	Café	
Canteen	Cantine	
Ceramics	Céramique	
Change room	Vestiaire	
Change table	Table à langer	

English	French	Pictogram
Classroom	Salle de classe	
Coat Room	Vestiaire	
Computer room	Salles des ordinateurs	
Craft studio	Studio d’artisanat	
Curling rink	Patinoire de curling	

English	French	Pictogram
Dance studio	Studio de danse	
Dental clinic	Clinique dentaire	
Dining lounge	Sallle à manger	
Drinking fountain	Fontaine à boire	
Electrical room	Local de service électrique	

English	French	Pictogram
Elevator (a)	Ascenseur (a)	
Emergency phone	Téléphone d’urgence	
Exercise room	Salle d’exercise	
Family change room	Vestiaire familial	

English	French	Pictogram
Female change room (a)	Vestiaire des femmes (a)	
Female washroom (a)	Toilettes des femmes (a)	
First aid	Premiers soins	
Information	Information	
Janitor's closet	Local d'entretien	
Janitors room	Salle des concierges	

English	French	Pictogram
Kitchen	Cuisine	
Lawn bowling	Boulingrin	
Library	Bibliothèque	
Lockers	Casiers	
Lockerettes	Petits casiers	

English	French	Pictogram
Male change room	Vestiaire des hommes	
Male Washroom (a)	Toilettes des hommes (a)	
Martial arts	Arts martiaux	
Massage therapy	Massothérapie	
Mechanical room	Local de service mécanique	

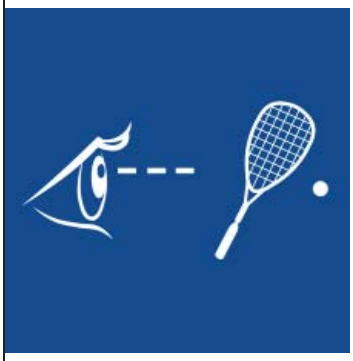
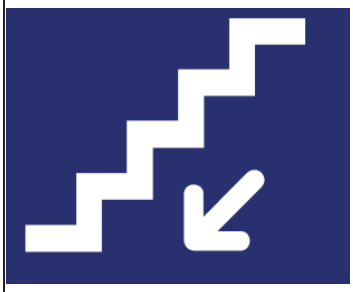
English	French	Pictogram
Meeting room	Salle de réunion	
Music room	Salle de musique	
No entry	Accès interdit	
Office / First Aid	Bureau / Premiers soins	
PC tutorial room	Salle de formation	

English	French	Pictogram
Pool	Piscine	
Pottery studio	Studio de poterie	
Prayer room	Lieu de paix	
Preschool washroom	Toilette préscolaire	

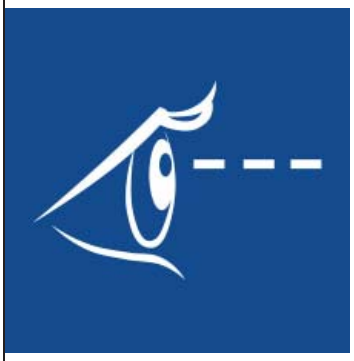
English	French	Pictogram
Racquetball	Racquetball	
Referee / First aid	Arbitre / premiers soins	
Referee	Arbitre	
Referee room	Local des arbitres	
Referees	Arbitres	
Referees change room	Vestiaire des arbitres	
Resource centre	Centre de documentation	
Restaurant	Restaurant	

English	French	Pictogram
Rink	Patinoire	
Sauna	Sauna	
Servery	Dépense	
Sinks	Lavabos	
Showers	Douches	

English	French	Pictogram
Shuffleboard	Jeu de palets	
Sledge hockey	Hockey sur luge	
Spinning room	Salle de cardiovélo	
Squash	Squash	

English	French	Pictogram
Squash viewing	Vue sur le squash	
Stairs	Escaliers	
Steam room	Bain de vapeur	
Storage	Rangement	
Swirl pool	Pisane à remous	

English	French	Pictogram
Theatre	Théâtre	
Telephone	Téléphone	
Ticket booth	Guichet	
Tickets	Billets	
Urinals	Urinoirs	
Viewing platform	Plateforme d’observation	
Viewing ramp	Rampe de vue	

English	French	Pictogram
Viewing stand	Tribune	
Visual arts	Arts visuels	
Washrooms (a)	Toilettes (a)	
Weight room	Salle de musculation	
Wheelchair lift	Ascenseur de fauteuil roulant	

English	French	Pictogram
Whirlpool	Bain hydromasseur	
Yoga room	Salle de yoga	
Zamboni room	Local de la zamboni