

Accessibility Design Guidelines





Accessibility Design Guidelines

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January 2019

Revision History

First Edition	May 2014	First release of compiled Accessibility Design Guidelines
Second Edition	January 2019	Updates to harmonize with AODA's Design of Public Spaces Standards, OBC and CSA Amendments, etc.

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Introduction

1.0

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Introduction



Mandate

Norfolk County 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

These Guidelines 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 Norfolk County a harmonious place to work and live for everyone;
- **Barrier Removal:** Preventing and removing barriers that create separation and special treatment;
- **Provincial Directions:** Accessibility standards in the areas of customer service, information and communication, employment, transportation and the built environment, developed under the Accessibility for Ontarians with Disabilities Act (AODA) initiative; and
- **Changing Demographics:** People with varying types of disabilities comprise a significant proportion of the population, whether considered locally, provincially or nationally. The proportion of seniors within the Canadian population is also increasing rapidly and for some seniors, acquiring a disability may also increase with age.

With accessibility requirements and related best practices continually evolving, especially in light of recent changes to Provincial legislation, the development and update of the Norfolk County’s Accessibility Design Guidelines is intended to be an ongoing process. These Guidelines are a “living document”, evolving over time to meet best practices, future changes that may be related to the Ontario Building Code (OBC) and requirements for the design of the Built Environment stemming from the Accessibility for Ontarians with Disabilities Act (AODA).

During the design, planning and construction of accessible spaces and buildings, a wide range of opportunities exist not only to optimize independent access for persons with disabilities but also to improve accessibility for all users. The purpose of the Norfolk County’s Accessibility Design Guidelines is to provide practical examples of solutions that optimize accessibility for new construction or for the renovation of existing facilities, owned or leased by Norfolk County.

Finally, the Corporation of Norfolk County is committed to eliminating barriers and improving accessibility for persons with disabilities in a manner that respects dignity, independence, integration and equal opportunity. Norfolk County recognizes the diverse needs of all our residents and customers and will respond by striving to provide services and facilities that are accessible to all. Norfolk County is committed to meeting the needs of people with disabilities in a timely manner, and will do so by preventing and removing barriers to accessibility and meeting accessibility requirements under the Accessibility for Ontarians with Disabilities Act (AODA).

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.

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 Guidelines to assist with understanding how users with disabilities interact with elements of the built environment. A summary of key “types” of disabilities include:

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-served populations, like people of short stature, seniors, pregnant women, parents with children in strollers, people who speak different languages and others.

Auditory Disabilities

Involve having partial or no hearing (e.g., persons who are deaf, deafened or hard of hearing). For some individuals, the loudness of the sound will determine whether it is heard, for others, it depends on the type of sound (e.g., consonants versus vowels, or the intonation). In other situations, individuals may also become confused by certain sounds due to excessive background noises.

Emotional Disabilities

May be hidden or apparent (e.g., depression). In many cases, they have little or no effect on learning. They may appear in actions of indifference or other types of mood swings. The causes of emotional disabilities are wide ranging but common forms are evident in individuals experiencing depression, anxiety or stress.

Intellectual, Developmental and Learning Disabilities

The type of cognitive impairment can vary widely, from severe intellectual disabilities, to the inability to remember, to the absence or impairment of specific cognitive functions (e.g., language). As an example, autism, which is a common disability, is a complex developmental disability as a result of a neurological disorder that affects the functioning of the brain. Children and adults with autism typically have difficulties in verbal and non-verbal communication, social interactions, and leisure or play activities. Individuals with autism may also experience sensitivities in sight, hearing, touch, smell and taste.

Mental Health Disabilities

Can take many forms and ‘overlap’ with other types of disabilities, including emotional disabilities. Stigma and stereotypes about mental health are unfortunately still prevalent, including common fears and misunderstandings by society at large. Some examples of common mental health disabilities include bipolar disorder, psychosis, schizophrenia, anxiety, attention deficit, mood and eating disorders. Overall, mental health is affected by many factors including where people live, the state of individual environments, genetics, income and education levels, and people’s relationships with friends and family.

Physical Disabilities

Involve limited mobility (e.g., limited ability to walk, move, stand for long periods or to carry objects) or stamina, or restricted agility (e.g., limited ability to bend, dress, feed oneself, or to manipulate objects).

Visual Disabilities

Involve complete blindness, limited or residual sight. It may involve a loss of visual clarity /acuity or a decrease in the size of the visual field.

1.1 Regulatory Framework

The application of these guidelines is driven by the regulatory environment and important Provincial accessibility legislation and related requirements, which also supports the County'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 Accessibility for Ontarians with Disabilities Act (AODA, 2005, S.O. 2005, Chapter 11)

The Accessibility for Ontarians with Disabilities Act (AODA) is legislation that aims to identify, remove, and prevent barriers for people with disabilities. The AODA became law on June 13, 2005 and applies to all levels of government, non-profits, and private sector businesses in Ontario that have one or more employees (full-time, part-time, seasonal, or contract). The AODA sets out a process for developing and enforcing accessibility standards and it is made up of five (5) parts, or Standards, with deadlines for compliance identified.

The intent is that people with varying types of disabilities and industry representatives will work in collaboration with the Government of Ontario to develop the standards with the aim of making Ontario accessible by 2025 through the implementation and enforcement of the standards.

1.1.2 Summary of AODA Accessibility Standards

Accessibility standards are laws that government, businesses, non-profits and public sector organizations must follow to become more accessible, with the intention that organizations identify and remove barriers to improve accessibility for people with disabilities in key areas of daily life. These areas are organized as five (5) standards, as part of the **Integrated Accessibility Standards Regulation (IASR, Ontario Regulation 191/11)**, which also identifies some general requirements (under Part I).

The five (5) standards under the IASR include:

- **Information and Communications Standards (Part II):** To help organizations make their information accessible to people with disabilities.
- **Employment Standards (Part III):** To help make hiring and employee support practices more accessible.
- **Transportation Standard (Part IV):** To make it easier for everyone to travel in the province.
- **Design of Public Spaces (Part IV.1):** To help organizations make new and redeveloped outdoor public areas accessible.
- **Customer Service Standards (Part IV.2):** To help remove barriers for people with disabilities so they can access goods, services or facilities.

Part V of the IASR addresses compliance requirements. The IASR also includes the following general requirements, under Part I:

- Overview of the purpose, application and definitions;
- Establishment of accessibility policies;
- Development of multi-year accessibility plans (e.g., including updating every five years);
- Consideration of accessibility needs as part of the procurement process and when designing or purchasing self-service kiosks; and
- Provision of training (e.g., staff and volunteers).

1.1.3 Summary of Consultation Requirements

The **Design of Public Spaces Standards (Part IV.1)** also requires obligated organizations to consult with people with disabilities, accessibility advisory committee members and the public, for the following areas: (Note: This information is also identified in the applicable sections of these Accessibility Design Guidelines)

- **Recreational trails** (e.g., slope, need for & location of ramps, need for & location of rest / passing / viewing areas and amenities / other pertinent features on the trail);
- **Outdoor play spaces** (e.g., needs of children and caregivers with various disabilities, when constructing new or redeveloping existing);
- **Exterior paths of travel – rest areas** (e.g., design and placement of rest areas, when constructing new or redeveloping existing paths of travel, intended to be maintained); and
- **On-street parking spaces** (e.g., need, location and design of accessible on-street parking, when constructing new or redeveloping existing on-street parking spaces).

1.1.4 The Ontario Human Rights Code (OHRC)

The Ontario Human Rights Code (referred to as ‘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 County’s Accessibility Guidelines 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 or group that has been discriminated against and to prevent further discrimination. The intent is not to punish the individual or company that has discriminated. The Ontario Human Rights Code provides for civil remedies, not criminal penalties. Persons or companies found to have discriminated can be made to compensate a complainant or make changes in the way they conduct their affairs.

1.1.5 The Ontario Building Code (OBC, 2012)

Accessibility amendments to Ontario’s Building Code (OBC) came into force on January 1, 2015.

The accessibility requirements, or “barrier-free design” requirements as they are referred to in the OBC, are generally recognized as representing a minimum standard for accessibility.

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

- Applies to most new construction and extensive renovation; and
- Amended requirements cover a range of areas, such as parking, entrances, elevators, washrooms, barrier-free access, 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, reaffirmed 2017)

Currently the Canadian Standards Association’s “Accessible Design for the Built Environment” (CSA) is recognized as a voluntary national built environment standard for Canada. The CSA requirements were reaffirmed in 2017 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 Norfolk County Accessibility Design Guidelines go above and beyond the minimum requirements of the OBC and the CSA, 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 County’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 Ontarians with Disabilities Act (ODA, 2001), the Province amended the Ontario 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 Ontarians with Disabilities Act, 2001 also specifies that if a municipality has an Accessibility Advisory Committee (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]

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 County 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 guidelines. Refer to Section 3.7.

1.1.8 Scope and Application

The accessible design criteria provided in these Guidelines aims to make all County-owned or leased buildings, infrastructure and elements accessible to Norfolk County residents and visitors, as part of any new construction or renovation activities. Norfolk County 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.

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

These accessibility design guidelines are:

- **Mandatory for all new construction and renovations (e.g., retrofit, alteration or addition) to existing facilities, owned, leased or operated by the Norfolk County; and**
- **Recognized as addressing the needs of diverse users, with or without disabilities, to ensure inclusive environments for all.**

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

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

Although the design criteria within these guidelines may differ from the requirements of the Ontario Building Code (OBC, Section 3.8, 2012), the intent is that OBC requirements are used as the baseline and minimum requirements that are to be applied. These guidelines are intended to reflect an optimum level of accessibility for the design of the built environment, whether meeting or going beyond the requirements of the OBC.

By making these Accessibility Design Guidelines available to all planning, design and development sectors, Norfolk County demonstrates its commitment to proactive measures to eliminate and prevent barriers faced by persons with disabilities.

1.1.9 Existing Barriers and Conditions

Barrier removal for existing County sites, infrastructure, facilities and elements is conducted through a list of priorities established in the County’s Multi-Year Accessibility Plan and through Capital Budget planning for the Barrier Free Access Program. The County intends to implement these accessibility guidelines 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 Guidelines 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 County Staff, in collaboration and consultation with all relevant stakeholders, including the Norfolk County Accessibility Advisory Committee, as required.

1.2 Guideline Organization

These Guidelines 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:

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 guidelines is identified to assist with implementation and how each section relates or applies to the built environment, element or feature.

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2.0 Common Elements:
Exterior and Interior

4.0 Interior
Environments

3.0 Exterior Environments

5.0 Systems, Controls and
Communications

6.0 Special Facilities and
Spaces

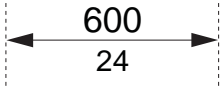
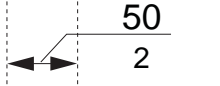
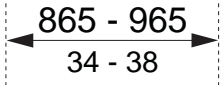
7.0 Appendices

1.2.1 Tables, Figures and Graphics

Throughout these Guidelines, 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 millimetres (mm) or metres (m) throughout this document, rounded up to the nearest multiple of five. Measurements in inches (in) or feet (ft) are provided adjacent to metric measurements in brackets (e.g., 1676 mm (66 in)), and are converted from the metric measurement and rounded to the nearest inch or foot. Where metric measurements are too small or specific, imperial conversion is not provided in order to maintain accuracy. Dimensions that are not marked as “maximum” or “minimum” are absolute, unless otherwise indicated. All dimensions for construction purposes are subject to conventional industry tolerances. Dimension conventions for diagrams are as follows:

Convention	Description
	dimension showing measurements in millimetres (unless otherwise specified) above the line and inches (unless otherwise specified) below the line
	dimension for small measurements
	dimension showing a range with minimum - maximum
min	minimum
max	maximum

1.2.3 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

Norfolk County recognizes that accessibility best practices continue to evolve and change over time, with the expectation that these Guidelines 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.

Common Elements: Exterior and Interior

2.0

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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, stamped concrete 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.

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

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 joints between surfaces no wider than 6 mm ($\frac{1}{4}$ in);
- e. where ground and floor surfaces have a change in level:
 - i. no bevel is required (e.g., vertical change permitted), where the change in level is less than 6 mm ($\frac{1}{4}$ in);
 - ii. provide a beveled slope of 1:2 (maximum - the ratio rise to run), where the change in level is between 6 and 13 mm ($\frac{1}{4}$ - $\frac{1}{2}$ in);
 - iii. provide a slope, ramp or curb ramp, where the change in level is greater than 13 mm ($\frac{1}{2}$ in); and
 - iv. for exterior ground surfaces, refer to Section 3.3 Exterior Accessible Routes for additional details;
- 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).

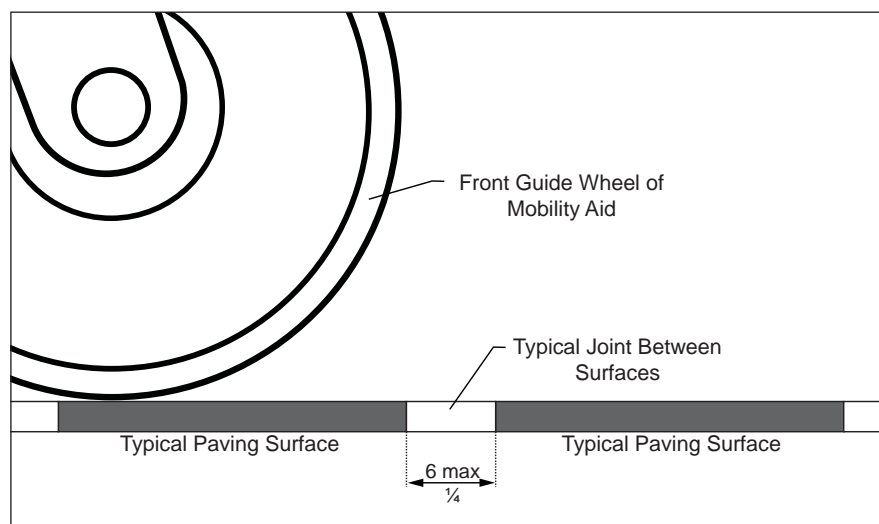


Figure 1: Joints Between Surfaces - Section View

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 (½ in) (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 (½ in) 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 ($\frac{1}{2}$ in) 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:

- ensure openings do not allow passage of an object that has a diameter greater than 13 mm ($\frac{1}{2}$ in); and
- ensure the longer dimension of opening is perpendicular to the pedestrian path of travel.

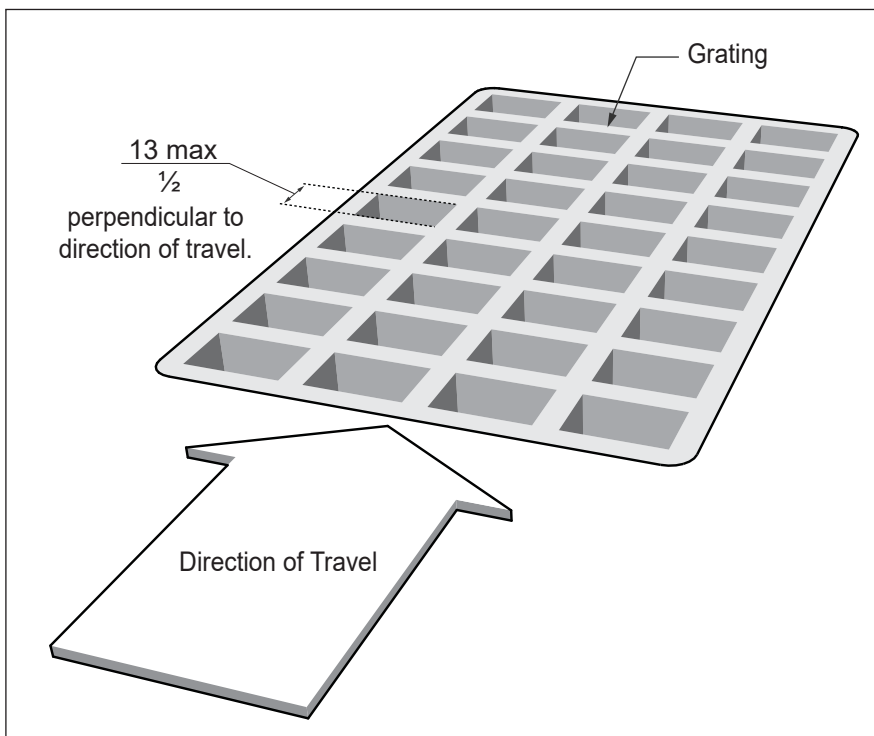


Figure 2a: Grating Opening

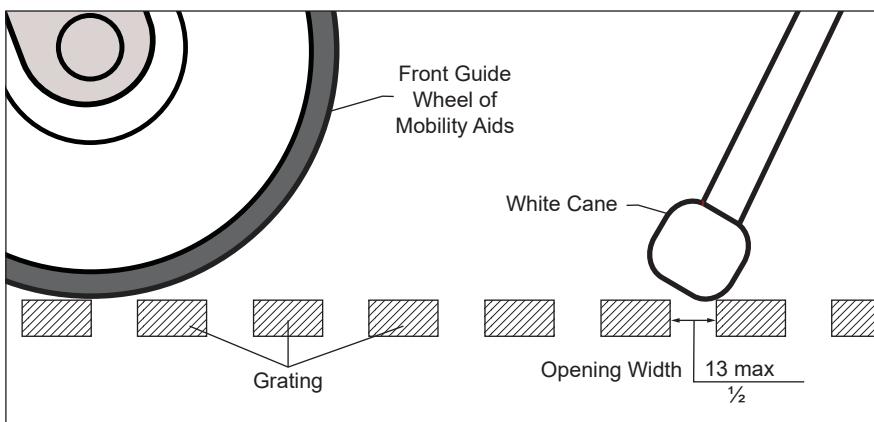


Figure 2b: Gratings - Section View



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. 5.7 Lighting

Best Practice

Provide a desired clear width of 1200 mm (47 in) for ramp surfaces. Where ramps are specifically designed for use by persons with vision loss, a ramp surface of up to 1500 mm (59 in) 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 (43 in) (minimum);
- b. ensure ramp section is no longer than 9000 mm (29 ft 6 in) (**Figure 3**);
- c. provide landings (**Figure 5**):
 - i. at top and bottom of ramp;
 - ii. where there is any directional change; and
 - iii. between each ramp section where overall length of ramp exceeds 9000 mm (29 ft 6 in);
- d. provide a wall or guard on both sides of ramp, where change in level is more than 600 mm (24 in) (**Figure 9**);
- e. provide handrails on both sides of the ramp (**Figure 8**); and
- f. ensure lighting level of 50 lux (5 foot-candles) (minimum), measured at floor level.

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%).

2.2.1.3 Edge Protection

Provide edge protection along ramps and landings:

- a. with a curb at least 75 mm (3 in) (minimum) high, where no solid enclosure or solid guard is provided (**Figure 4a**); and
- b. with railings or other barriers that extend to within 50 mm (2 in) (maximum) of the finished ramp surface (**Figure 4b & 4c**).

2.2.1.4 Colour Contrasting Strip

- a. provide a colour contrasted and slip-resistant strip at the beginning and end of the ramp, and where landings meet a slope change (**Figure 3**);
- b. ensure strips are 50 ± 10 mm (2 in) wide, extending along the width of the ramp.

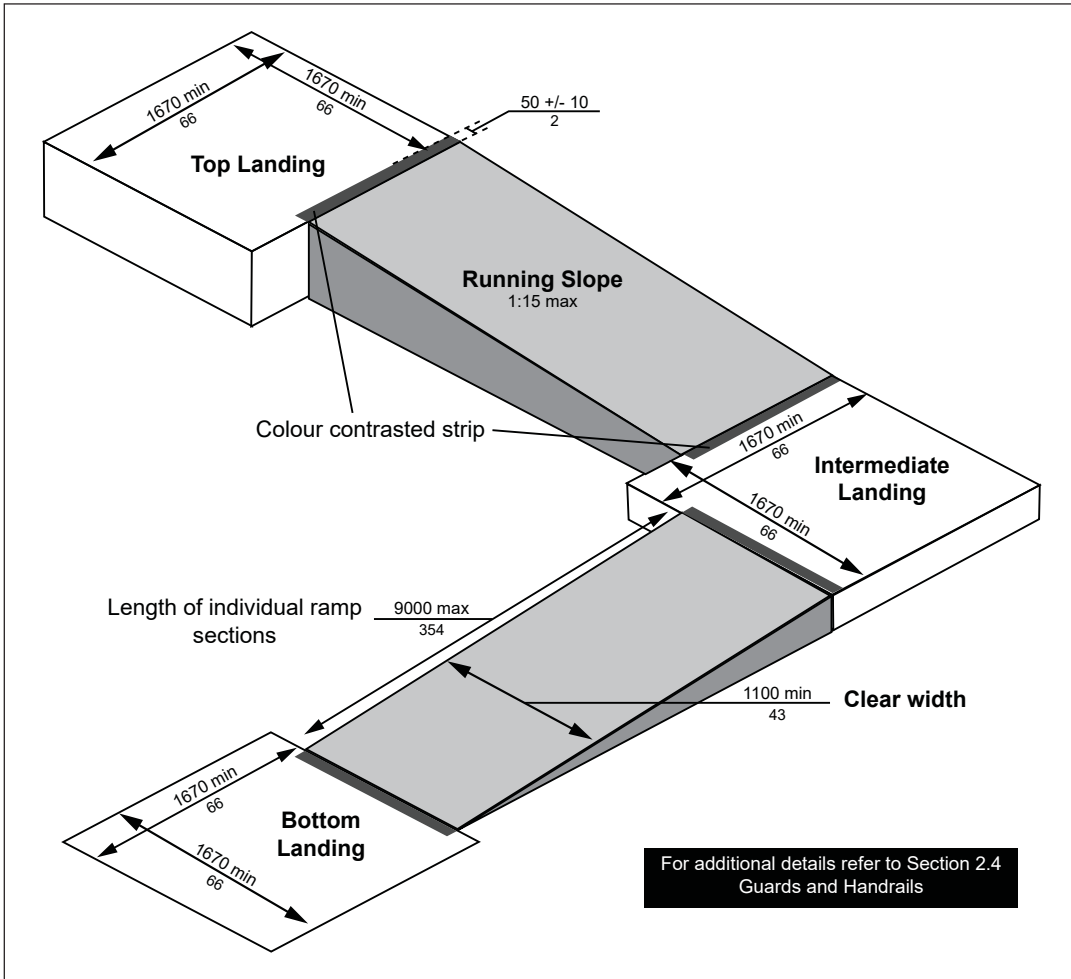


Figure 3: Ramp Design Features

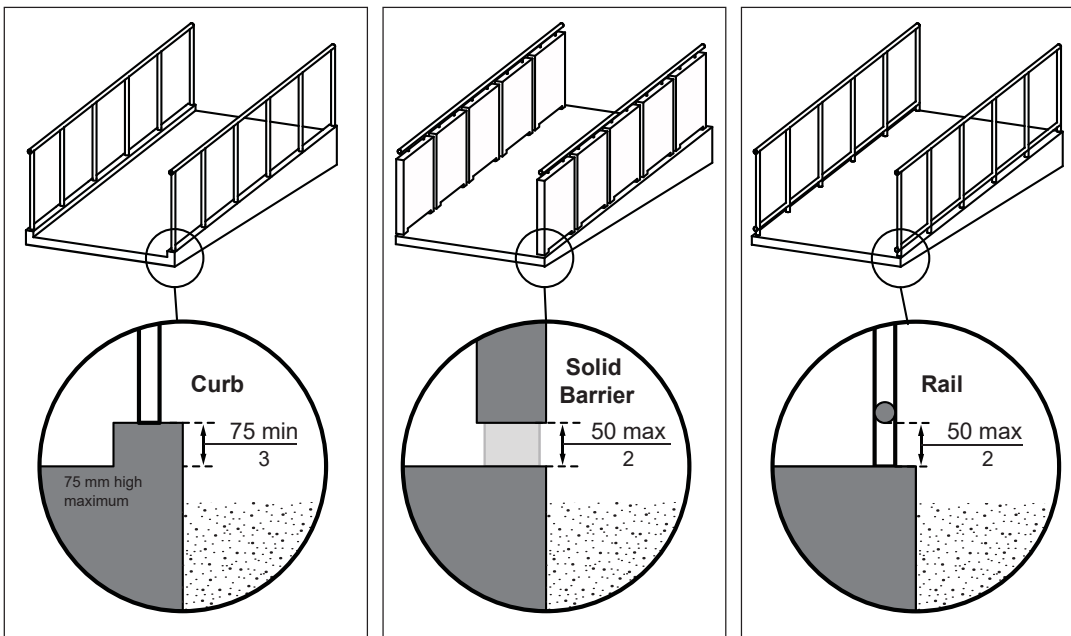


Figure 4a: Curb Protection

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 (98 in by 98 in) is preferred in order to accommodate larger, wheeled mobility aids, including scooters and powered wheelchairs.

2.2.2 Landings

- ensure landings are level and have a cross slope that is not steeper than 1:50 (2%);
- provide a clear space of 1670 mm by 1670 mm (66 in by 66 in) (minimum) at top and bottom landings, and where there is an abrupt change in direction (**Figure 5**);
- provide a clear space of 1670 mm (66 in) (minimum) long and at least the same width as the ramp for an in-line landing;
- where overall length of ramp exceeds 9000 mm (29 ft 6 in), provide intermediate landings; and
- where a door swings into ramp landing, ensure length of landing is extended:
 - 600 mm (24 in) beyond the latch side of the door opening, when the door swings towards the ramp landing (**Figure 6a**); and
 - 300 mm (12 in) beyond the latch side of door opening, when door swings away from the ramp landing (**Figure 6b**).

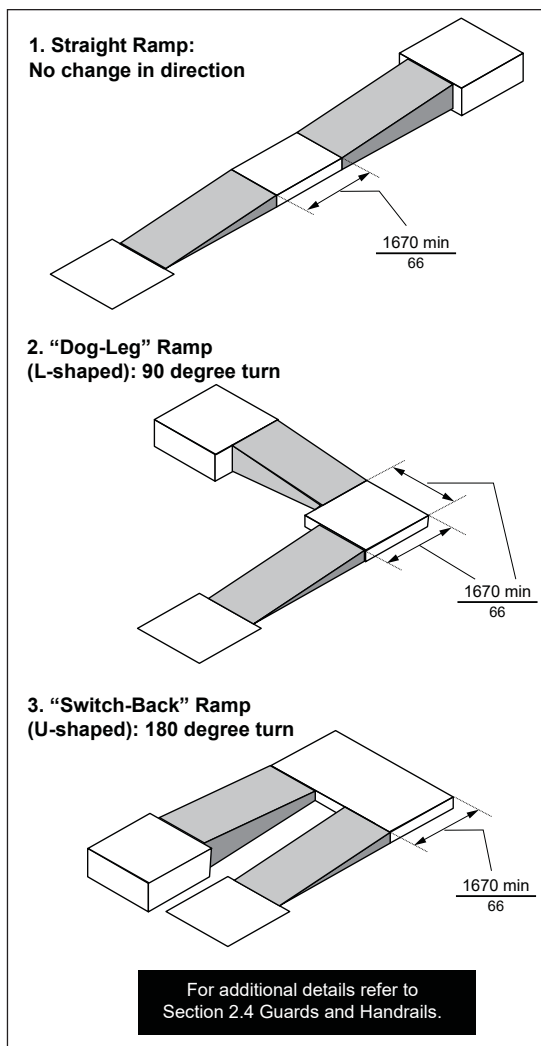


Figure 5: Typical Ramp Configurations

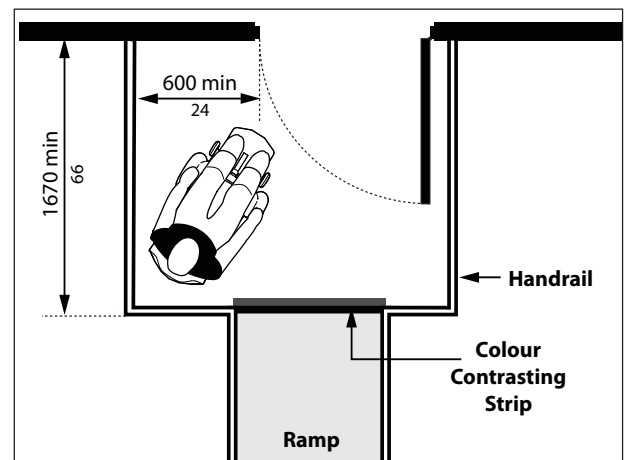


Figure 6a: Door Swings into Ramp Landing - Plan View

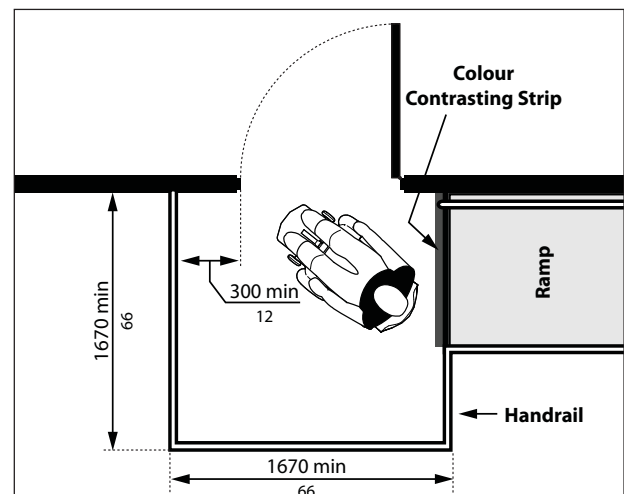


Figure 6b: Door Swings Away From Ramp Landing - Plan View

2.2.3 Handrails and Guards

2.2.3.1 Handrails

- mount continuously on both sides of ramp, including landings, at consistent height between 865 mm (34 in) and 965 mm (38 in), measured vertically from the surface of the ramp (**Figure 8**);
- provide clear width of 1100 mm (43 in) (minimum) between handrails;
- provide intermediate handrails where ramps are more than 2200 mm (87 in) wide, with a maximum of 1650 mm (65 in) between handrails;
- ensure colour contrasted finish of 70% (minimum) between handrails and mounting surfaces; and
- provide extensions based on the following criteria (**Figure 7a, b & c**):
 - extend horizontally 300 mm (12 in) (minimum) at top and bottom landings;
 - design to return to the guard / rail, wall or floor; and
 - ensure handrails are terminated in a manner that will not obstruct pedestrian path of travel or create potential bumping hazards.

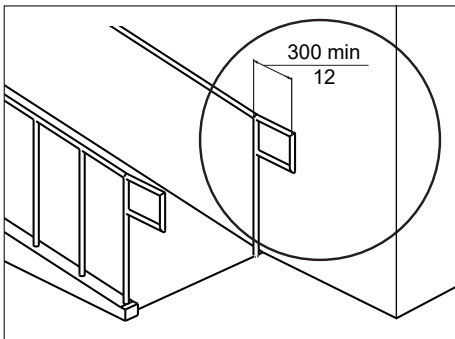


Figure 7a: Handrail Returns to Guard or Rail

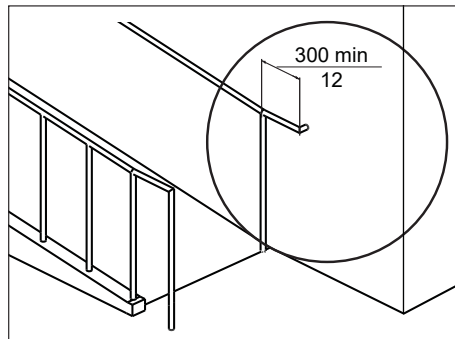


Figure 7b: Handrail Returns to Wall

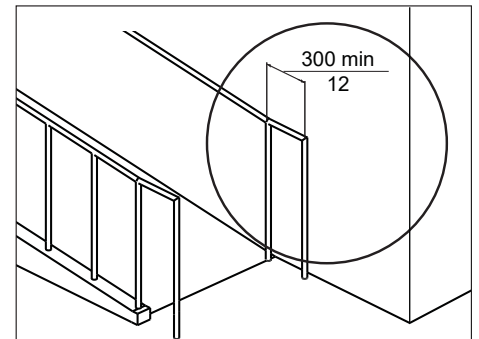


Figure 7c: Handrail Returns to Floor

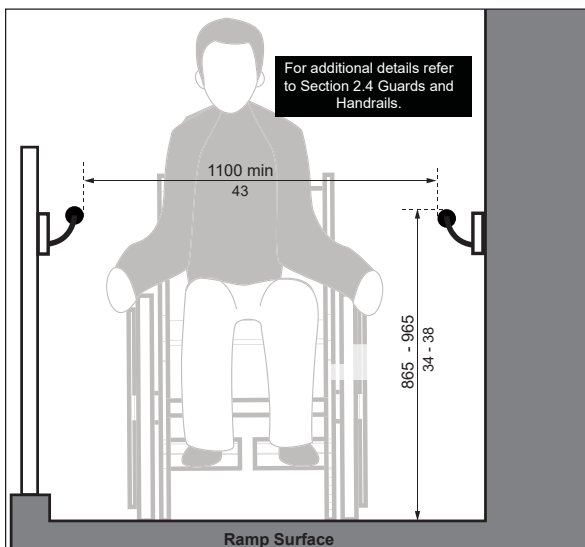
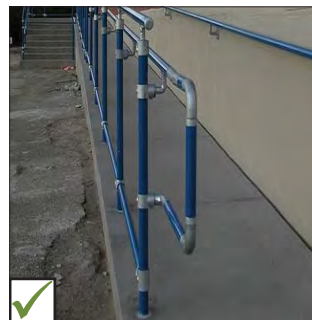


Figure 8: Handrail Design and Features - Section View



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

Note

Under OBC Section 9.8.8.1, there are conditions where a guard is only required if the difference in elevation is more than 600 mm (24 in) or the adjacent surface within 1200 mm (47 in) has a slope steeper than 1:2 (50%).

2.2.3.2 Guards

Provide walls or guards on both sides of ramp:

- mounted at 1070 mm (42 in) (minimum) high, measured vertically to the top of the guard from the ramp surface (**Figure 9**); and
- with no member, attachment or opening located between 140 mm (5 ½ in) and 900 mm (35 in) high above the ramp surface to prevent climbing.

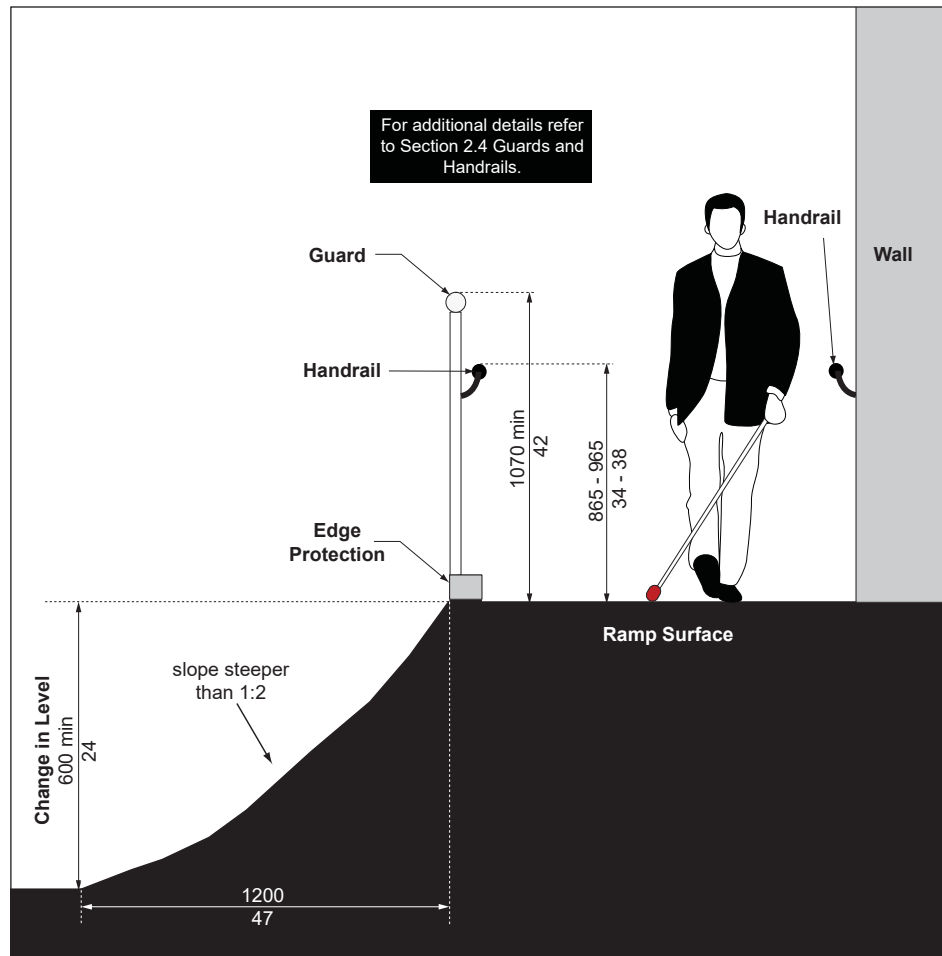


Figure 9: Guard Provision at Ramp - Section View



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

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).

2.3.1 Design Features

- ensure surface is stable, firm, slip-resistant and non-glare; and
- provide lighting level of 50 lux (5 foot-candles) (minimum), measured at floor level.

2.3.1.1 Treads and Risers

- riser height of 125 mm (5 in) (minimum) to 180 mm (7 in) (maximum) ;
- tread depth of 280 mm (11 in) (minimum) to 355 mm (14 in) (maximum);
- no open risers are permitted (**Figure 10**); and
- ensure uniform riser height and tread depth throughout any stair system.

2.3.1.2 Nosings

- ensure no abrupt undersides;
- ensure they do not project more than 38 mm (1 ½ in) over the tread below and are sloped to the riser at an angle greater than 60 degrees to the horizontal (**Figure 10**);
- ensure leading edge is rounded or has a beveled profile, with a radius of curvature of 13 mm (½ in) or less; and
- provide horizontal marking strips:
 - 50 mm (2 in) (+/- 10 mm) deep;
 - at the leading edge of the tread;
 - ensure strong colour contrast compared with tread and riser finishes with slip-resistant surface; and
 - extend the full width of the tread.

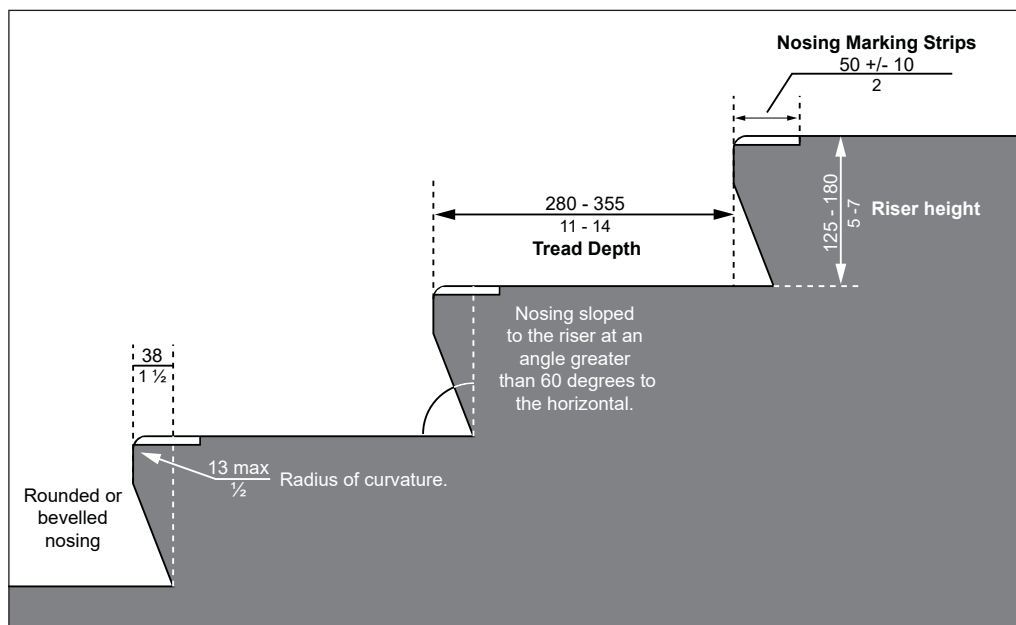


Figure 10: Stair Design Features - Section View

2.3.1.3 Tactile Walking Surface Indicators (TWSIs)

Provide tactile walking surface indicators (TWSIs):

- a. at the top of all flights of stairs starting one tread depth back from the leading edge of the top step;
- b. at the top step, starting one tread depth back from the leading edge, at the following locations; :
 - i. at each landing incorporating an entrance into a stair system;
 - ii. where the regular pattern of a stairway is broken; and
 - iii. where the run of a landing not having a continuous handrail is greater than 2100 mm (83 in);
- c. with surface depth of 610 mm (24 in) (minimum), extending the full width of the stairs (**Figure 11**).

Note

Tactile walking surface indicators 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.

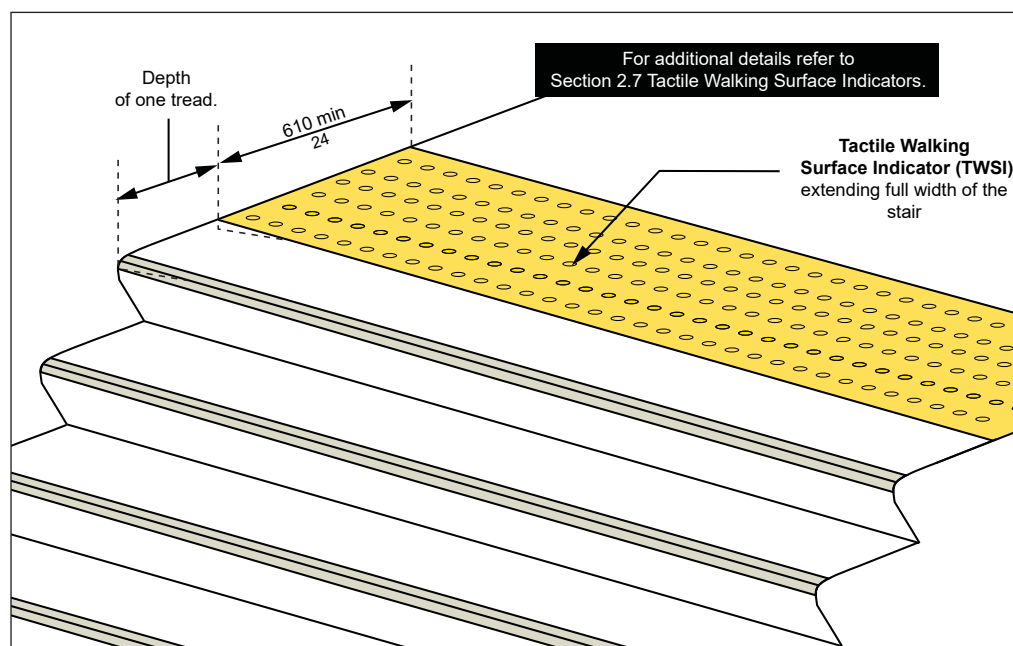


Figure 11: Tactile Walking Surface Indicators (TWSI) at Top of Stairs

2.3.2 Guards and Handrails

2.3.2.1 Guards

Where there is a change in level of 600 mm (24 in) or more adjacent to stairs, provide guards as follows:

- a. mount 1070 mm (42 in) (minimum) high, measured vertically to the top of the guard from the stair surface;
- b. provide edge protection; and
- c. ensure that no member, attachment or opening located between 140 mm (5 ½ in) and 900 mm (35 in) high above the stair surface will facilitate climbing.

Exception

Where there is a wall, a guard is not required.

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

- a. provide where stair system contains three or more steps;
- b. mount on both sides of stairs, at a consistent height between 865 mm (34 in) and 965 mm (38 in), measured from leading edge of stair tread (**Figure 12**);
- c. ensure high colour contrast is provided between handrails and mounting surfaces for improved visibility;
- d. be continuous around landing less than 2100 mm (83 in) in length from the top of stairs, except where the landing:
 - i. is intersected by an alternative accessible route; or
 - ii. has an entry door leading into it;
- e. be continuous on the inside edge of stairs;
- f. where stairs are more than 2200 mm (87 in) wide, provide one or more intermediate handrails that are continuous between landings and with a maximum of 1650 mm (65 in) between handrails; and
- g. provide extensions based on the following criteria:
 - i. extend horizontally 300 mm (12 in) (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 (12 in) 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.

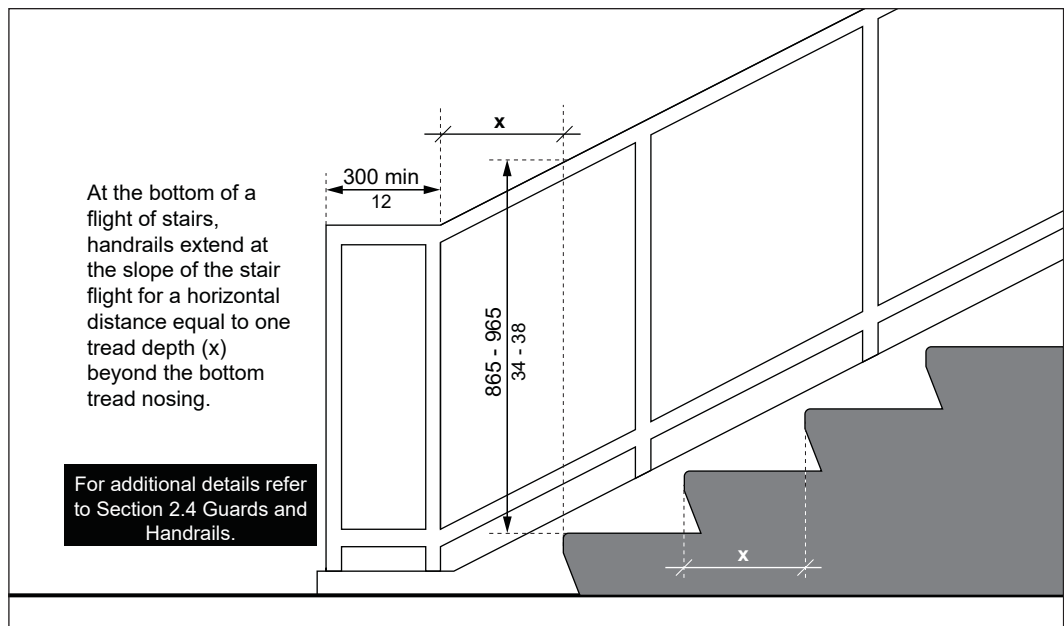


Figure 12: Handrail Extensions at Stairs - Section View



Guards and Handrails



2.4

Application

This section applies to guards and handrails for ramps, stairs and other areas in both the 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.

Best Practice

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

2.4.1 Guards

- ensure they comply with the Ontario Building Code requirements;
- mount at 1070 mm (42 in) (minimum) high, measured vertically to the top of the guard from the ground / floor surfaces;
- design to prevent the passage of a sphere with a diameter greater than 100 mm (4 in); and
- ensure that any member, attachment or opening that is located between 140 mm (5 ½ in) and 900 mm (35 in) above the floor does not facilitate climbing.

2.4.2 Handrails

- ensure handrails are continuous with grasping surface, uninterrupted by mounting brackets, newel posts or any other construction elements;
- provide rounded edges, free of abrasive elements;
- provide outside diameter between 30 and 43 mm (1 ½ in and 1 ½ in) for circular cross-section, which is preferred (**Figure 13a & 13b**);
- where non-circular cross sections are provided, ensure perimeter dimension of 100 mm (4 in) (minimum) and 155 mm (6 in) (maximum), with cross section dimension of 57 mm (2 ¼ in) (maximum);
- provide clearance of 50 mm (2 in) (minimum) between grasping surface and any adjacent surface (**Figure 13a**);
- where handrails are in a recessed area, ensure clearance of 50 mm (2 in) (minimum) between handrail surface and adjacent surface with clearance of 450 mm (18 in) (minimum) above the handrail (**Figure 13b**); and
- be designed and constructed such that handrails and their supports 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
 - a uniform load not less than 0.7 kN/m, applied in any direction.

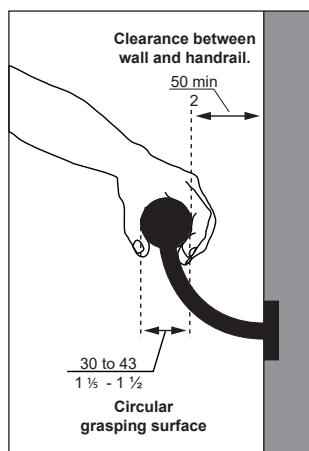


Figure 13a: Handrails on Wall - Section View

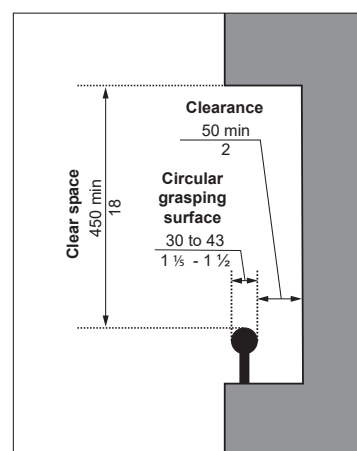


Figure 13b: Handrails in Recessed Area - Section View



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 Paths of Travel
- Sec. 4.3 Interior Accessible Routes

Best Practice

Where possible, enclosure at the underside of the stairs for protection is recommended.

Note

Fixed 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

- provide 2100 mm (83 in) (minimum) headroom clearance; and
- where headroom clearance is less than 2100 mm (83 in) over a portion of an accessible path of travel, install cane detectable rail or other barrier with leading edge of 680 mm (27 in) (maximum) (**Figure 14**).

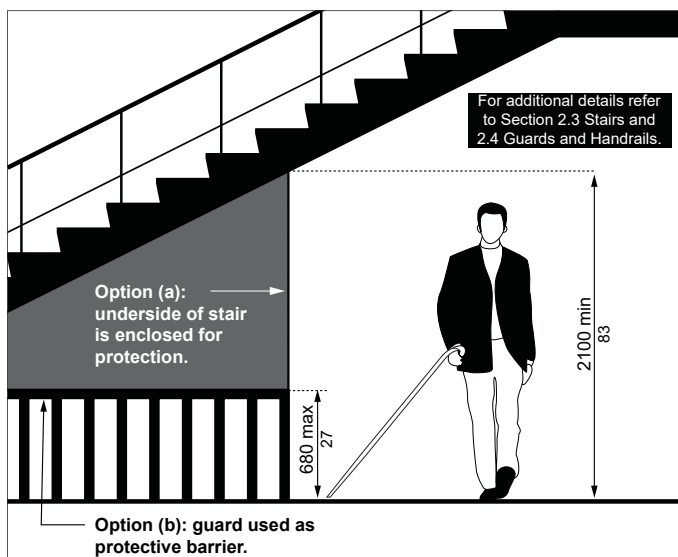


Figure 14: Protection Options Underneath Stairs

2.5.2 Protruding Objects

Where objects protrude along accessible paths of travel:

- ensure clear width of an accessible path of travel or manoeuvring space is not reduced (**Figure 15**); and
- ensure objects protruding more than 100 mm (4 in) from wall have their bottom edge mounted at or below 680 mm (27 in) for cane detection.

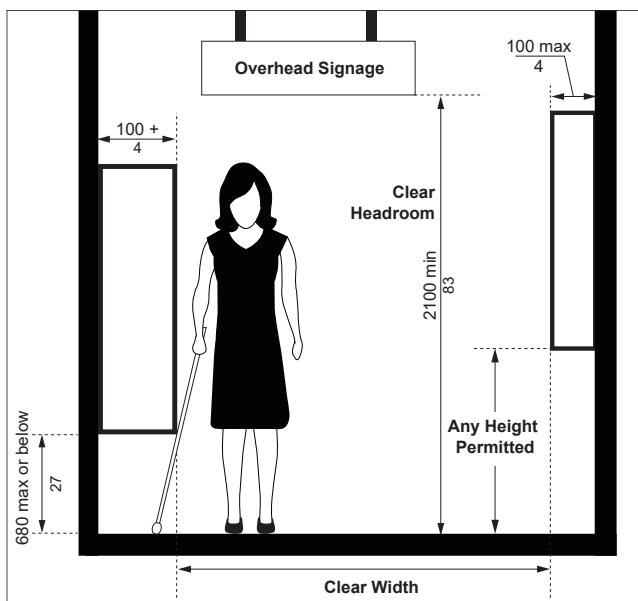


Figure 15: Protruding Objects

Best Practice

Wing walls, extending from protruding edge to floor / ground surface, provide cane detection, where protrusion is greater than 100 mm (4 in).

Note

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



2.6

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.

Reference

- Sec. 2.1 Ground and Floor Surfaces
- Sec. 2.10 Seating, Tables and Work Surfaces
- Sec. 3.3 Exterior Paths of Travel
- Sec. 4.3 Interior Accessible Routes
- 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 Consultation Requirements

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

- a. the public and persons with disabilities; and
- b. the Norfolk County Accessibility Advisory Committee.

2.6.2 Design and Layout

Where rest areas are provided:

- a. locate adjacent to and away from accessible path of travel;
- b. ensure ground and floor surfaces are firm, stable and slip-resistant;
- c. provide colour contrast (e.g., amenity strips) to distinguish rest areas from the accessible path of travel;
- d. provide clear floor space of 915 mm (36 in) wide by 1370 mm (54 in) long (minimum) (**Figure 16**);
- e. where seating is provided, ensure seating has armrests and backrests; and
- f. ensure lighting level of 50 lux (5 foot-candles) (minimum), measured at floor level.

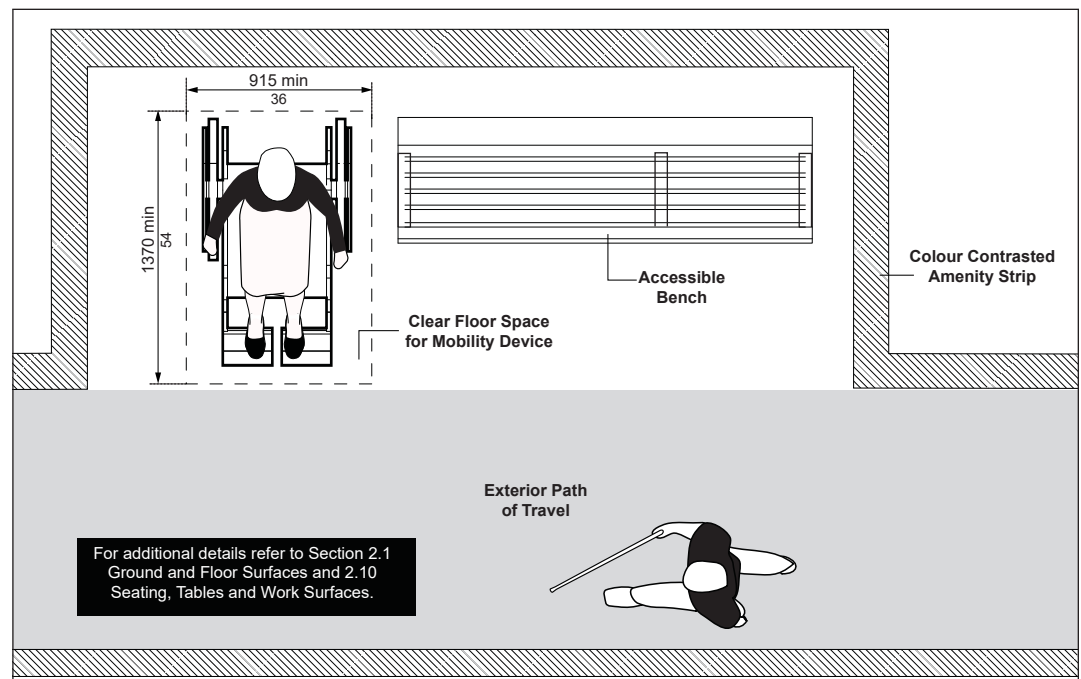


Figure 16: Rest Area - Plan View



Tactile Walking Surface Indicators



Application

Tactile walking surface indicators (TWSI) are means a standardized surface, detectable underfoot or by a long white cane, to assist people with low vision or blindness by alerting or guiding them (Illustrated Technical Guide to the Accessibility Standard for the Design of Public Spaces GAATES, p201).

Typical locations where TWSIs are required are as follows:

- at curb ramps and depressed curbs;
- where walking surfaces between pedestrian and vehicular areas are not separated by curbs; and
- at stairs.

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.

Suitable surfaces for TWSIs include a high tonal contrast compared to adjacent mounting surfaces, as well as a suitable change in texture that does not present a tripping hazard, as identified in this section.

Reference

- Sec. 2.3 Stairs
- Sec. 3.3 Exterior Paths of Travel
- Sec. 3.4 Curb Ramps and Depressed Curbs
- Sec. 4.3 Interior Accessible Routes
- Sec. 6.8 Recreational and Community Facilities
- Sec. 6.13 Elevated Platforms or Stages

Note

TWSIs can also be referred to as detectable warning 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. Cast iron is typically provided at curb ramps and depressed curbs, and yellow plastic at the top of stairs and edge of pools.

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."

2.7.1 Design Features

Provide tactile walking surface indicators (TWSIs) with:

- raised tactile profile;
- truncated domes (e.g., circular and flat-topped domes);
- slip-resistant and non-glare surfaces;
- a high colour /tonal contrast of at least 70% compared with adjacent surfaces;
- edges beveled or level with surrounding surface (e.g., height of 3 mm or less).

2.7.2 Truncated Dome Specifications

- ensure flat-topped domes are 4 to 5 mm high (**Figure 17**);
- ensure the top of flat-topped domes are between 12 to 25 mm diameter;
- 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) (**Figure 17**);
- ensure domes are arranged in a square grid (**Figure 17**); and
- ensure spacing between the centres of two adjacent flat-topped domes, which may be parallel or diagonal at 45 degree to the direction of travel, 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

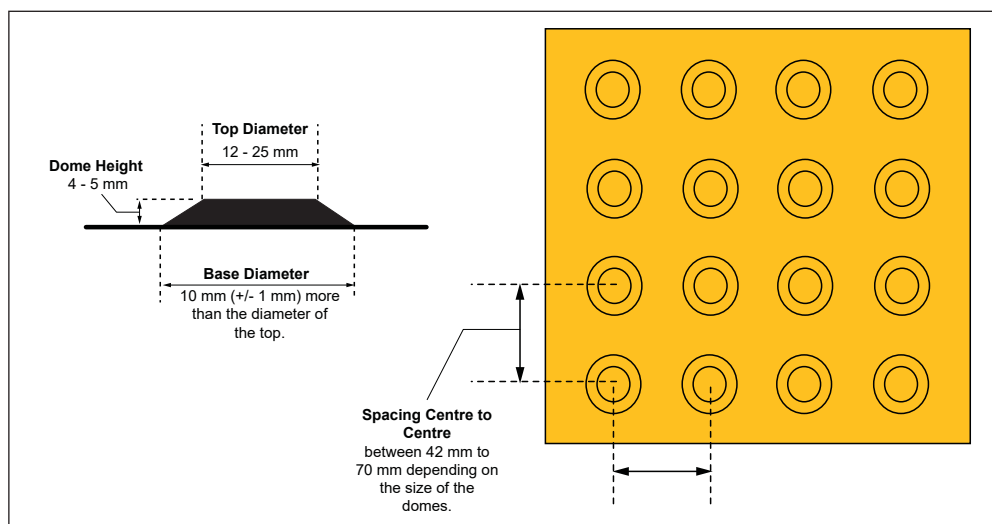


Figure 17: Truncated Dome Specification



Application

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

Reference

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

Best Practice

The provision of two drinking fountains at different heights meet the needs of most people (e.g., both standing and seated position).

Recessed drinking fountains (e.g., in alcoves) are preferred as they prevent potential bumping hazards.

Ensure pipes are positioned at rear of fountain and do not obstruct required clearances.

Note

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

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 Design and Layout

Where drinking fountains are provided:

- 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;
- where only one drinking fountain is provided, ensure it is an accessible lowered unit;
- ensure they are located adjacent to an accessible route, recessed or with a cane detectable feature with its leading edge at 680 mm (27 in) (maximum), if they protrude into an accessible route; and
- ensure drinking fountain fixtures provide high colour contrast with surroundings for easy identification.

2.8.2 Clear Floor Space Requirements and Approach

- provide clear floor space of 915 mm (36 in) wide by 1370 mm (54 in) deep (minimum) for forward approach (**Figure 18**);
- provide clear floor space of 1525 mm (60 in) wide by 915 mm (36 in) deep (minimum) for side approach (**Figure 18**);
- ensure one fully unobstructed side adjoins an accessible route or adjoins another clear floor area; and
- ensure clear floor space does not overlap the minimum space of the accessible route used to access the drinking fountain.

2.8.3 Knee and Toe Clearances

Where cantilevered drinking fountains are provided:

- ensure clear knee space under the fountain is 915 mm (36 in) wide by 200 mm (8 in) deep at 735 mm (29 in) (minimum) high above the floor (**Figure 19**);
- ensure clear toe space under the fountain is 350 mm (14 in) above the floor from a point of 300 mm (12 in) back from the front edge to the wall (**Figure 19**); and
- ensure depth at the base of the drinking fountain is 700 mm (28 in) (minimum).

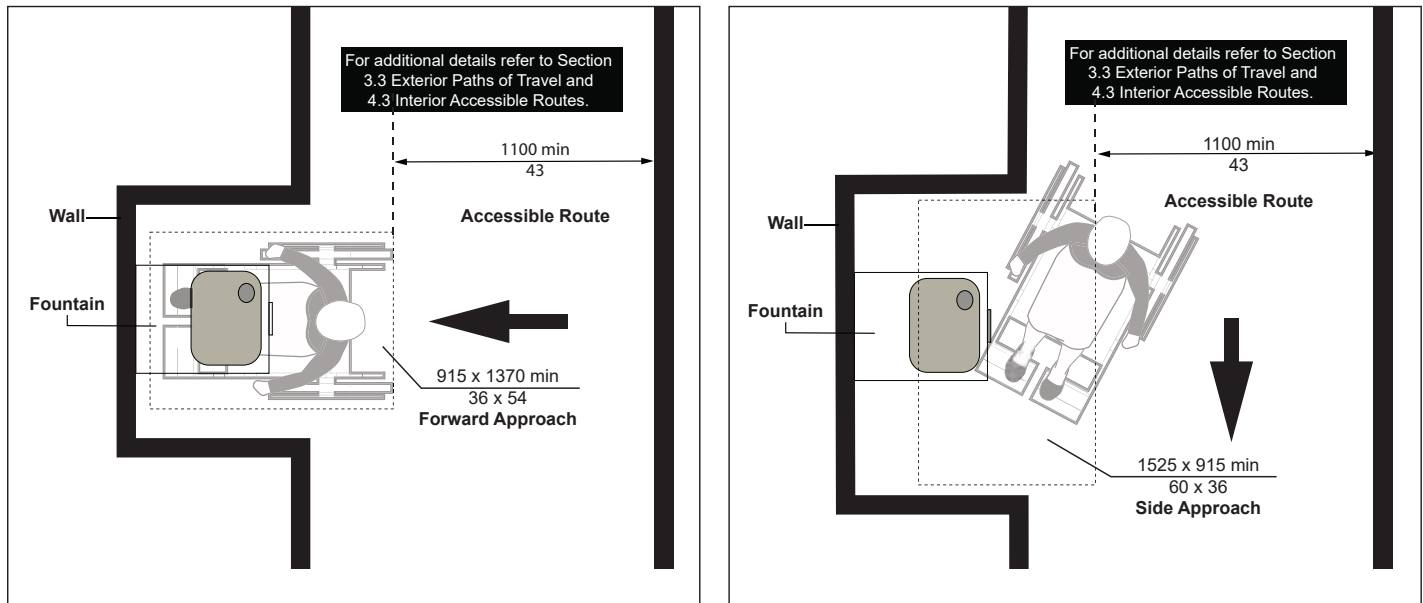


Figure 18: Clear Floor Space Requirements and Approach at Recessed Drinking Fountain - Plan View

2.8.4 Operating Controls

Ensure fountain operating controls are:

- not foot-operated;
- located at the front of the drinking fountain, between 760 mm (30 in) and 915 mm (36 in) high above floor (**Figure 19**); and
- operable with one hand, requiring a maximum force of 22 Newtons to operate without turning / twisting of the wrist or pinching of the fingers.

2.8.5 Water Spout

- mount no higher than 915 mm (36 in) above the finished floor (**Figure 19**);
- mount 125 mm (5 in) (maximum) from the front of the drinking fountain, including bumpers, and 380 mm (15 in) (minimum) from the vertical support (**Figure 19**);
- ensure water flows 100 mm (4 in) high (minimum); and
- ensure water flows at a vertical angle of:
 - 30 degrees maximum, where spouts are located less than 75 mm (3 in) from the front of the unit; or
 - 15 degrees maximum, where water spouts are located between 75 mm (3 in) and 125 mm (5 in) from the front of the unit.

Best Practice

Automatic or hands free operating controls are preferred.

Note

The purpose of requiring the drinking fountain to have a flow of water of 100 mm (4in) high (minimum) is so that a cup can be inserted under the flow of water for users who cannot use the drinking fountain.

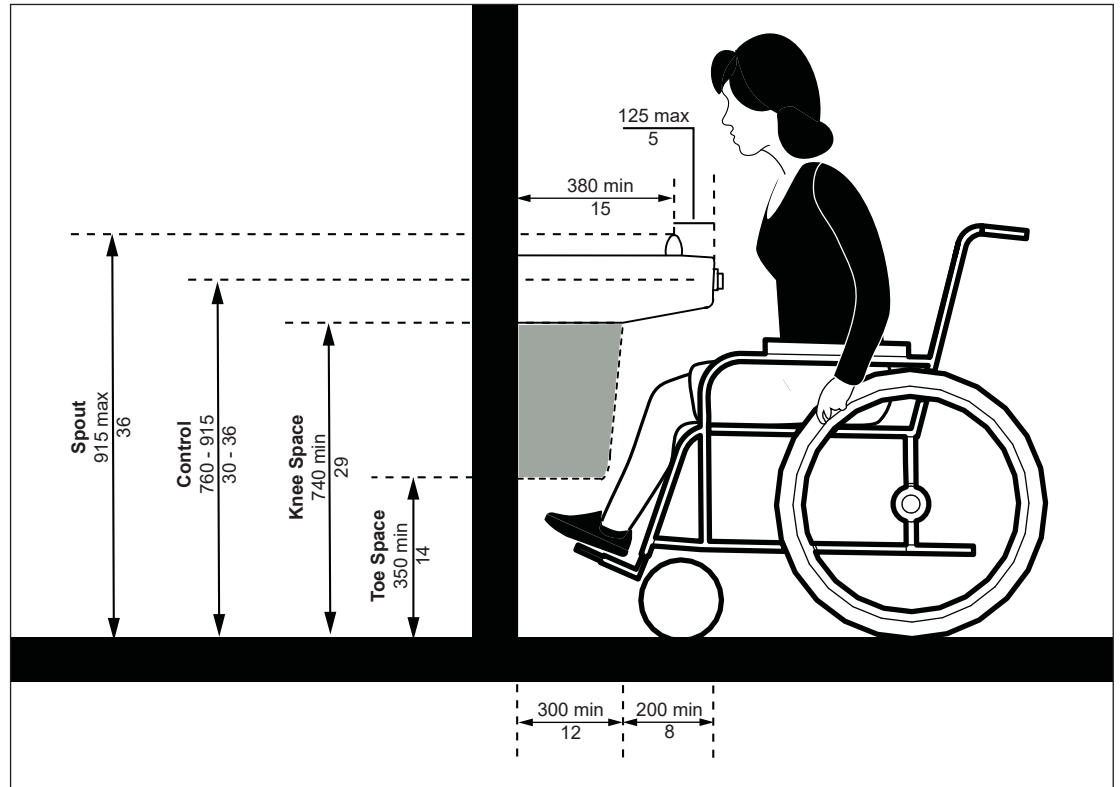


Figure 19: Drinking Fountain Design and Layout - Elevation View

A close-up photograph of a public telephone booth, showing the keypad and coin slot area, set against a dark blue background.

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 guidelines 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

Where public telephones are provided,

- a. ensure at least one accessible telephone unit on each accessible floor level as identified in **Table 2**; and
- b. if only one is provided, ensure it is accessible with built-in shelf or counter.

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 centered in front of accessible telephone unit (e.g., can be wall-mounted or hung in an enclosure) of:
 - i. 915 mm (36 in) wide by 1370 mm (54 in) depth (minimum) for a forward approach (**Figure 21**); and
 - ii. 1525 mm (60 in) wide x 915 mm (36 in) depth (minimum) for a side approach (**Figure 21**);
- d. ensure accessible public telephones are located adjacent to an accessible route, recessed or with a cane detectable feature with its leading edge at 680 mm (27 in (maximum) if they protrude into an accessible route;
- e. ensure overhead clearance of 2100 mm (83 in) (minimum);
- f. where seating is provided in floor space, ensure it can be moved to accommodate users of mobility aids and people who prefer to stand;
- 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) (average) over all controls and related features / signage.

2.9.3 Telephone Operating Controls

- provide push button controls with large size numbers;
- ensure a high colour contrast is provided between button and background, as well as numbering;
- ensure controls have a matte finish;
- mount operating controls, including coin and card slots, push buttons and dispensers, 1200 mm (47 in) (maximum) from floor level (**Figure 20**);
- ensure maximum reach to all operating controls is 485 mm (19 in) from front edge of phone cabinet or shelf;
- provide cord for telephone handset with length of 735 mm (29 in) (minimum); and
- 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.

The number five '5' key of a 12-key telephone key pad to be tactilely distinct from the other keys.

Note

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

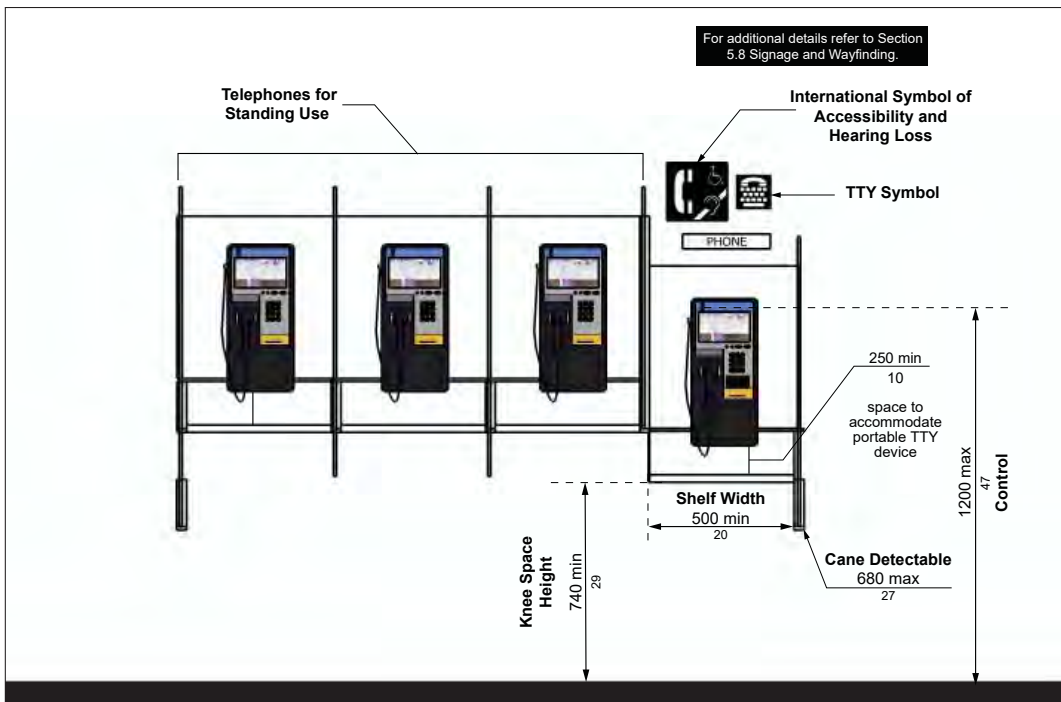


Figure 20: Public Telephone Provision and Layout - Front View

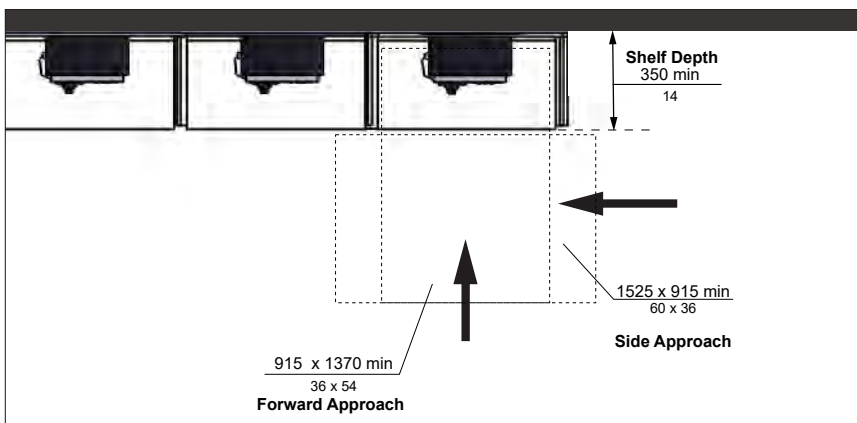


Figure 21: Clear Floor Space Requirements at Accessible Public Telephone - Plan View

Note

Norfolk County does not currently provide TTY devices in its facilities. This section may be used as guidance should the County provide TTY devices in the future.

2.9.4 Shelves and Counters

Where more than one telephone is provided for public use, provide a built-in shelf or counter for at least one telephone underneath telephone (**Figure 20**):

- ensure shelf or counter is level;
- 500 mm (20 in) wide by 350 mm (14 in) deep (minimum);
- mount top surface between 775 mm (31 in) and 875 mm (34 in) high above the floor;
- ensure knee clearance is 740 mm (29 in) high (minimum); and
- ensure a clear space of 250 mm (10 in) (minimum) high between the top of the shelf and the lower edge of the phone.

2.9.5 Text Telephones (TTYs)

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

- provide signage with the International Symbols of Accessibility and Hearing Loss and symbol for TTY, to identify its location;
- 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; and
- provide long cord on telephone handset to allow connection to text telephone (TTY), if acoustic coupler is used.



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;
- outdoor public use eating areas;
- 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.

Note

Where only one bench is provided, ensure it is accessible with a three arm rest configuration: one provided at each end and one within the middle.

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:

- provide a seat height at 430 to 460 mm (17 in to 18 in) above finished floor / ground (**Figure 22**);
- ensure seat depth between 510 to 610 mm (20 in to 24 in);
- provide back support:
 - 1065 mm (42 in) (minimum) long, extending 51 mm (2 in) (maximum) above the seat surface to 455 mm (18 in) above the seat surface;
 - 64 mm (2 ½ in) (maximum) from the rear edge of the seat, measured horizontally;
- provide at least one (1) arm rest for additional support and an additional arm rest in the middle where benches are longer;
- ensure bench is stable at all times; and
- ensure seating surfaces provide a high colour contrast with surroundings to enhance visibility.

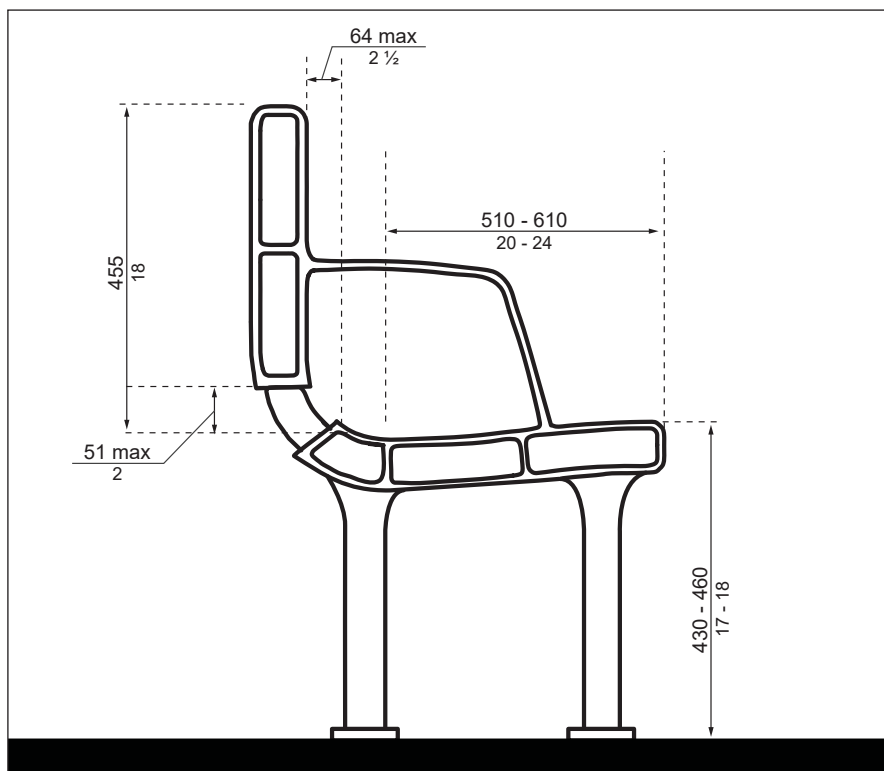


Figure 22: Typical Accessible Bench Dimensions - Section View

2.10.2 Tables and Work Surfaces

- ensure top surface is between 730 and 865 mm (29 and 34 in) high (**Figure 23**);
- provide minimum clear knee space of 915 mm (36 in) wide by 480 mm (20 in) deep by 680 mm (27 in) high (**Figure 23**);
- where toe clearance is required based on table design, ensure toe space is 350 mm (14 in) (minimum) high by 230 mm (9 in) (minimum) deep;
- ensure top surface and edges provide a high colour contrast with adjacent surroundings to enhance visibility; and
- ensure clear floor space in front of table and work surfaces for users of mobility aids is:
 - 915 mm (36 in) wide by 1370 mm (54 in) deep (minimum), of which 480 mm (20 in) (maximum) may be under the table for forward approach; and
 - 1525 mm (60 in) wide by 915 mm (36 in) deep (minimum) for a side approach.

Best Practice

Adjustable tables can accommodate diverse users.

Provide a clear floor space or ground surface with turning diameter of 1700 mm (67 in), to allow both side and front approach by users of larger wheeled mobility aids, such as powered scooters and wheelchairs.

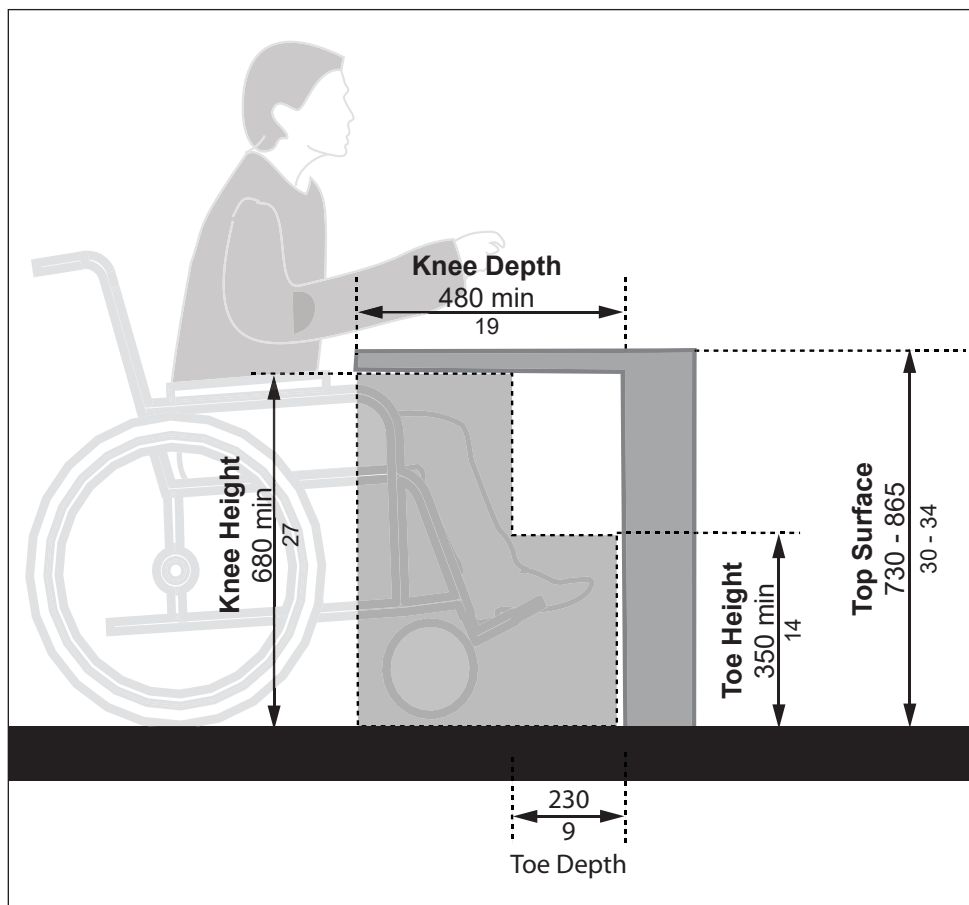


Figure 23: Tables and Work Surfaces Knee and Toe Clearances - Elevation View

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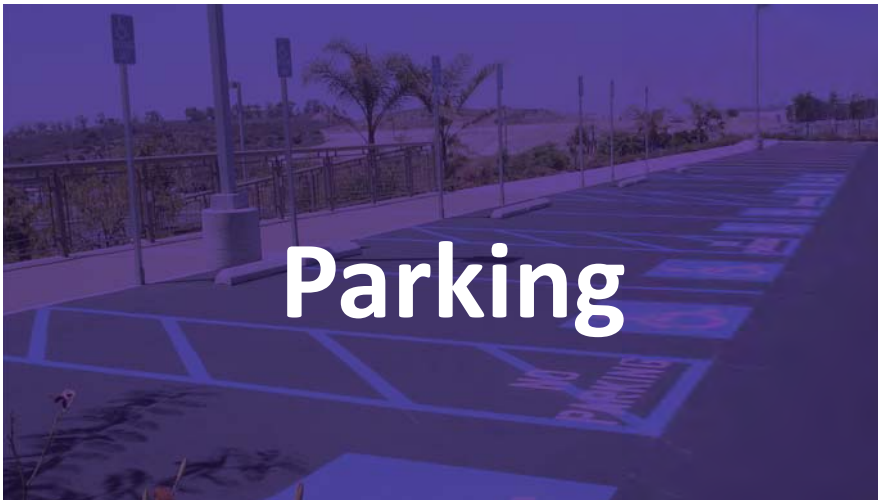
Exterior Environments

3.0

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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.

Reference

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

Exception

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

- buses;
- delivery vehicles;
- law enforcement vehicles;
- medical transportation vehicles, such as ambulances; and
- impounded vehicles.

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

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

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.

Note

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

3.1.1 Types of Parking

Two (2) types of accessible parking spaces are required where parking is provided (excluding on-street parking):

- a. **Type A** spaces consist of wider parking spaces which accommodate larger vehicles such as vans that are equipped with transfer ramps for users of wheeled mobility aids; and
- b. **Type B** spaces are standard parking spaces which accommodate users who are ambulatory but have limited mobility and cannot travel lengthy distances, or use other mobility aids, such as canes, crutches and walkers.

3.1.2 Provision

- a. provide Type A and Type B parking spaces in accordance with **Table 3**:

Table 3: Accessible Parking Provision Requirements

Total Number of Parking Spaces	Total Number of Accessible Spaces Required	Number of Type A	Number of Type B
1 - 25	1	1	0
26 - 50	2	1	1
51 - 75	3	1	2
76 - 100	4	2	2
101 - 133	5	2	3
134 - 166	6	3	3
167 - 250	7	3	4
251 - 300	8	4	4
301 - 350	9	4	5
351 - 400	10	5	5
401 - 450	11	5	6
451 - 500	12	6	6
501 - 550	13	6	7
551 - 600	14	7	7
601 - 650	15	7	8
651 - 700	16	8	8
701 - 750	17	8	9
751 - 800	18	9	9
801 - 850	19	9	10
851 - 900	20	10	10
901 - 950	21	10	11
951 - 1000	22	11	11
1000 +	11 +1 % of total	(1) Where an even number is required, provide equal number of Type A and B (2) Where an odd number is required, provide equal number of Type A and B plus an additional Type B.	

- b. where a parking facility serves multiple buildings or accessible entrances, distribute accessible parking spaces to enable users to park near as many accessible entrances as possible;
- c. where more than one parking facility is provided at a site:
 - i. ensure the number and type of accessible parking spaces provided is determined based on the total number of parking spaces required for each of the separate parking facilities; and
 - ii. locate and distribute accessible parking spaces among the off-street parking facilities in a manner that provides substantially equivalent or greater accessibility in terms of distance from an accessible entrance or user convenience (e.g., protection from weather, lighting, security and comparative maintenance).
- d. where the parking facility is a multi-level parking facility, ensure the accessible parking spaces are easy to identify and have at least one accessible route leading to an entrance, exit or elevator lobby.

Best Practice

Where possible, consider providing Type B parking spaces 2600 mm (102 in) wide.

Accessible parking spaces and adjacent access aisles should be regularly maintained, kept clear of debris and snow, and where possible, have overhead protection.

Where spaces are configured such that the front or rear of the parked vehicles is immediately adjacent to a pedestrian walkway, consider vehicle overhangs which could reduce the width of the walkway.

Provide additional vertical height clearance of 2750 mm (108 in) to accommodate larger vehicles.

3.1.3 Design and Layout (Type A and B)

- 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 (228 in) (**Figure 24a**);
- f. width of 3400 mm (134 in) for “Type A” van accessible spaces and width of 2400 mm (94 in) for “Type B” standard parking spaces (**Figure 24a**);
- g. ensure spaces are clearly indicated by high contrast and white colour line markings;
- h. provide an access aisle adjacent and parallel to each accessible parking space (**Figure 24a**):
 - i. 1500 mm (59 in) wide (minimum);
 - ii. extending the full length of the space;
 - iii. clearly indicated by high contrast and white colour diagonal pavement markings; and
 - iv. where two accessible parking spaces are provided adjacent to each other, they 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. provide accessible parking spaces at the same level as accessible path of travel where possible or provide curb ramps at relevant transition areas;

3.1 Parking

- k. ensure overhead clearance of 2100 mm (83 in) high (minimum) at designated accessible parking spaces and along the vehicle access and egress routes; and
- l. ensure lighting level is 10 lux (1 foot-candles) (minimum).



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



Accessible parking spaces and access aisle.

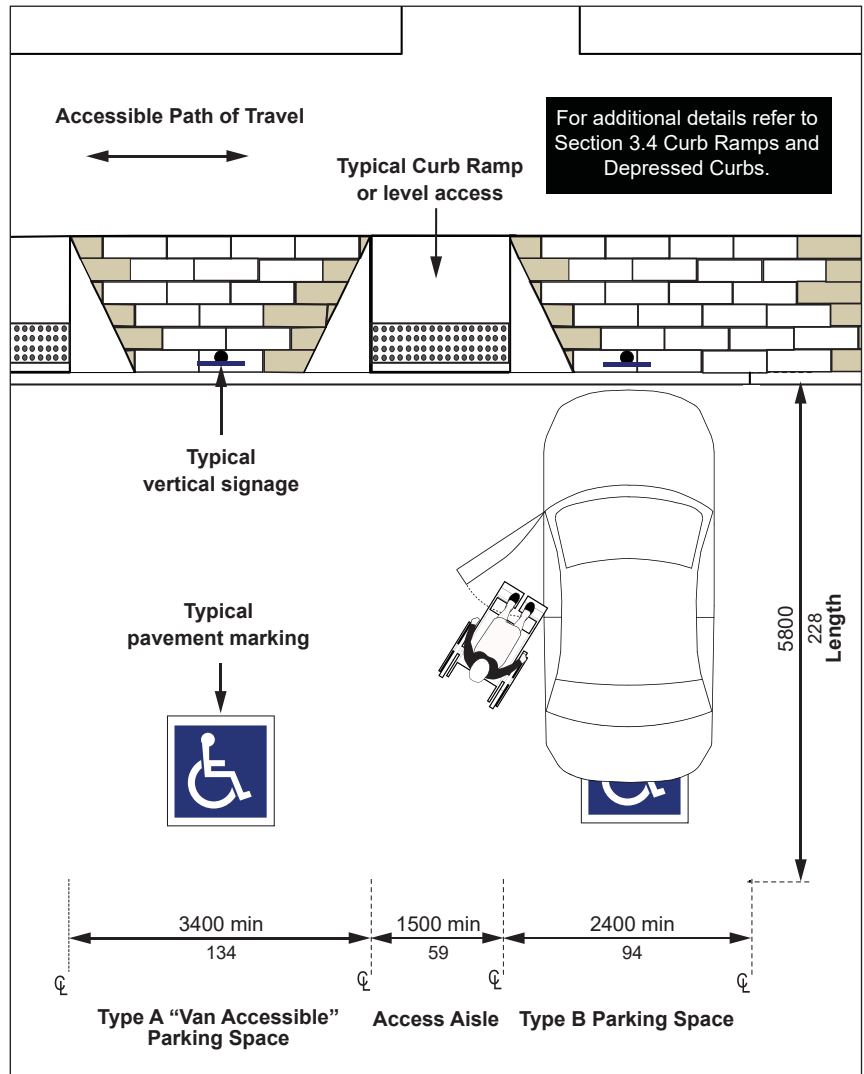


Figure 24a: Accessible Parking Space Dimensions - Plan View

3.1.4 On-Street Parking

3.1.4.1 Consultation Requirements

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

- a. the public and persons with disabilities; and
- b. the Norfolk County Accessibility Advisory Committee.

3.1.4.2 Design and Layout - Parallel Parking Space

- a. location(s) to be determined based on consultation and broader streetscape design, including the provision of curb ramp, clear space, recessed access aisle (on curb side), rear access aisle and other requirements identified **(Options Figure 24b and 24c)**;
- 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 (228 in) **(Options Figure 24b and 24c)**;
- f. width of 3900 mm (181 in), typical **(Options Figure 24b and 24c)**;
- g. ensure spaces are clearly indicated by high contrast and white colour line markings;
- h. provide access aisle at rear of space or recessed into adjacent boulevard **(Options Figure 24b and 24c)** that:
 - i. extends full width or length of space;
 - ii. is 2000 mm (79 in) wide preferred, or 1500 mm (59 in) (minimum), where technically infeasible due to roadway, boulevard and parking space layout constraints; and
 - iii. is clearly indicated by high contrast and white colour diagonal pavement markings;
- i. ensure access aisle at rear or side of space leads directly to accessible curb ramp and path of travel;
- j. provide clear space of 2440 by 2440 mm (96 by 96 in) (minimum) at sidewalk level and adjacent to the passenger side or recessed access aisle;
- k. ensure provision of vertical signage, located at the front of space (on the sidewalk) and pavement signage (centred);
- l. ensure overhead clearance of 2100 mm (83 in) high (minimum) at designated accessible parking spaces and along the vehicle access and egress routes; and
- m. ensure lighting level is 10 lux (1 foot-candles) (minimum).

Note

Where roadway and other design constraints are identified during consultation (e.g., provision of typical width of 3900 mm (181 in), access aisles or curb ramps etc. is not technically feasible), consideration for the provision of accessible parallel parking spaces at other on-street locations may be required.

Additionally, provision of accessible parking spaces at alternate off-street locations (e.g., municipal lots) may be a preferred option due to design constraints (e.g., at existing on-street parallel parking space locations).

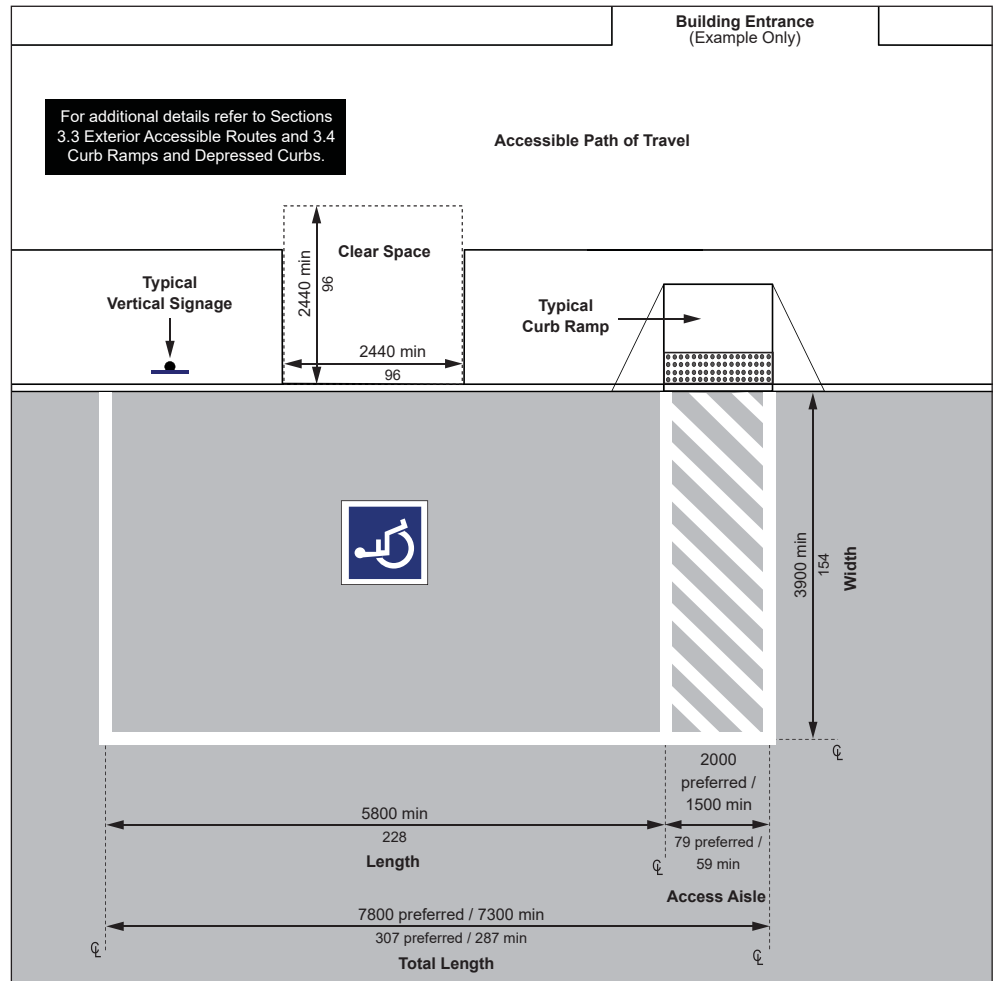


Figure 24b: Conceptual Layout for Typical On-Street, Parallel Parking - Plan View

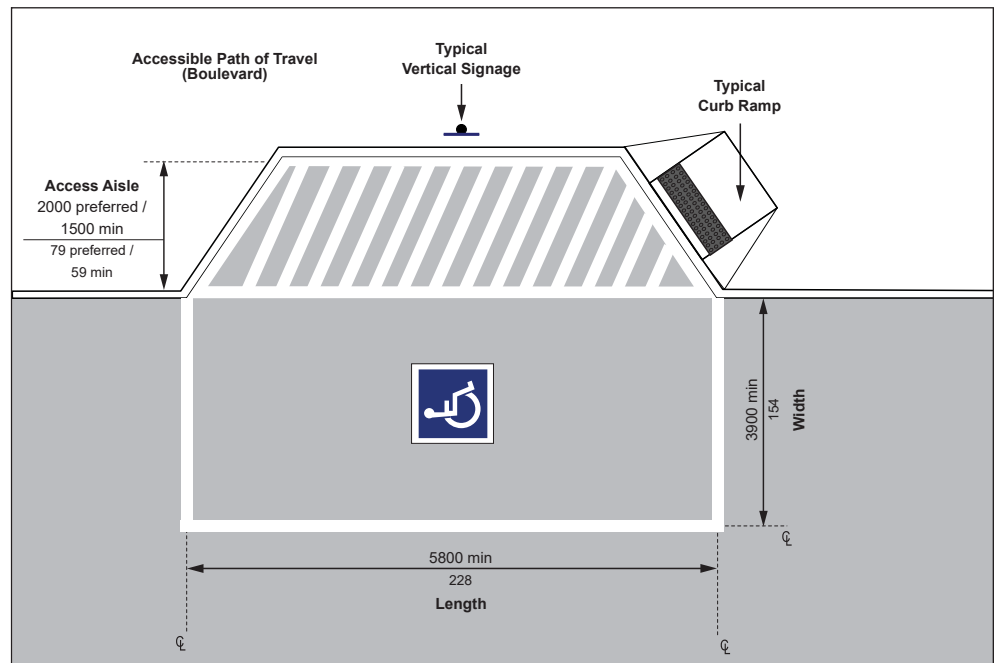


Figure 24c: Conceptual Layout for Typical On-Street, Parallel Parking with Recessed Access Aisle - Plan View

Note

For additional information regarding Norfolk County zoning By-law requirements, refer to County By-law 2011-189.

3.1.5 Signage and Pavement Markings

- a. ensure spaces are clearly designated with pavement and vertical signage, containing the International Symbol of Accessibility (**Figure 25 & 26**); and
- b. provide directional signage, marked with the International Symbol of Accessibility, to indicate the location of designated accessible parking spaces, and / or the location of the nearest accessible entrance if the spaces or entrance are not easy to locate when entering or using the site.

3.1.5.1 Vertical Signage

- a. mark with International Symbol of Accessibility;
- b. ensure size of 300 mm (12 in) wide by 450 mm (18 in) high (minimum);
- c. mount at height of 1500 mm to 2000 mm (59 to 79 in) (centre) (e.g., wall or post-mounted), from ground / floor (**Figure 25**);
- d. ensure a high colour contrast is provided between sign and background environment;
- e. provide information text, compliant with County By-law requirements;
- f. provide additional signage that identifies Type A spaces as “van accessible”; and
- g. provide Type B space signage for parallel, on-street parking spaces (**Figure 25**).

3.1.5.2 Pavement Markings

- a. mark with International Symbol of Accessibility;
 - i. ensure 1525 mm wide by 1525 mm depth (minimum) (**Figure 26**);
 - ii. provide a white or yellow border with a blue background field colour;
 - iii. locate near the back of the space for 90 degree or angled parking spaces and centered for parallel parking spaces; and
- b. ensure all pavement markings are slip resistant and clearly visible through use of high colour contrast and white colour line markings compared to the surface of the parking space.

3.1 Parking

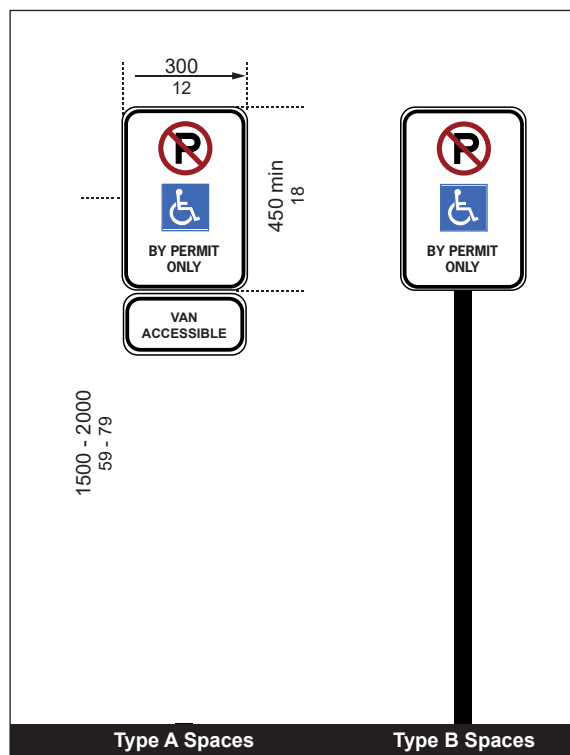


Figure 25: Accessible Parking Vertical Signage

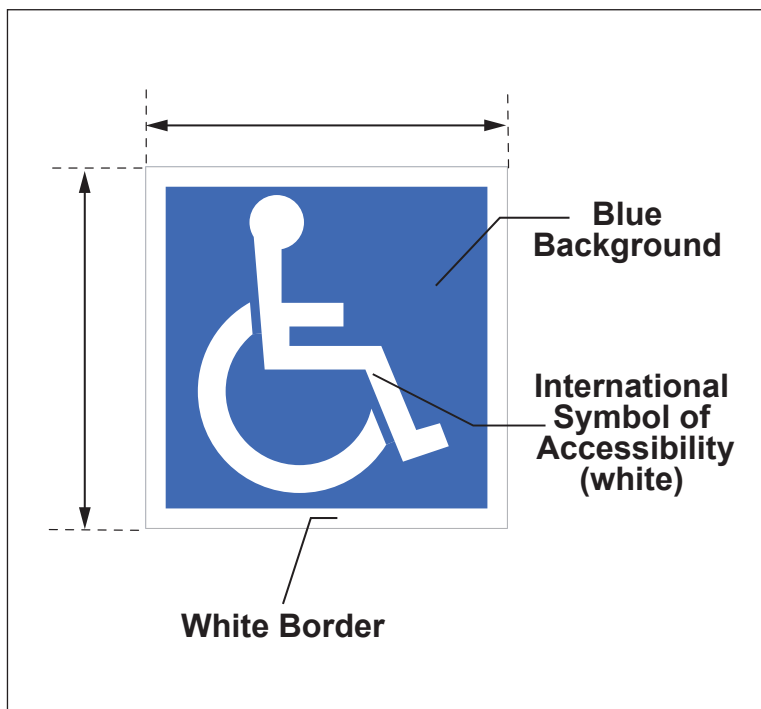


Figure 26: Accessible Parking Pavement Markings



Passenger Loading Zones

3.2

Application

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

Passenger loading and drop-off zones are important features for people who have difficulty walking long distances or have limited stamina, 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. 2.7 Tactile Walking Surface Indicators
- Sec. 3.3 Exterior Paths of Travel
- Sec. 3.4 Curb Ramps and Depressed Curbs
- Sec. 5.7 Lighting
- Sec. 5.8 Signage and Wayfinding

Note

Transit stops, shelters and related amenities are not classified as part of passenger loading zones and are not covered within the scope of these guidelines.

Best Practice

Consider providing access aisle 3050 mm (120 in) wide by 7925 mm (312 in) 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 (98 ft) (maximum);
- b. locate the PLZ away from any traffic flow and design so that users avoid entering any adjacent vehicular routes and drive aisles;
- c. where practical, provide overhead protection (e.g., a canopy to protect users from weather conditions) with clearance (i.e., vertical dimension) of 3600 mm (142 in) (minimum) throughout vehicular pull-up space and passenger loading zone;
- d. include a side access aisle that (**Figure 27**):
 - i. is adjacent, parallel and at the same level as the vehicular pull-up space;
 - ii. is 2440 mm (96 in) wide by 7400 mm (291 in) long (minimum);
 - iii. provides a clearance height of 3600 mm (142 in) (minimum) at the vehicle pull-up space and along the vehicle access and egress routes; and
 - iv. provides diagonal pavement markings (e.g., yellow or white colour and are clearly visible through use of high tonal contrast compared to surface), extending the full length of the space;
- e. provide at least one curb ramp, for users of mobility aids, where there is a change in level; and
- f. where the accessible route and the access aisle are not separated by a curb, consider installing tactile walking surface indicators (TWSIs) or other warning features (e.g., bollards). If using TWSIs, ensure that they:
 - i. are detectable by foot or cane;
 - ii. are clearly visible through the use of high tonal contrast compared to adjacent mounting surface; and
 - iii. extend across the full length of the space.

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 (12 in) wide by 450 mm (18 in) high (minimum);
- c. mount at height of 1500 to 2000 mm (59 to 79 in) (centre) (e.g., wall or post-mounted), from ground / floor;
- d. ensure a high colour contrast is provided between sign and background environment, where possible; and
- e. provide information text, compliant with County By-law requirements.

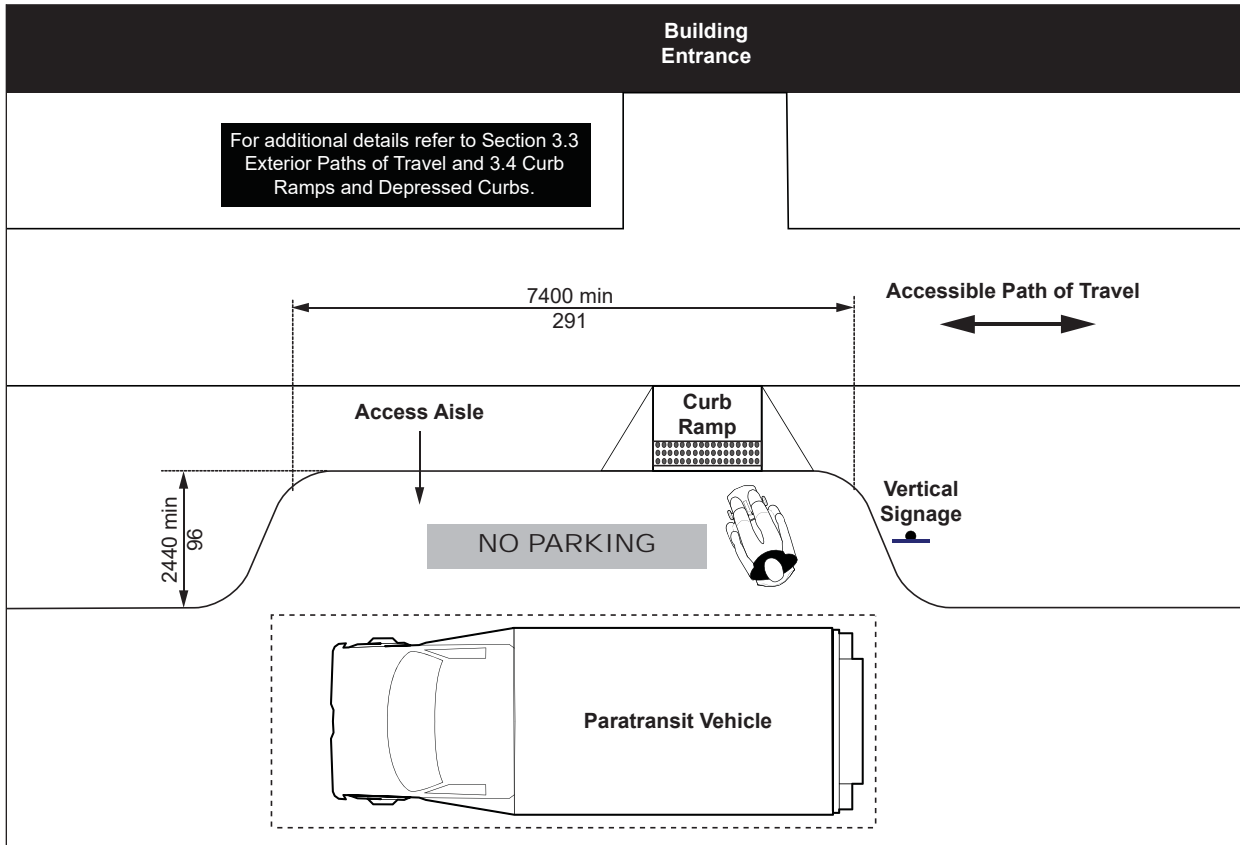


Figure 27: Passenger Loading Zone - Plan View

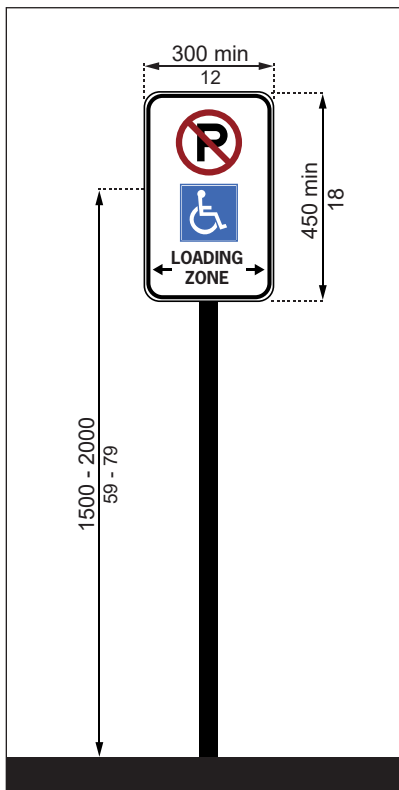
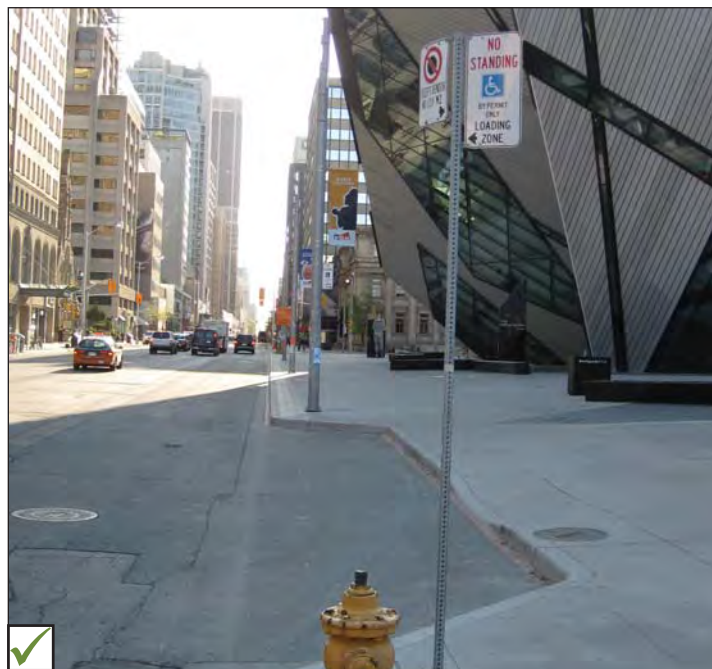


Figure 28: Accessible Passenger Loading Zone Vertical Signage



Example of designated accessible passenger loading zone and signage.



Application

This section applies to exterior paths of travel, 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 paths of travel 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 paths of travel 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 and Depressed Curbs
- Sec. 5.7 Lighting
- Sec. 6.16 Recreational Trails, Beach Access Routes and Boardwalks
- Sec. 6.18 Inclusive Play Spaces

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. provide adequate drainage to prevent water accumulation;
- c. ensure headroom clearance is not less than 2100 mm (83 in);
- d. provide colour contrast of 70% (minimum) on ground surfaces to distinguish the edges of exterior accessible paths of travel and assist with wayfinding;
- e. where a pedestrian route crosses or joins a vehicular route and the walking surfaces are not separated by curbs, railings or other elements between the pedestrian and vehicular areas, provide tactile walking surface indicators (TWSI), continuous along the full length of the crossing boundary; and
- f. ensure components along a pedestrian route (e.g., stairs, ramps and rest areas) provide lighting level of 50 lux (5 foot-candles) (minimum).

Best Practice

Where possible, provide clear width of 1800 mm (71 in) (minimum) for exterior paths of travel.

Cross slope gradient of 1:50 (2%) or less is recommended.

3.3.2 Clear Width

- a. provide clear width of 1500 mm (59 in) (minimum) (**Figure 29a**);
- b. where the clear width of exterior paths of travel is reduced to 1200 mm (47 in) (minimum), provide a passing area, 1800 mm (71 in) wide by 1800 mm (71 in) long (minimum), at intervals of 30 metres (98 ft) or less (**Figure 29b**); and
- c. ensure the entrance to exterior paths of travel provide a clear opening of 850 mm (33 in) (minimum), whether the entrance includes a gate, bollard or other entrance design.

Exception

Curb ramps and depressed curbs are excepted from the running slope requirements for exterior paths of travel.

3.3.3 Running and Cross Slopes

3.3.3.1 Running Slope

- a. ensure a running slope gradient of 1:20 (5%) (maximum) (**Figure 30a**);
- b. where slope gradient exceeds 1:20 (5%), path of travel is considered a ramp; and
- c. where the running slope exceed 1:20 (5%), provide a level rest area at 30 metres (98 ft) for people with limited stamina / mobility or users of mobility aids.

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.

3.3.3.2 Cross Slope

- a. provide a maximum cross slope of:
 - i. 1:20 (5%), where the surface is asphalt, concrete or some other hard surface (**Figure 30b**); or
 - ii. 1:10 (10%) in all other cases.

3.3.4 Rest Areas

When constructing new or redeveloping existing exterior paths of travel intended to be maintained, Section 2.6 “Rest Areas” applies.

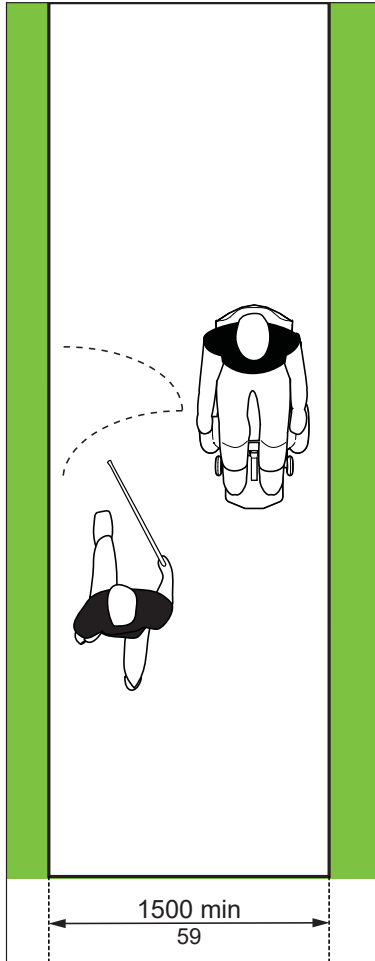


Figure 29a: Minimum Clear Width of Exterior Path of Travel

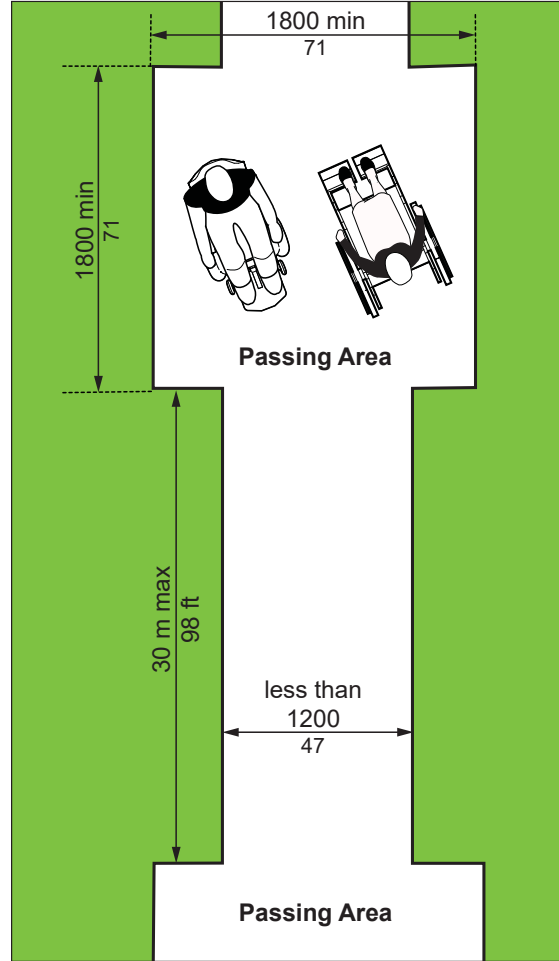


Figure 29b: Reduced Clear Width and Required Passing Area

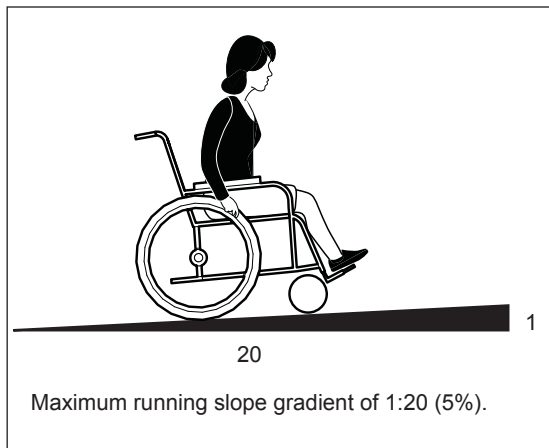


Figure 30a: Running Slope

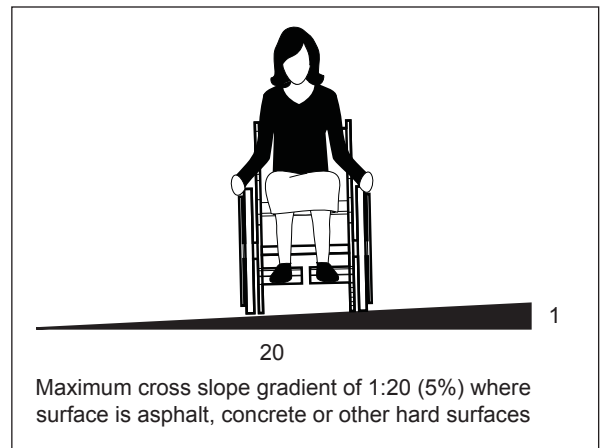


Figure 30b: Cross Slope

3.3.5 Changes in Level

- a. where there is a change in level along the exterior path of travel, ensure slope requirements are provided in accordance to **Table 4**:

Table 4: Change in Level - Slope Requirements

Change in Level (height)	Slope Requirements
1 - 5 mm (¼ in)	No bevel required
6 - 13 mm (¼ - ½ in)	1:2 bevel
14 - 74 mm (½ - 8 in)	maximum running slope 1:8 (12.5%) or provide a curb ramp
75 - 200 mm (3 - 8 in)	maximum running slope 1:10 (10%) or provide a curb ramp
more than 200 mm (8 in)	provide a ramp

Note

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

- b. where there is a change in level or drop-off immediately adjacent to the accessible path of travel (**Figure 31**),
 - i. provide colour contrasted curb or other barrier protection, 75 mm (3 in) (minimum) high above path of travel, where change in level is between 200 mm (8 in) and 600 mm (24 in); and
 - ii. provide guards mounted at 1070 mm (42 in) (minimum), measured vertically to the top of the guard from the ground surface, where change in level is more than 600 mm (24 in).

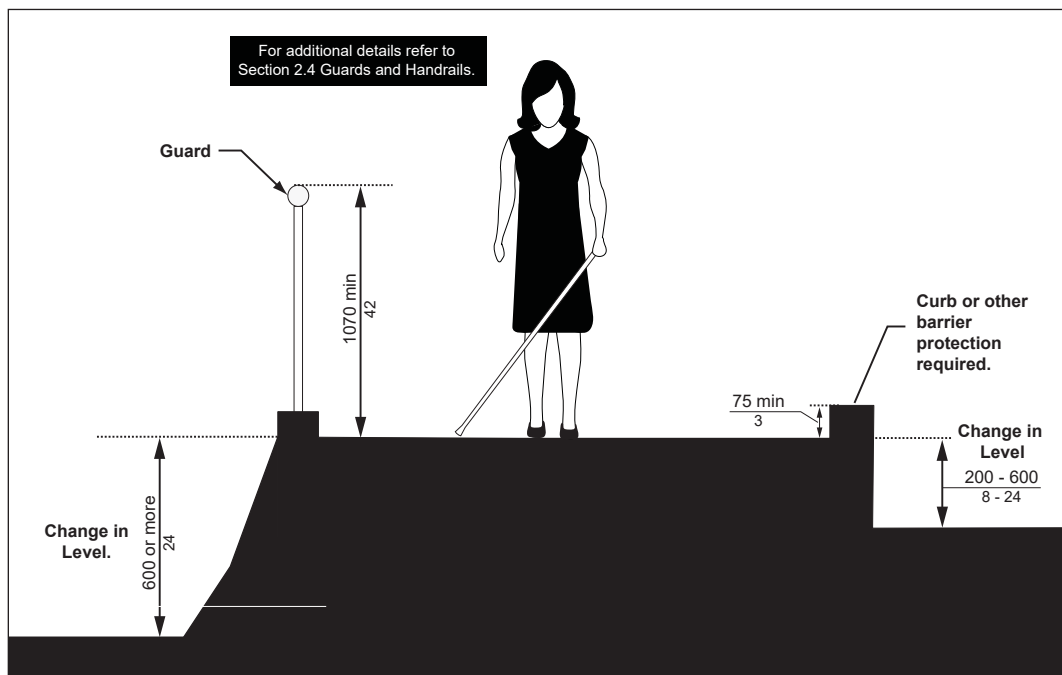


Figure 31: Curb protection and guard provision where there is a change in level adjacent to an accessible path of travel - Section View



3.4

Application

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

The provision of curb ramps 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 Paths of Travel

Best Practice

A transition area of 1675 mm (66 in) (or more) in diameter at top and bottom of the curb ramp is recommended, where possible, to accommodate larger wheeled mobility aids.

Provide a maximum running slope of 5% and cross slope of zero.

3.4.1 Design and Layout

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

3.4.2 Width

- a. provide clear width of 1500 mm (59 in) (minimum), exclusive of flared sides (**Figure 32a**).

3.4.3 Landing

- a. ensure a level landing, 1500 mm (59 in) (minimum) deep is provided at the top of the curb ramp (**Figure 32a**); and
- b. ensure running and cross slopes are 2% (1:50) (maximum).

3.4.4 Running and Cross Slopes

- a. provide maximum slope gradient of:
 - i. 1:8 (12.5 %), where elevation is less than 75 mm (3 in);
 - ii. 1:10 (10 %), where elevation is 75 mm (3 in) or greater and 200 mm (8 in) or less; and
 - iii. 1:20 (5%) (maximum) for depressed curbs (**Figure 32c**);
- b. ensure maximum cross slope of 1:50 (2%); and
- c. where the counter slope at a curb ramp or depressed curb is greater than 11%, provide a transition area that:
 - i. extends the full width of the curb ramp;
 - ii. begins at the base of the curb ramp and extends to a length of at least 600 mm on the street (**Figure 32b**); and
 - iii. has a maximum cross slope gradient of 1:50 (2%) maximum.

Best Practice

Cast iron (e.g., unpainted) TWSI plates are recommended for typical curb ramp applications.

Cast iron TWSI plates will develop a permanent patina that provides a high colour / tonal contrast compared to mounting surface.

3.4.5 Flared Sides

Where flared sides are provided:

- ensure surface is stable, firm, slip-resistant and non-glare;
- ensure the sides are clearly demarcated with grooved edges;
- provide width of 1000 mm (39 in) (minimum) (**Figure 32a**); and
- provide a slope gradient between 1:15 (6.67%, preferred) and 1:10 (10%, maximum), measured parallel to the curb line.

3.4.6 Tactile Walking Surface Indicator

Where curb ramps or depressed curbs are provided on an exterior path of travel, provide tactile walking surface indicators:

- in accordance with Section 2.7 “Tactile Walking Surface Indicators”;
- with a minimum depth of 610 mm (24 in) (minimum), extending the full width of the curb ramp or depressed curb (**Figure 32a**);
- installed at the bottom portion of the curb ramp or depressed curb, set back 150 to 200 mm (6 to 8 in) from the back edge of the curb; and
- ensure a high colour / tonal contrast is provided between the tactile walking surface indicator and the curb ramp mounting surface.

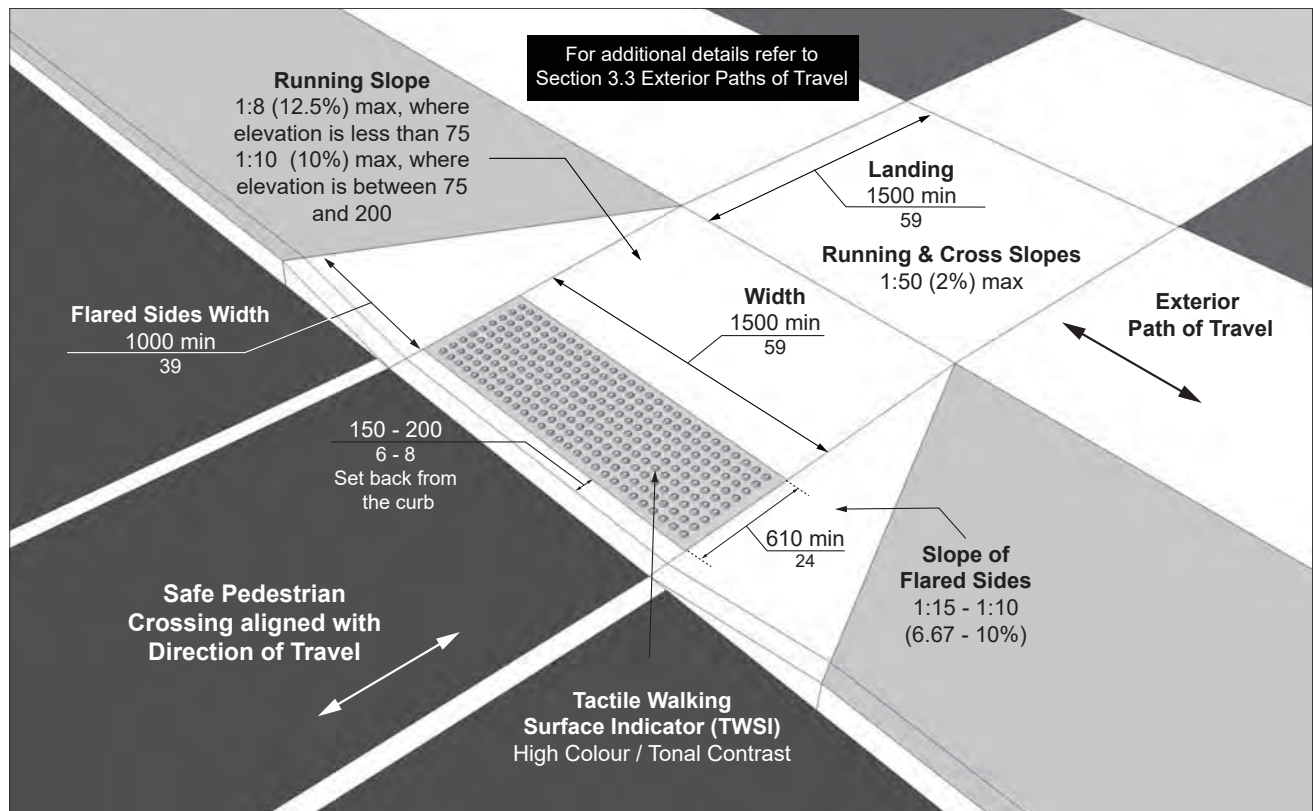


Figure 32a: Typical Curb Ramp Design

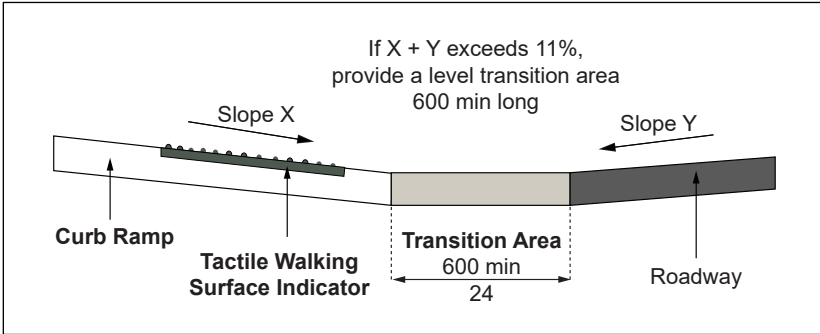


Figure 32b: Transition Area - Counter Slope

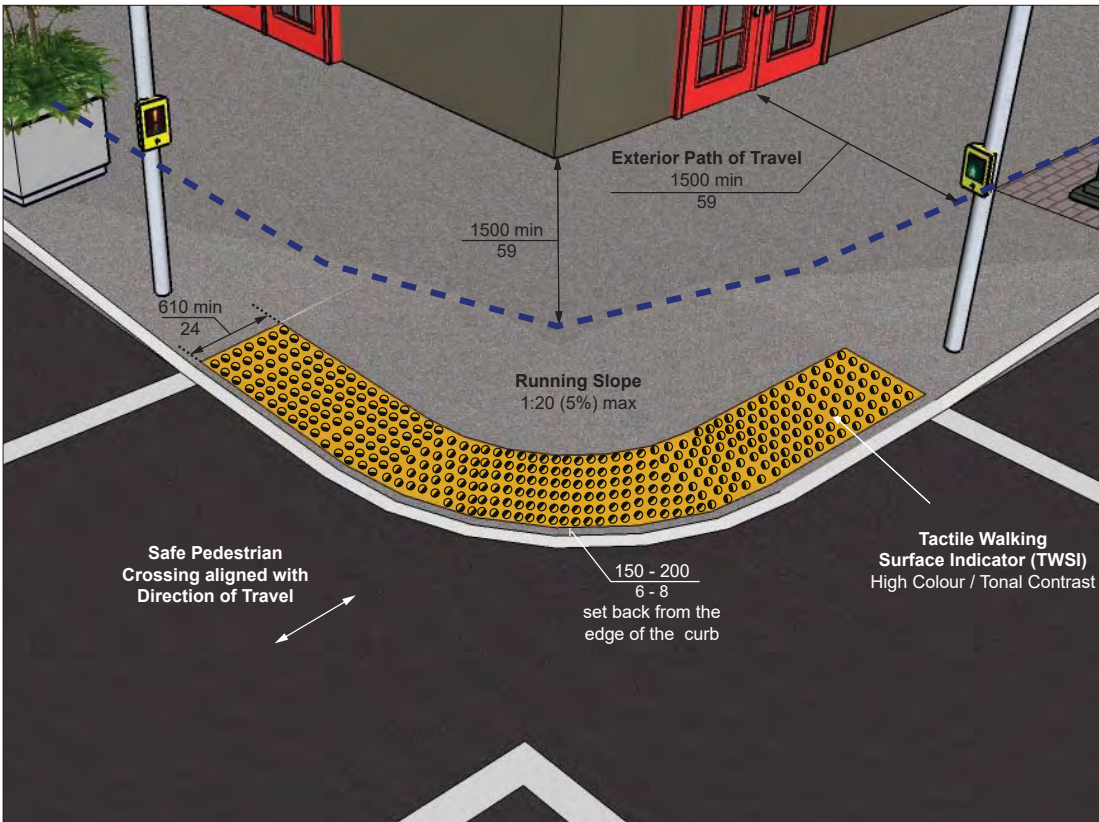


Figure 32c: Typical Depressed Curb Design



3.5

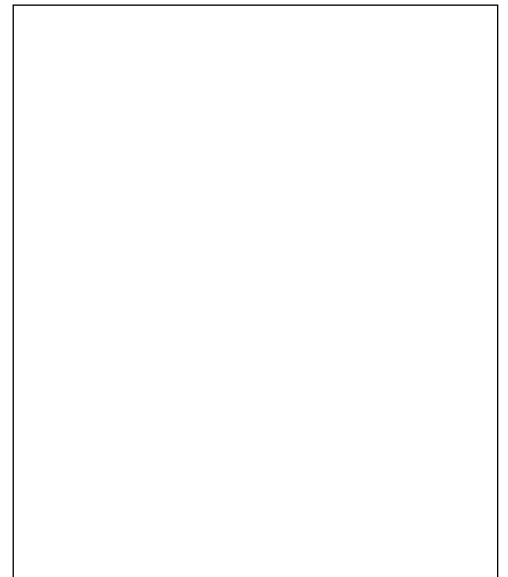
Application

This section addresses accessible pedestrian signals (APS) where provided at exterior paths of travel as per the Accessibility for Ontarians with Disabilities Act's Integrated Accessibility Standards Regulation: Design of Public Spaces Standard Clause 80.8.

APS are required for public safety at pedestrian crossings at vehicular roadways, including but not limited to, designated crosswalks and signalized intersections.

Note

Detailed information is provided in "Appendix A" of the Transportation Association of Canada's "Guidelines for Understanding, Use and Implementation of Accessible Pedestrian Signals" - August 2008 (or current version).



3.5.1 Provision

- a. provide accessible pedestrian signals (APS) where new pedestrian signals are being installed or existing pedestrian signals are being replaced at pedestrian cross overs.

3.5.2 Design & Layout

Accessible pedestrian signals to meet the following requirements:

- a. provide a locator tone that is distinct from a walk indicator tone;
- b. install within 1500 mm (59 in) of the edge of the curb;
- c. mount at 1100 mm (43 in) (maximum) high above ground;
- d. provide tactile arrows that align with the direction of crossing;
- e. include both manual and automatic activation features;
- f. include both audible and vibro-tactile walk indicators;
- g. where two APS assemblies are installed on the same corner, ensure they are installed a minimum of 3000 mm (118 in) apart; and
- h. where two APS assemblies cannot be installed 3000 mm (118 in) (minimum) apart because of site constraints or existing infrastructure:
 - i. install on a single post; and
 - ii. include verbal announcements clearly stating which crossing is active.

3.5.3 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).*

Note

The term “pedestrian crossover” is defined in the Highway Traffic Act as: “any portion of a roadway, designated by by-law of a municipality at an intersection or elsewhere, distinctly indicated for pedestrian crossing by signs on the highway and lines or other markings on the surface of the roadway as prescribed by the regulations.”



Typical APS actuation.

Street Furniture

3.6

Application

This section addresses street furniture, which includes but is not limited to amenities for outdoor spaces, right-of-ways, and accessible routes. Examples of typical street furniture includes:

- drinking fountains;
- public telephones;
- mailboxes;
- vending machines;
- benches;
- lighting elements; and
- waste receptacles.

Reference

- Sec. 2.8 Drinking Fountains
- Sec. 2.9 Public Telephones
- Sec. 2.10 Seating, Tables and Work Surfaces
- Sec. 5.1 Controls and Operating Mechanisms

3.6.1 General Requirements

- a. ensure street furniture does not obstruct accessible route;
- b. ensure movement or temporary removal of street furniture is not required to allow its access and use; and
- c. ensure the ground surface where the street furniture is located has a high colour contrast of 70% (minimum) compared with adjacent accessible route, and / or area is separated by colour contrasted border.

Best Practice

Wherever possible, provide clearly marked continuous amenity strips, 600 mm (24 in) wide (minimum), separated from the accessible route by a colour contrasted border, 300 mm (12 in) wide (minimum) (Figure 33).

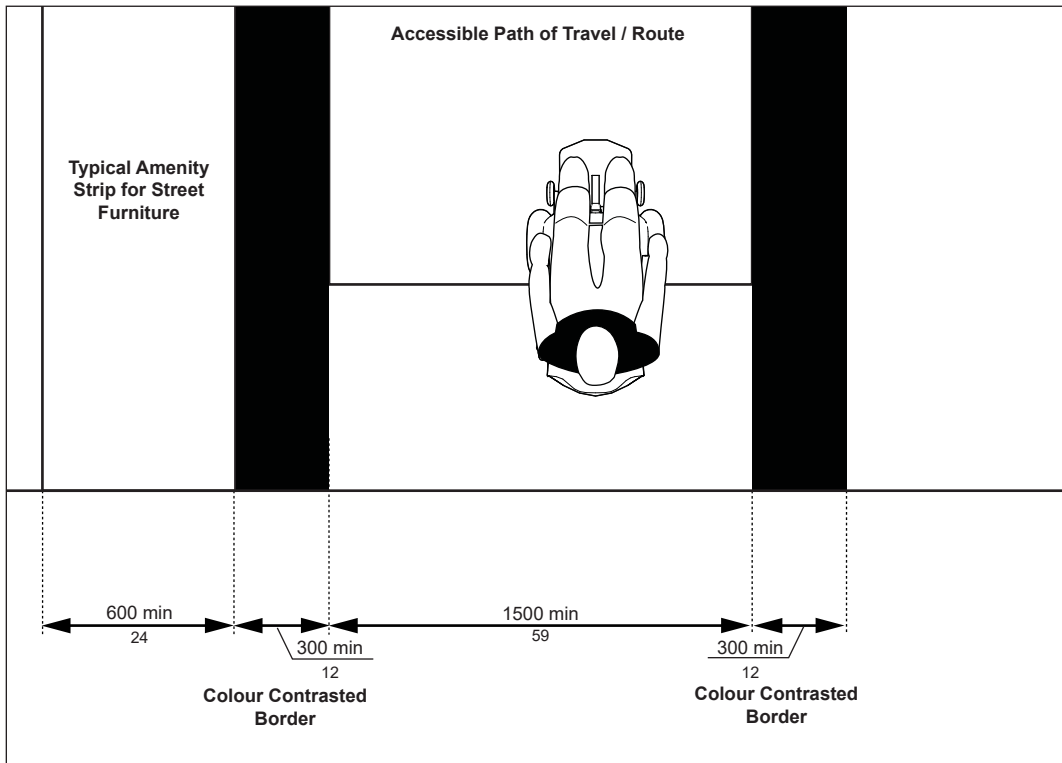


Figure 33: Typical Amenity Strip for Street Furniture Placement (Best Practice)

Site Plan Checklist

3.7

Application

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

Site Plan Checklist

Project Information	Applicant Contact Information		
Project name / reference no.: _____ Municipal address: _____ Application number: _____ Type of application: New construction <input type="checkbox"/> Renovation <input type="checkbox"/> Submission date : ____ / ____ / ____ Date reviewed: ____ / ____ / ____ Notes : _____	Name: _____ Phone number: _____ Address: _____ _____ _____		
Reviewed By Staff name: _____ Title / Position: _____ Department: _____ Phone Number: _____			
<table><tr><td data-bbox="66 1478 412 1934">Approval verification: <div data-bbox="110 1570 412 1894" style="border: 1px solid black; width: 186px; height: 154px; display: flex; align-items: center; justify-content: center; margin-top: 20px;">[Stamp]</div></td><td data-bbox="412 1478 1511 1934">Reviewed by Norfolk County Accessibility Advisory Committee? <input type="checkbox"/> Y <input type="checkbox"/> N Date of AAC review ____ / ____ / ____ AAC feedback received and addressed? <input type="checkbox"/> Y <input type="checkbox"/> N Staff signature _____ Date ____ / ____ / ____</td></tr></table>		Approval verification: <div data-bbox="110 1570 412 1894" style="border: 1px solid black; width: 186px; height: 154px; display: flex; align-items: center; justify-content: center; margin-top: 20px;">[Stamp]</div>	Reviewed by Norfolk County Accessibility Advisory Committee? <input type="checkbox"/> Y <input type="checkbox"/> N Date of AAC review ____ / ____ / ____ AAC feedback received and addressed? <input type="checkbox"/> Y <input type="checkbox"/> N Staff signature _____ Date ____ / ____ / ____
Approval verification: <div data-bbox="110 1570 412 1894" style="border: 1px solid black; width: 186px; height: 154px; display: flex; align-items: center; justify-content: center; margin-top: 20px;">[Stamp]</div>	Reviewed by Norfolk County Accessibility Advisory Committee? <input type="checkbox"/> Y <input type="checkbox"/> N Date of AAC review ____ / ____ / ____ AAC feedback received and addressed? <input type="checkbox"/> Y <input type="checkbox"/> N Staff signature _____ Date ____ / ____ / ____		

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

This section does not apply

Guideline Ref.	Requirements	Compliance	Comments
3.1.2	PROVISION: Minimum number and ratio of accessible parking spaces provided as required in sub-section 3.1.2 Provision Table 3.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	PATH OF TRAVEL: 1500 mm (59 in) wide to accessible entrance.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.1.3	LOCATION: within 30 m (98 ft) of accessible entrance.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	SURFACE: firm, stable and slip-resistant.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	RUNNING SLOPE: 1:50 (maximum).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	CROSS-SLOPE: 1:50 (maximum).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	OVERHEAD CLEARANCE: 2100 mm (83 in)	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	TYPE A SPACE: 3400 mm (134 in) wide x 5800 mm (228 in) long	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	TYPE B SPACE: 2400 mm (94 in) wide x 5800 mm (228 in) long	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	ACCESS AISLE: 1500 mm (59 in) wide, clearly marked, adjacent to accessible parking space. <i>Note: Two adjacent accessible parking spaces may share an access aisle.</i>	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.1.4	DIRECTIONAL SIGNAGE: provided to guide users to nearest accessible entrance.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.1.4.1	VERTICAL SIGNAGE	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	Width 300 mm (12 in) x Height 450 mm (18 in).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	Mounted 1500 to 2000 mm (59 to 79 in) high at centre.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	Marked with International Symbol of Accessibility.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.1.4.2	PAVEMENT SIGNAGE	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	Marked with International Symbol of Accessibility.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	Length 1525 mm (60 in) x Width 1525 mm (60 in) (minimum).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	

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

This section does not apply

Guideline Ref.	Requirements	Compliance	Comments
3.2.1	LOCATION: within 30 m (98 ft) of accessible entrance.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	LENGTH: 7400 mm (291 in) x WIDTH 2440 mm (96 in), clearly marked.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	VERTICAL CLEARANCE: 3600 mm (142 in) throughout vehicular pull-up space and passenger loading zone.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	PATH OF TRAVEL: 1500 mm (59 in) wide to accessible entrance.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	DIRECTIONAL SIGNAGE: provided to guide users to nearest accessible entrance.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.2.1.1	VERTICAL SIGNAGE:	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	Width 300 mm (12 in) x Height 450 mm (18 in).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	Mounted 1500 to 2000 mm (59 to 79 in) high at centre.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	

3. Exterior Paths of Travel (Ref. Section 3.3 Exterior Paths of Travel)

This section does not apply

Guideline Ref.	Requirements	Compliance	Comments
3.3.1	SURFACE: firm, stable and slip-resistant.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	LIGHTING: 50 lux (5 foot-candles) (minimum) at components (e.g., stairs, ramps and rest areas).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.3.2	CLEAR WIDTH: 1500 mm (59 in).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.3.3	RUNNING SLOPE: 1:20 (5%) (maximum). <i>Note: If walkways exceed 5%, a ramp is required.</i>	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	CROSS-SLOPE: 1:20 (5%) (maximum) for asphalt, concrete or some other hard surface or 1:10 (10%) (maximum) for other cases.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.3.4	REST AREA: provided at every 30 m (98 ft) along path of travel.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.3.5	EDGE PROTECTION OR GUARDS: provided at changes in level.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
2.1.5	GRATINGS AND OPENINGS: 13 mm (½ in) (maximum) wide in direction of travel.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	

4. Curb Ramps and Depressed Curbs (Ref. Section 3.4 Curb Ramps and Depressed Curbs)

This section does not apply

Guideline Ref.	Requirements	Compliance	Comments
3.4.1	SURFACE: firm, stable and slip-resistant.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	LANDING: 1500 mm (59 in) (minimum) in diameter at top and bottom.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.4.1.1	CLEAR WIDTH: 1500 mm (59 in) (minimum), exclusive of flared sides.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.4.1.2	RUNNING SLOPE: 1:8 (12.5%) (maximum) where elevation is less than 75 mm; 1:10 (10%) (maximum), where elevation is between 75 mm and 200 mm or 1:20 (5%) (maximum) for blended transitions.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.4.1.3	CROSS-SLOPE: 1:50 (2%) (maximum).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.4.1.4	TACTILE WALKING SURFACE INDICATORS (TWSI): 610 mm (24 in) deep, at 150 to 200 mm (6 to 8 in) from back edge of curb.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
3.4.1.5	FLARED SIDE (where provided): 1000 mm (39 in) wide; slope 1:15 to 1:10 (6.67% to 10%).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	

5. Ramps (Ref. Section 2.2 Ramps)

This section does not apply

Guideline Ref.	Requirements	Compliance	Comments
App.	Provided where ELEVATION is greater than 1:20 (5%).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
2.2.1	RUNNING SLOPE: 1:15 (6.67%).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	CROSS-SLOPE: 1:50 (2%).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	SURFACE: firm, stable and slip-resistant.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	CLEAR WIDTH: 1100 mm (43 in) (minimum).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	EDGE PROTECTION: provided, where ramps and landings are not level or where there is no solid enclosure or guard.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	COLOUR CONTRASTED STRIPS: 50 +/- 10 mm (2 in) wide, extending along the width of ramp.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	LIGHTING: 50 lux (5 foot-candles) (minimum).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	

5. Ramps Continued (Ref. Section 2.2 Ramps)

This section does not apply

2.2.2	LENGTH: 9000 mm (354 in) (maximum) or provide landing.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	LANDING:	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	Provided at top, bottom, intermediate level or where there is any directional change.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	1670 mm (66 in) x 1670 mm (66 in) at top and bottom landing.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	1670 mm (66 in) in length and same width as ramp.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
2.2.3	HANDRAIL: 865 to 965 mm (34 to 38 in) high on both sides. <i>Note: Refer to Section 2.4, Guards and Handrails for detailed requirements.</i>	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	

6. Stairs (Ref. Section 2.3 Stairs)

This section does not apply

Guideline Ref.	Requirements	Compliance	Comments
2.3.1	SURFACE: slip-resistant and non-glare.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	TREAD: 280 to 355 mm (11 to 14 in) deep, uniform.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	RISER: 125 to 180 mm (5 to 7 in) high, uniform.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	OPEN RISER: not permitted.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	NOSING PROJECTION: 38 mm (1 ½ in) (maximum).	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	NOSING STRIP: 50 +/- 10 mm (2 in) deep; colour contrasted, at leading edge of tread, extending full width of tread.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
	TACTILE WALKING SURFACE INDICATOR (TWSI): 610 mm (24 in) (deep, at top of stairs, one tread back). <i>Note: Refer to Section 2.7, Tactile Walking Surface Indicators for detailed requirements.</i>	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	
2.3.2	HANDRAIL: 865 to 965 mm (34 to 38 in) high on both sides. <i>Note: Refer to Section 2.4, Guards and Handrails for detailed requirements.</i>	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	

7. Building Entrance (Ref. Section 4.1 Entrances)

This section does not apply

Guideline 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) <i>Note: Refer to Section 4.7, Interior Maintenance Checklist.</i>	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	

Exterior Maintenance Checklist

3.8

Application

The following checklist is designed for use by Norfolk County 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 County (e.g., daily, weekly, monthly etc.), based on departmental responsibilities.

1. Signage <i>(Ref. Section 5.8 Signage and Wayfinding)</i> This section does not apply <input type="checkbox"/>				
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?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
2	Where provided, is signage (e.g., directional, identification signage) throughout exterior maintained and clearly visible?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
3	Is signage properly illuminated to ensure legibility?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
4	Is signage provided to identify amenities (e.g., public telephone) and is it clearly visible?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		

2. Accessible Parking Spaces and Passenger Loading Zones <i>(Ref. Section 3.1 Parking and 3.2 Passenger Loading Zones)</i> This section does not apply <input type="checkbox"/>				
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?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
7	Is the parking surface in good condition (e.g., free of disrepair such as cracks, heaving, uneven surfaces, potholes)?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
8	Are pavement markings provided at parking spaces legible?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		

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

Item	Requirements	Compliance	Accessibility Issues	Location Reference
9	Is vertical signage provided at designated accessible parking spaces clearly visible and in good condition?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
10	Where provided, are curb ramps kept free of obstructions (e.g., gravel / grit, snow and ice)?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
11	Are accessible routes from parking spaces leading to facility entrance clearly marked and free of obstructions?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
12	Is vertical signage provided at designated passenger loading zones clearly visible and in good condition?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		

3. Exterior Paths of Travel (Ref. Section 3.3 Exterior Paths of Travel) *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.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 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)?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
15	Where provided, are curb ramps kept free of obstructions (e.g., gravel / grit, snow and ice)?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
16	Are trees and other vegetation maintained (e.g., trimmed) to ensure that an overhead projection of 2100 mm (83 in) is provided throughout exterior?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		

Notes: _____

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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. 6.11 Service Counters
- Sec. 6.12 Waiting and Queuing Areas

Note

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

Best Practice

Consider providing automatic sliding doors at highly used entrances.

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

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.

4.1.1 Provision

- at least one main or primary entrance into a facility is required to be accessible (e.g., via level, sloped or ramped accessible routes);
- at least 50% of the total number of building entrances are required to be accessible, rounding up to the nearest whole number; and
- locate entrance 30 metres (98 ft) or less from designated accessible parking or passenger loading or drop-off zones.

4.1.2 Main or Primary Entrance Features

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

- locate as part of an accessible path of travel, including exterior landing area with 1700 mm (67 in) turning diameter (minimum);
- provide power door operator and mark door with International Symbol of Accessibility (**Figure 34**);
- 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;
- ensure clear door width of 860 mm (34 in) (minimum);
- where an entrance vestibule is provided, ensure:
 - the distance between the two doors in series is 1500 mm (59 in) (minimum), plus the width of the door swinging into the space; or
 - a turning space of 1500 mm (59 in) (minimum) diameter is provided where doors do not align; and
- where overhead protection (e.g., canopy) at pedestrian entrance and passenger loading or drop-off zones adjacent to the entrance is provided, ensure the height clearance is 2750 mm (108 in) (minimum) or 3600 mm (142 in) (preferred).

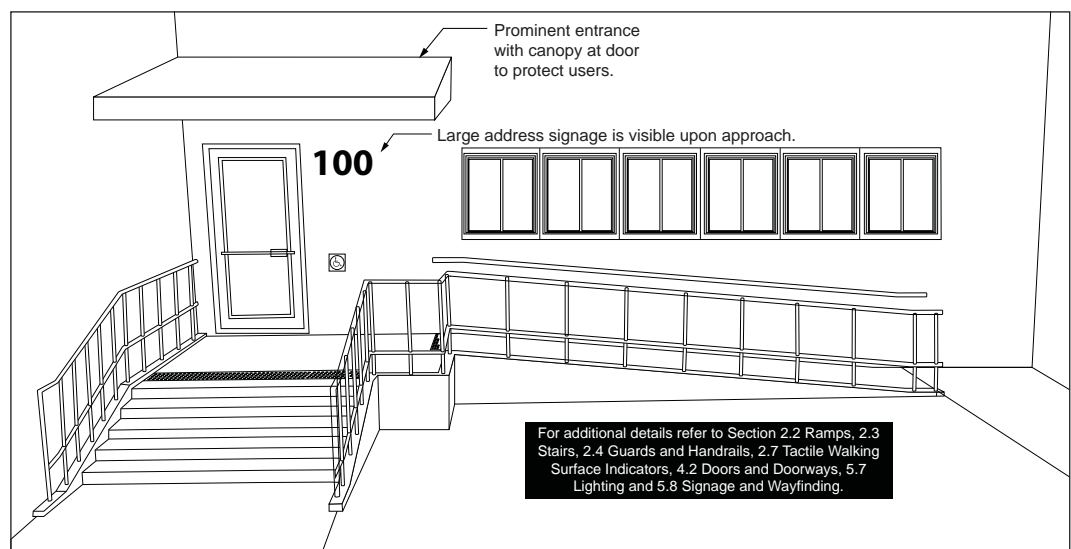
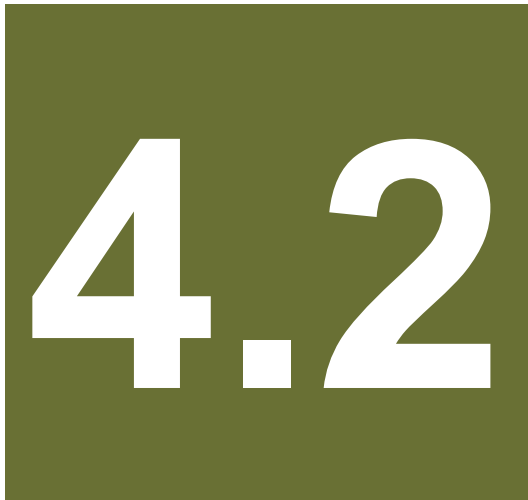
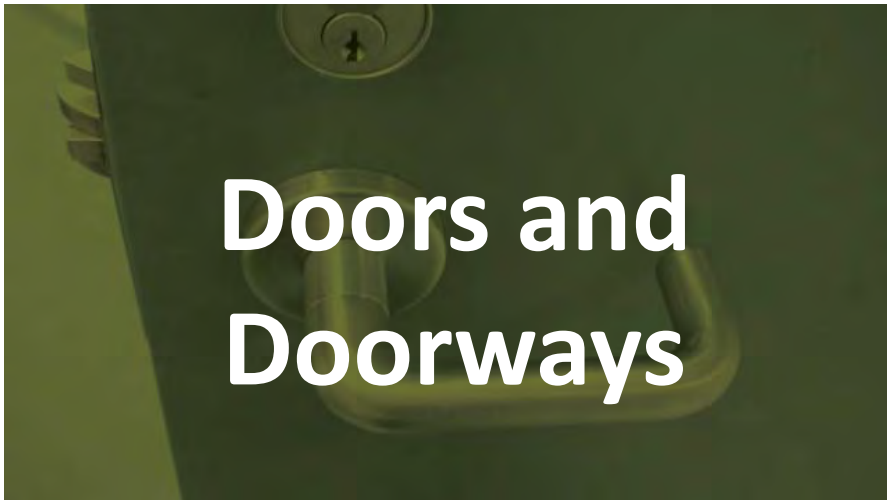


Figure 34: Main or Primary Entrance Features



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 leaves 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 electromagnetic 'hold-open' devices and door closer adjustments).

Best Practice

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

Note

For existing doors with panic hardware for exiting, often hardware projects more than 100 mm (4 in) and reduces required clear width.

To achieve required clear width of 860 mm (34 in) minimum, a door and frame system at 965 mm wide (38 in) minimum is typically required (e.g., measuring the full width, including the width / thickness of door stops on each side of the doorway, as well as the thickness of the door (which may vary)).

4.2.1 Clear Width

For all interior and exterior doors and doorways:

- provide a clear width of 860 mm (34 in) (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 (**Figure 35**); and
- where there is a projection into clear opening width, ensure it is 100 mm (4 in) (maximum) between 860 and 2030 mm (34 in and 80 in) high above floor (**Figure 35**).

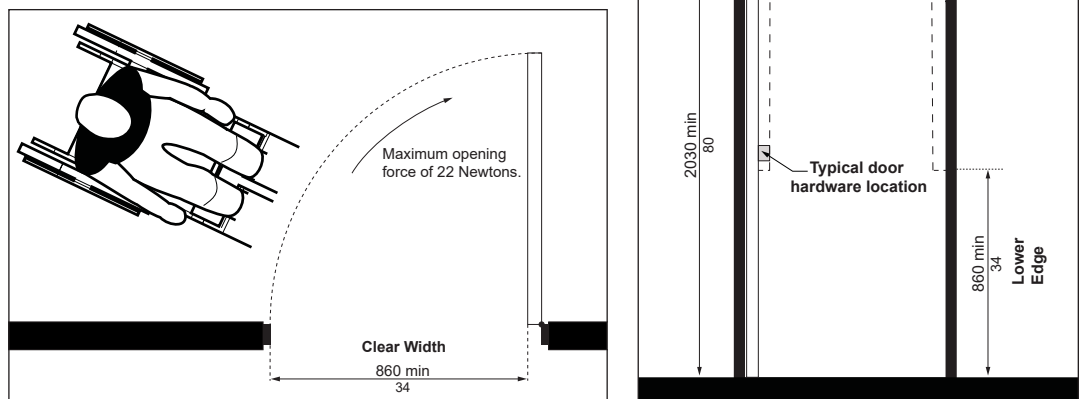


Figure 35: Clear Width of Doors - Plan and Elevation Views

4.2.2 Opening Force and Closers

4.2.2.1 Opening Force

The maximum opening force required for push / pull is:

- 38 Newtons (8.5 pounds) for exterior hinged doors;
- 22 Newtons (5 pounds) for interior hinged doors; and
- 22 Newtons (5 pounds) for sliding or folding doors.

4.2.2.2 Closers

- 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

- provide bevel at maximum slope of 1:2 (50%), where transition is between 6 and 13 mm ($\frac{1}{4}$ and $\frac{1}{2}$ in) high; and
- ensure threshold at door is not more than 13 mm ($\frac{1}{2}$ in) high.

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 (35 in) (minimum) and 1100 mm (43 in) (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 high colour contrast is provided between hardware finishes compared to mounting surface; and
- e. where door kick plates are provided, install 300 mm (12 in) 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.

4.2.6 Revolving Doors and Turnstiles

- a. provide accessible gate or door adjacent to turnstiles and / or revolving door, with clear width of 860 mm (34 in) (minimum) (**Figure 36**); and
- b. ensure accessible gate or door is clearly marked with International Symbol of Accessibility.

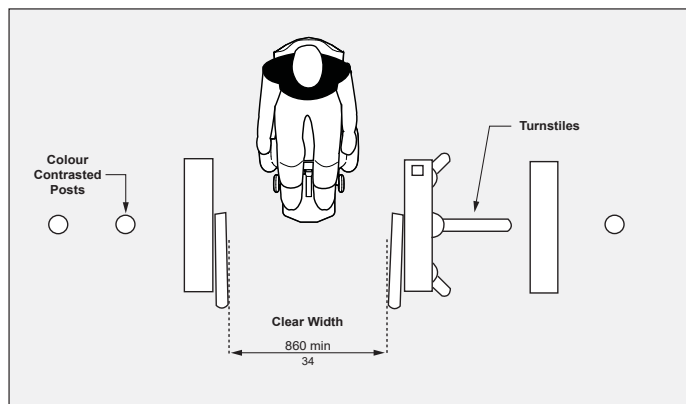


Figure 36: Accessible Controlled Gate

4.2.7 Automatic Doors

Where automatic doors are provided, which are 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.

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).

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.

Best Practice

For main entrances to larger facilities with high-occupancy load, an automatic sliding door system is recommended to control the flow of pedestrian traffic and facilitate access for the majority of users.

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 large meeting rooms, common areas and along paths of travel.

A vertical extended power door operator allows activation from any approach and height level (e.g., can be operated by service animals, foot or foot rest). (Figures 37 and 38b).

Note

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

4.2.8 Power-Assisted Doors

Power-assisted doors have two different types of operation:

- automatically activated by a motion detector or a floor pad sensor; and
- manually activated by pushing a control.

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

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

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

- interior doors along accessible routes and / or connecting accessible routes;
- doors into reception areas;
- doors into highly used functional spaces (e.g., larger multi-purpose rooms, meeting or board rooms); and
- doors leading to accessible exits and designated “Areas of Refuge”.



Figure 37: Example of Power Operator Control Promoting Universal Use

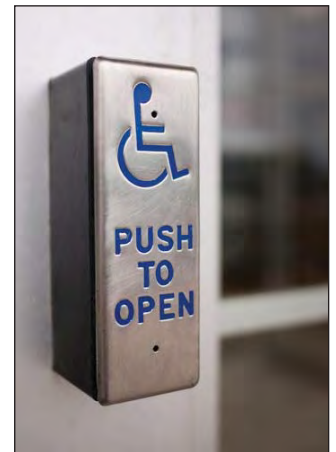
Where power-assisted doors are provided:

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

- 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 on the latch side;
 - ii. ensure control dimension is 150 mm (6 in) (minimum) in diameter where control is circular or 150 mm (6 in) wide by 915 mm (36 in) (minimum) where it is a vertical extended power door operator (Figure 38b and c);
 - iii. ensure colour contrast of 70% (minimum) is provided between activation device and mounting surface;
 - iv. ensure they project less than 100 mm (4 in) from mounting surfaces;
 - v. mark with International Symbol of Accessibility;
 - vi. ensure controls are operable with a closed fist;
 - vii. mount at height of 900 to 1100 mm (35 to 43 in) from ground or floor surface (Figure 38c);
 - viii. where rectangular extended power door operator controls are provided, mount so that they extend from not more than 200 mm (8 in) and not less than 900 mm (35 in) high above the floor (Figure 38b);
 - ix. mount between 600 mm (24 in) and 1500 mm (59 in), on a level wall surface or separate post, beyond the door swing where the door opens towards the control (Figure 38a, b and c); and
 - x. provide a minimum clear floor space of 1675 mm (66 in) by 1675 mm (66 in) in front of activation devices.

Note

Rectangular shaped power door operator control with dimensions of 50 mm (2 in) by 100 mm (4 in), may only be used for retrofit situations, where standard control sizes will not fit.



Example of rectangular shaped power door operator control to be used for retrofit situations only.



Example of power door operator control mounted at suitable distance from floor swing.

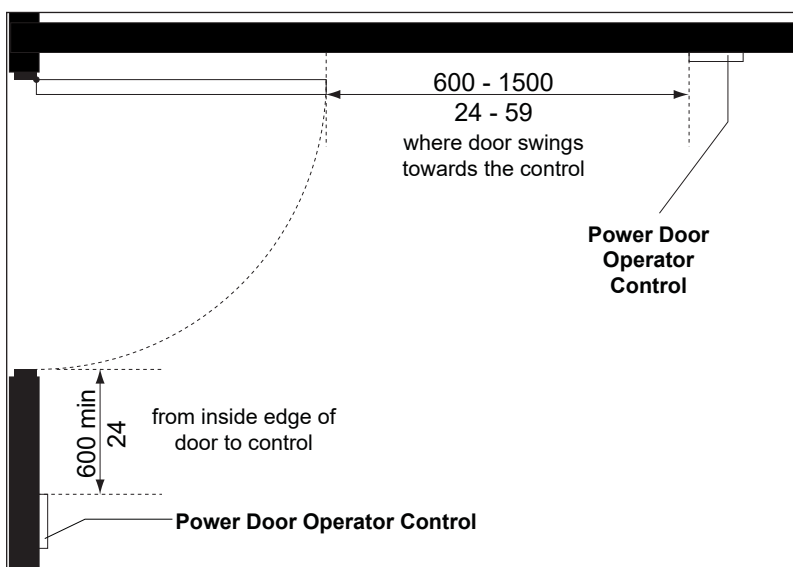


Figure 38a: Power Door Operator Control Mounting Location

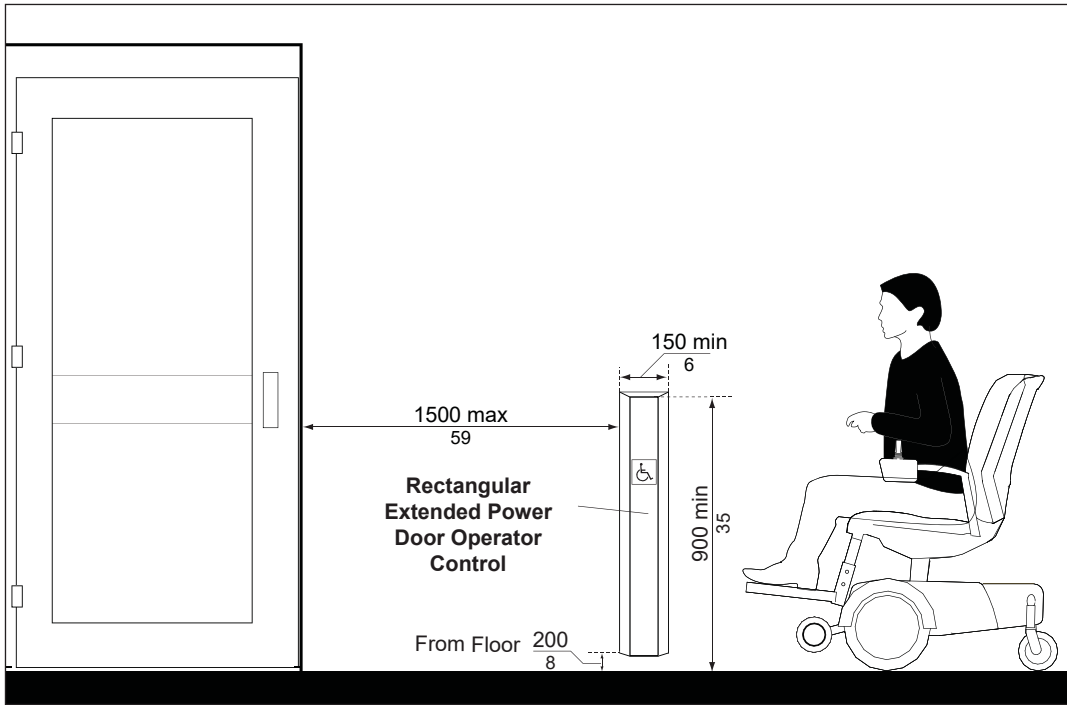
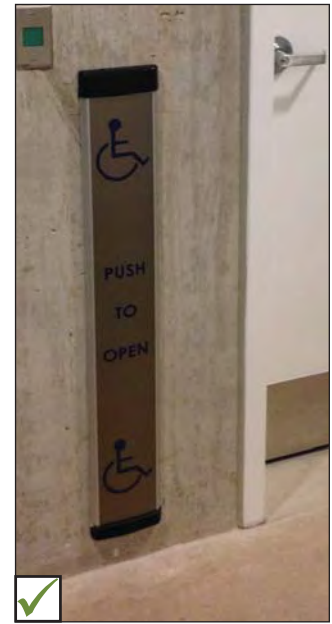


Figure 38b: Vertical Extended Power Door Operator - Elevation View



Example of large vertical extended power door operator control.

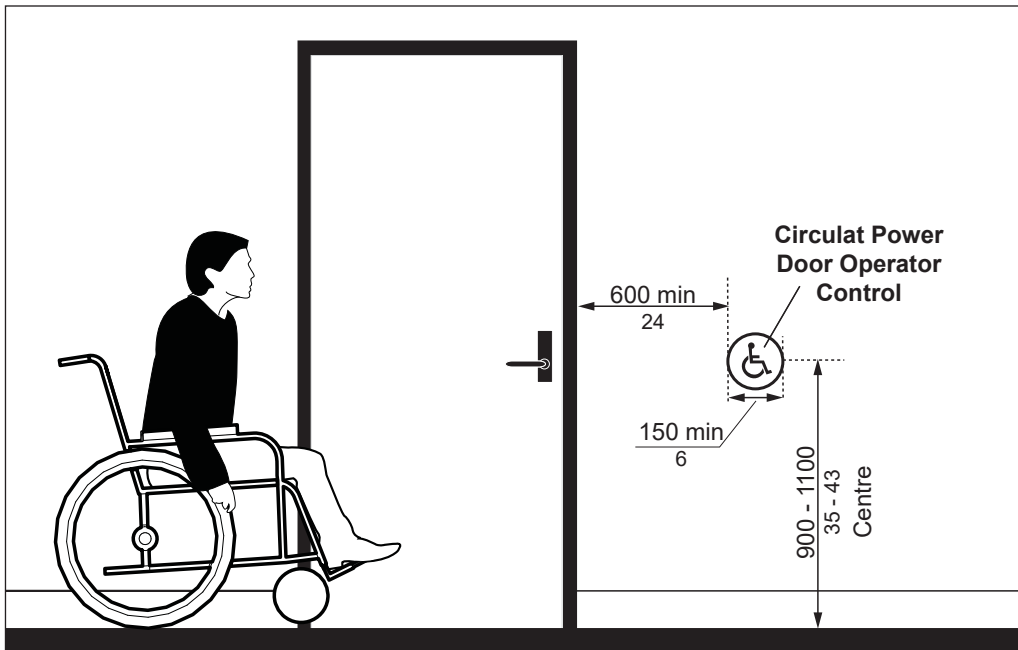


Figure 38c: Circular Power Door Operator Control - Elevation View



Example of circular power door operator control.

4.2.9 Doors swinging into Accessible Routes

Where automatic or power-assisted doors, whether activated by a control manually or automatically by a motion sensor or a floor-pad sensor that someone steps on (e.g., typically used at higher traffic doors), swing into an accessible path of travel:

- a. provision of recessed doors is preferred (**Figure 39a**); or
- b. for swinging doors opening into passing pedestrian traffic, provide cane detectable guards or other devices at right angles to the wall containing the door, with the lower rail surface mounted no more than 680 mm (27 in) high (maximum) from ground or floor surface, extending 300 mm (12 in) beyond the door swing, on both sides of doors (**Figure 39b**).

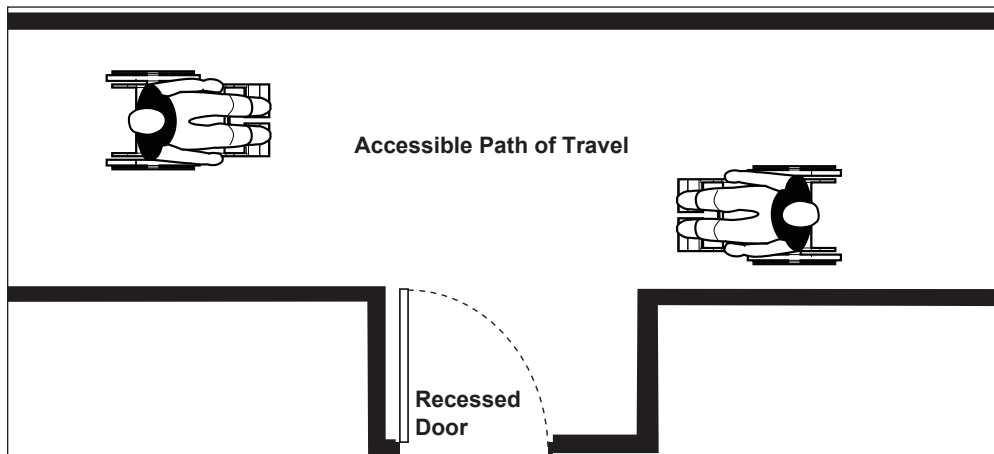


Figure 39a: Recessed Door - Plan View

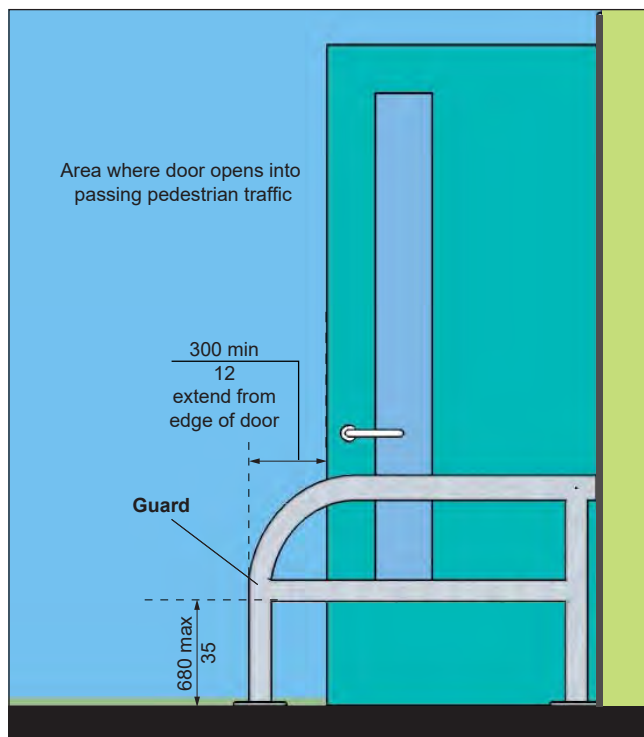


Figure 39b: Guard at Door - Elevation View

Best Practice

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

Note

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

Exception

Where door is equipped with power door operator, the clear space on the latch side of the door is not required.

4.2.10 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 5** with corresponding diagrams referenced.

Table 5: Minimum Clearance at Doors

Context	Floor Space Required in mm (in)		
	Depth (min.)	Width (min.)	Space Beside Latch
Recessed Door - Front Approach (Figure 40a and b)			
Pull side	1525 (59)	n/a	450 (18)
Push side	1220 (48)	n/a	300 (12)
Side-Hinged Door - Front Approach (Figure 40c)			
Pull side	1525 (59)	1600 (63)	600 (24)
Push side	1370 (54)	1250 (49)	300 (12)
Sliding Door (Figure 40d)			
Front approach	1370 (54)	1100 (43)	300 (12)
Side approach	1370 (54)	1550 (61)	600 (24)
Side-Hinged Door - Hinge Side Approach (Figure 40e)			
Pull side	2440 (96)	2440 (96)	600 (24)
Push side	1370 (54)	1830 (72)	450 (18)
Side-Hinged Door - Latch Side Approach (Figure 40f)			
Pull side	1370 (54)	1600 (63)	600 (24)
Push side	1370 (54)	1525 (60)	600 (24)
Folding Door			
Front approach	1220 (48)	610 (24)	n/a
Side approach	1220 (48)	610 (24)	n/a
Doorways Without Doors			
Front approach	1220 (48)	n/a	n/a
Side approach	n/a	1065 (42)	n/a

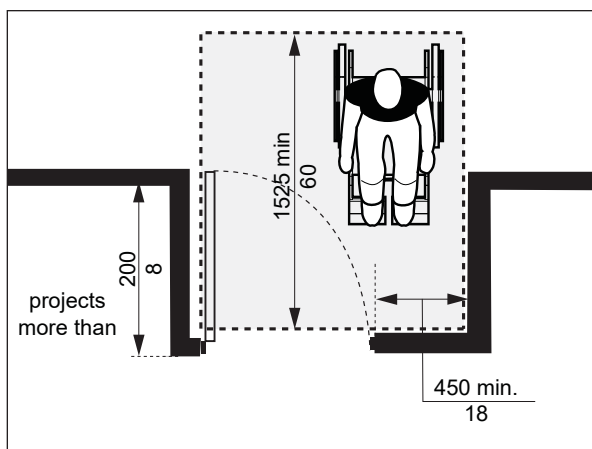


Figure 40a: Pull Side Approach at Recessed Side-Hinged Door - Plan View

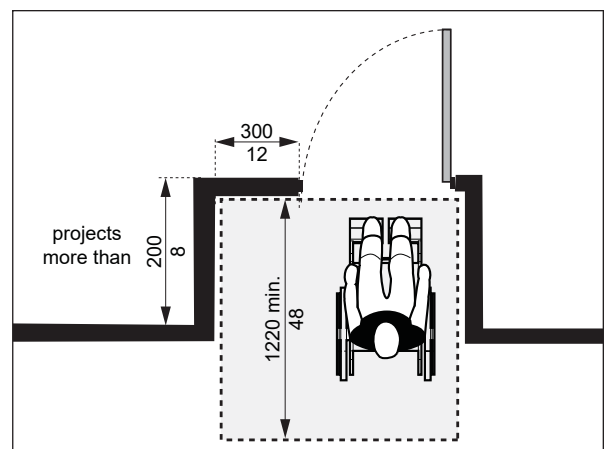


Figure 40b: Push Side Approach at Recessed Side-Hinged Door - Plan View

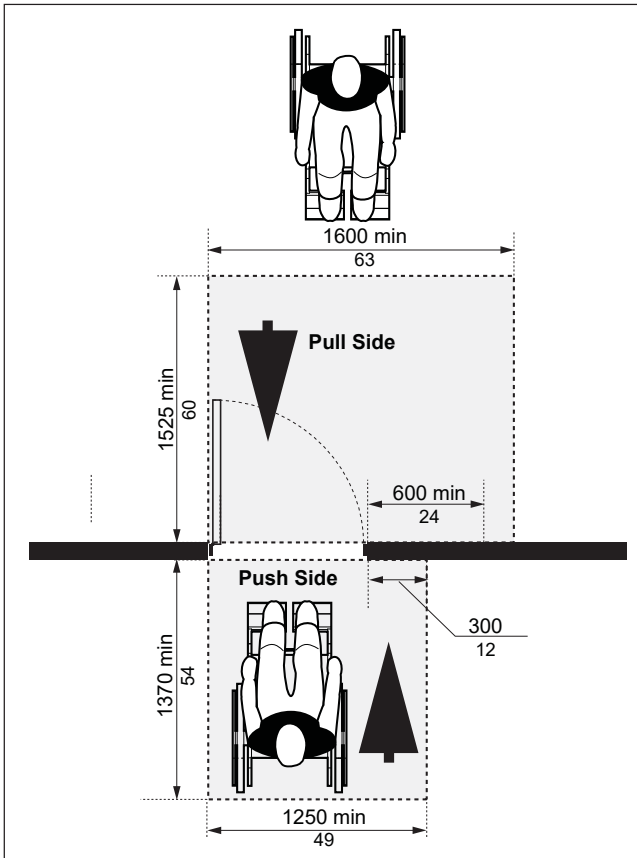


Figure 40c: Front Approach at Side-Hinged Door - Plan View

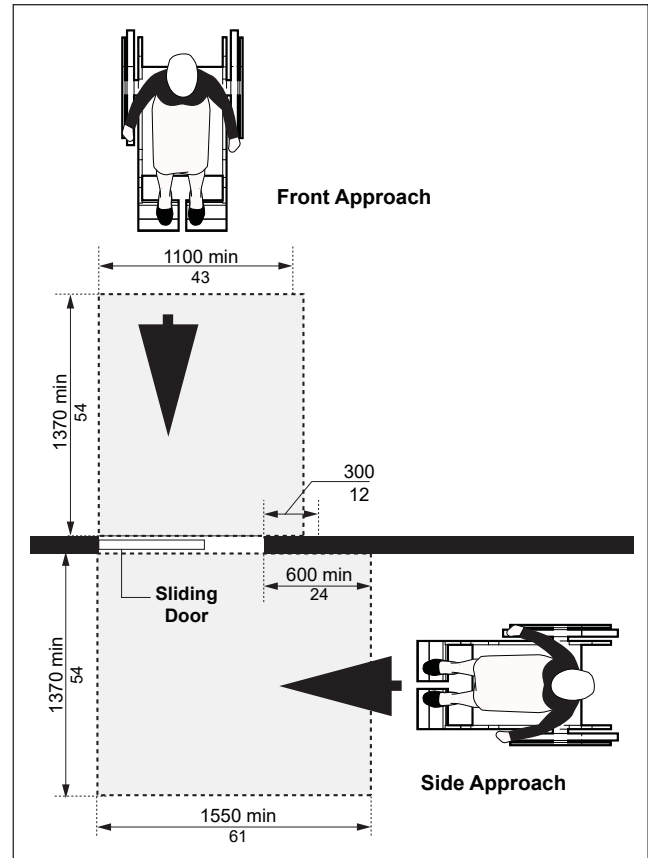


Figure 40d: Front and Side Approach at Sliding Door - Plan View

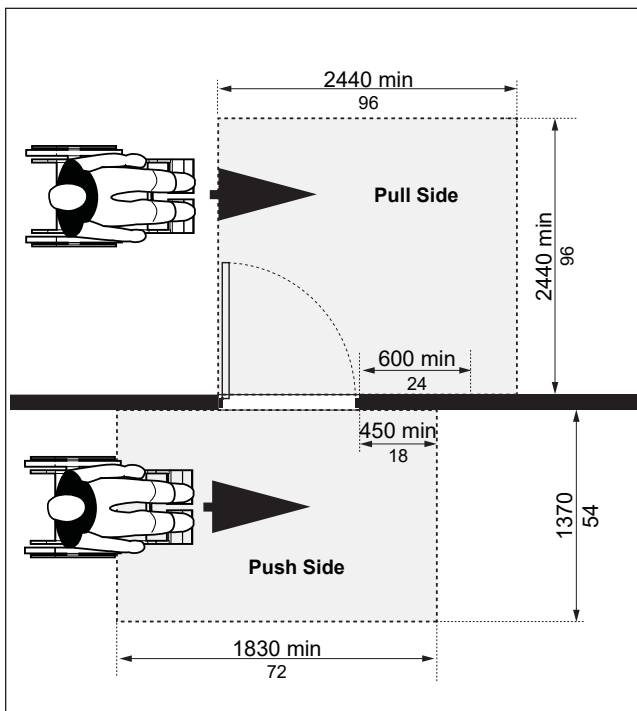


Figure 40e: Hinge Side Approach at Side-Hinged Door - Plan View

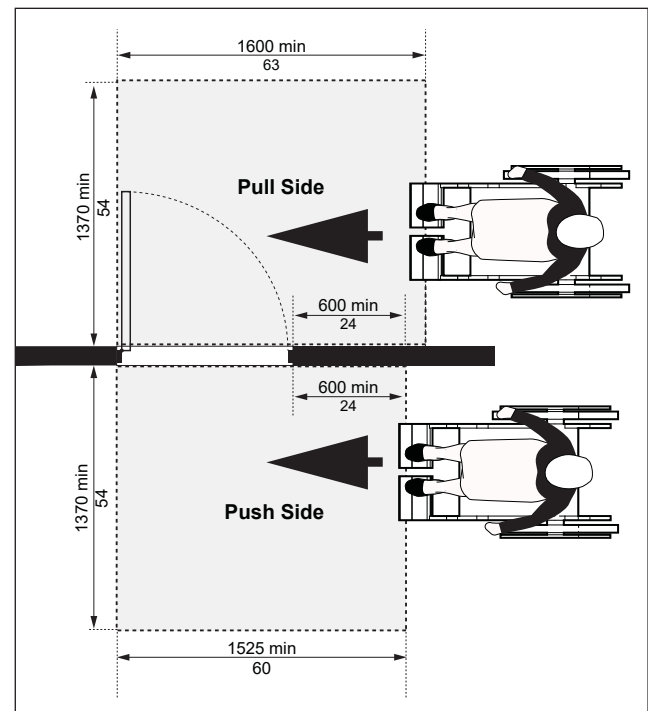


Figure 40f: Latch Side Approach at Side-Hinged Door - Plan View

Best Practice

Design vestibules to provide suitable clear floor space (1700 mm minimum turning circle) for users of mobility aids where the vestibule may be used as a waiting area, for example at main entrances.

Note

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

4.2.11 Doors in Series

Where doors in series form a vestibule:

- provide a distance between two doors in series of 1500 mm (59 in) (minimum), plus the width of the door swinging into the space (**Figure 41**);
- where the doors into the vestibule are not aligned, provide a turning diameter of 1500 mm (59 in) within the vestibule clear of any door swing; and
- arrange vestibule to allow the movement of users of mobility aids between doors.

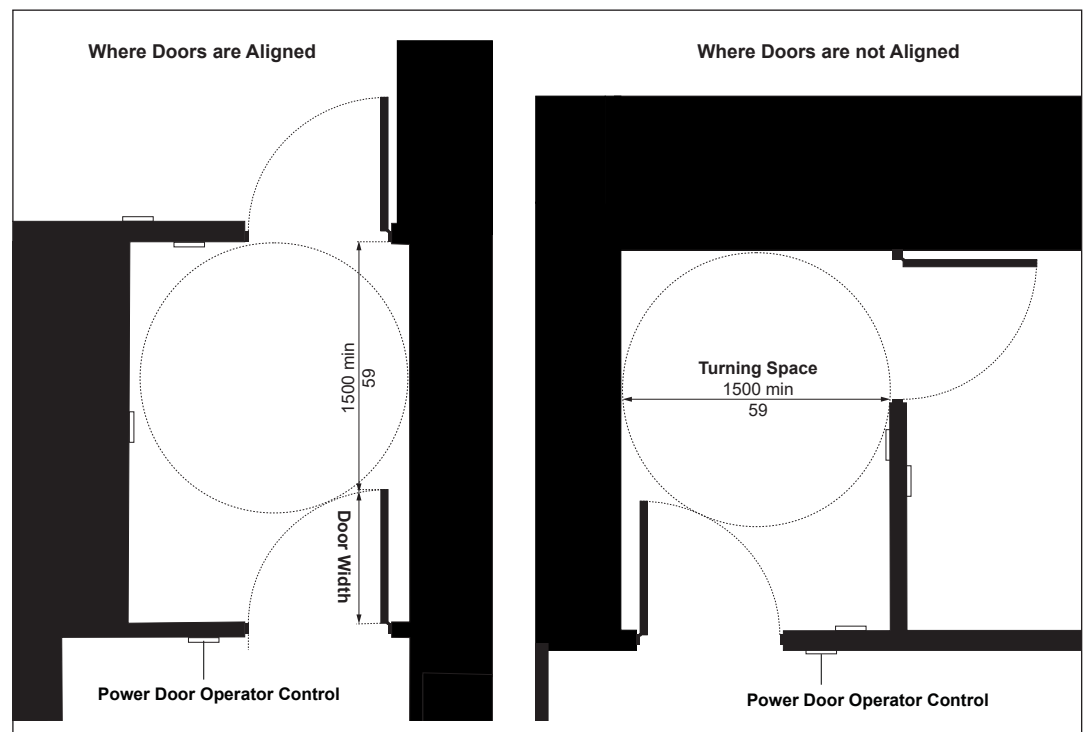


Figure 41: Doors in Series - Plan View

Best Practice

Frameless and fully glazed doors are not recommended.

Where there is extensive glazing, consider providing a strip at a lower level, between 850 to 1000 mm (33 to 39 in) high above finished floor level.

4.2.12 Glazed Doors or Doors with Sidelights

- 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;
- mark the edges of fully glazed doors (e.g., tempered glass without frame) with a high tonal contrast (e.g., exposed edges to be identified with a vertical safety strip, applied to cap the ends of any exposed glass panel); and
- provide a continuous opaque and high tonal contrast strip, decal or logo on fully glazed doors (**Figure 42**):
 - provide width of 50 mm (2 in) (minimum); and
 - mount at eye level between 1350 and 1500 mm (53 and 59 in) high from floor level.

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.

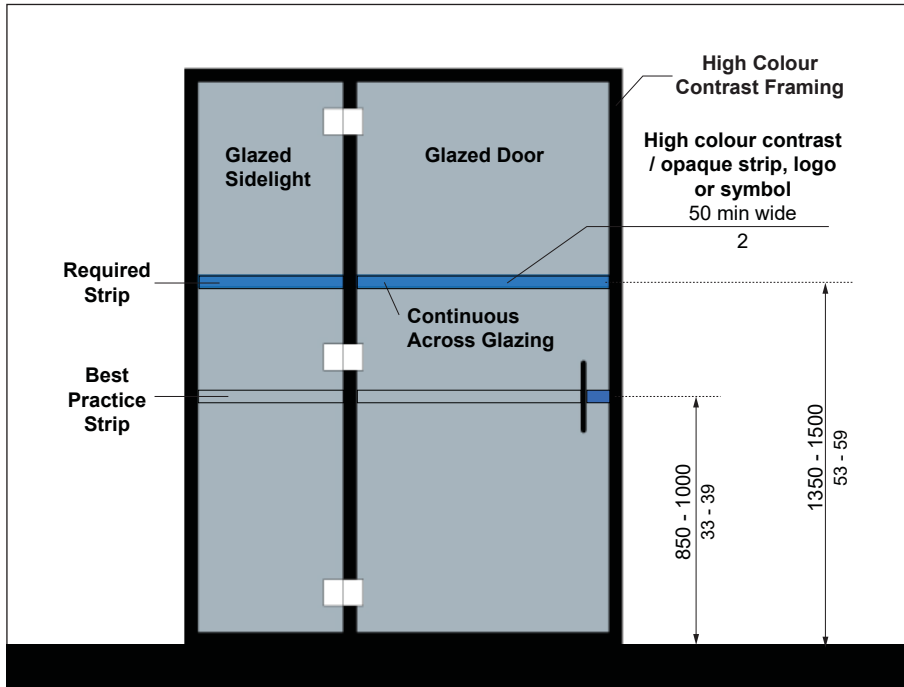


Figure 42: Glazed Doors - Elevation View

4.2.13 Vision Panels

- a. provide width of 75 mm (3 in) (minimum) (Figure 43); and
- b. mount bottom edge at a height of 900 mm (35 in) (maximum) with side edge no more than 250 mm (10 in) from latch side of the door (Figure 43).

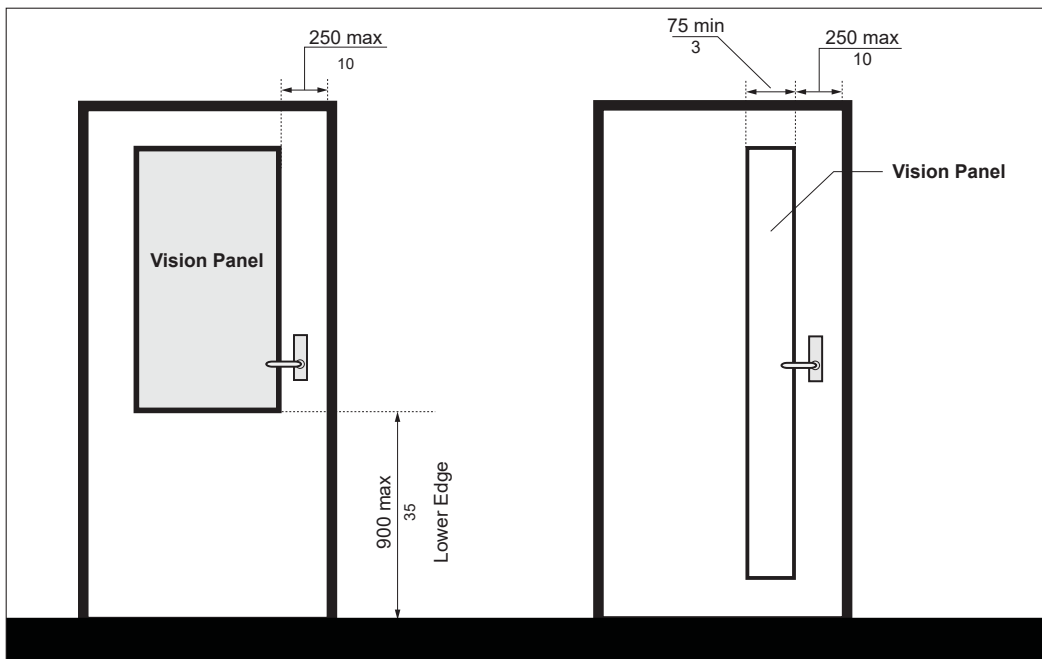
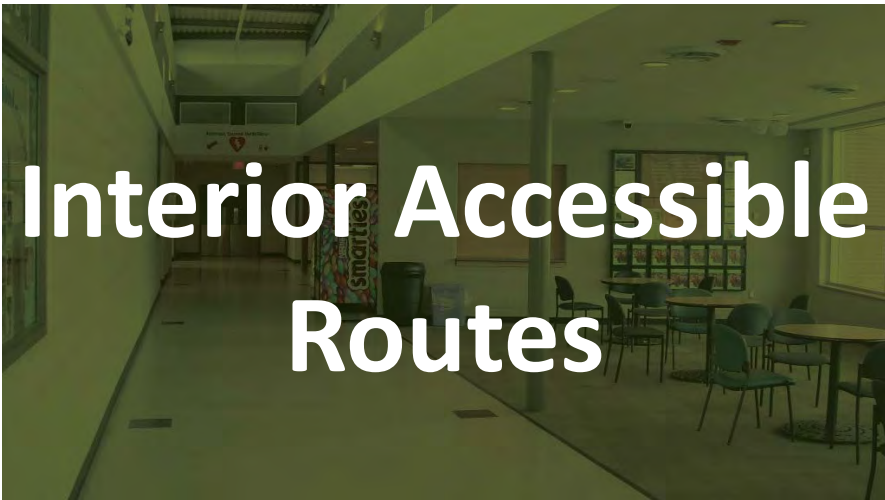


Figure 43: Vision Panels - Elevation View



Application

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

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

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

Reference

- Sec. 2.1 Ground and Floor Surfaces
- Sec. 2.2 Ramps
- Sec. 2.4 Guards and Handrails
- Sec. 2.5 Overhanging and Protruding Objects
- Sec. 2.6 Rest Areas
- Sec. 5.4 Acoustics
- Sec. 5.7 Lighting
- Sec. 5.8 Signage and Wayfinding

Exception

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

- Service rooms.
- Elevator machine rooms or other equipment, including service corridors to these rooms.
- Service spaces.
- Janitors’ rooms.
- Crawl spaces and attics or roof spaces.
- Within portions of a floor area with fixed seats in an assembly occupancy, where these portions are not designated for users of mobility aids (e.g., spaces designated for wheelchair use, seats designated for adaptable seating, or spaces for the storage of wheelchairs and mobility assistive devices).
- Suites in residential occupancy that are in storeys other than the entrance storey and that have all entrance doors at floor levels that are not required to have an accessible path of travel.
- As required by jurisdictions having authority within a suite of residential occupancy.
- Portions of a floor area that are not at the same level as the entry level, provided amenities and uses provided on any raised or sunken level are accessible on the entry level by means of an accessible path of travel.

4.3.1 General Features

- ensure floor surfaces are stable, firm and slip-resistant;
- 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;
- provide headroom clearance of 2100 mm (83 in) (minimum);
- where headroom clearance along accessible routes is less than 2100 mm (83 in), provide guards to protect users from potential hazards;
- design public corridors to facilitate wayfinding by using architectural treatments and elements that can be used to differentiate main corridors from secondary corridors;
- ensure lighting level is 100 lux (10 foot-candles) minimum, measured at ground level; and
- where accessible routes are more than 30 metres (98 ft) long, provide suitable rest areas.

Best Practice

Consider using texture and architectural treatments to enhance wayfinding.

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

Note

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



Example of tactile floor surface to guide users with vision loss (Best Practice).



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

4.3.2 Clear Width

- provide clear width of 1100 mm (43 in) (minimum) (**Figure 44a**);
- in high traffic areas, provide clear width of 1500 mm (59 in) (minimum);
- where clear width is less than 1600 mm (63 in) along a route that exceeds 30 metres in length, provide a passing area of 1800 mm (71 in) wide by 1800 mm (71 in) (minimum) length at interval of no more than 30 metres (98 ft) (**Figure 44b**);
- where clear width is reduced to 920 mm (36 in) (minimum width permitted), extending to a length of 600 mm (24 in) (maximum), a clear floor space of 1100 mm (43 in) wide (minimum) beyond indentation and ensure indentations or reduced clear width is not repeated in a series (**Figure 44c**); and

Exception

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

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

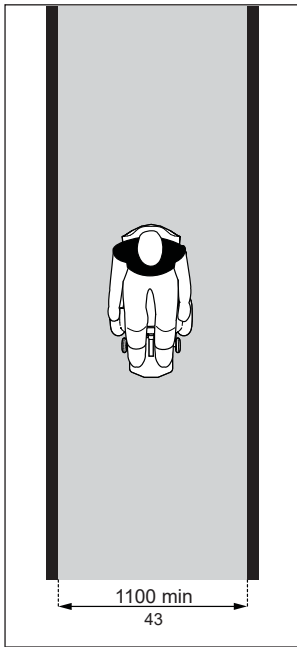


Figure 44a: Clear Width (Typical)

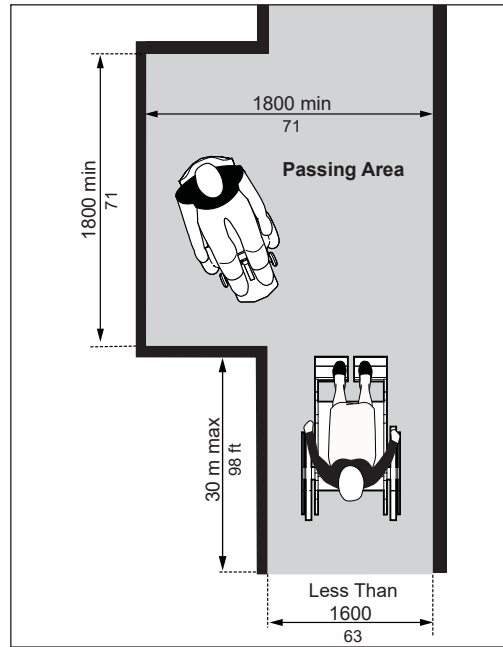


Figure 44b: Required Passing Area for Routes Greater than 30 metres if Width is less than 1600 mm

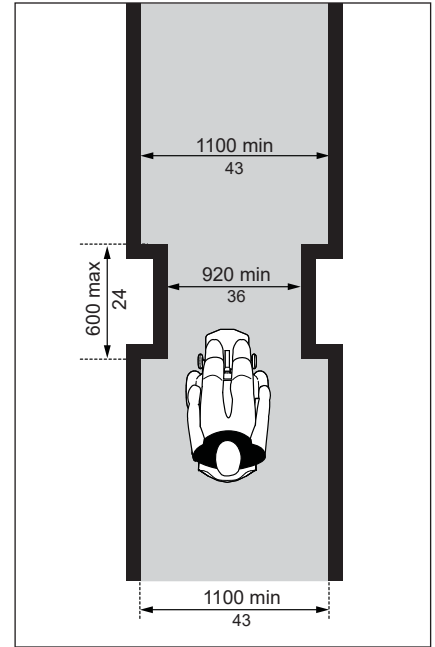


Figure 44c: Permitted Reduced Clear Width

Note

Where an obstacle is greater than 1200 mm (47 in) wide, cutting the corners of the obstacle will provide additional manoeuvring space (Figure 45b).

- e. where an accessible route makes a 180 degree turn around an obstacle that is less than 1200 mm (47 in) wide, ensure clear width of 1100 mm (43 in) (minimum) is provided, when approaching and leaving the turn, and 1200 mm (47 in) (minimum) at the turn (Figure 45a).

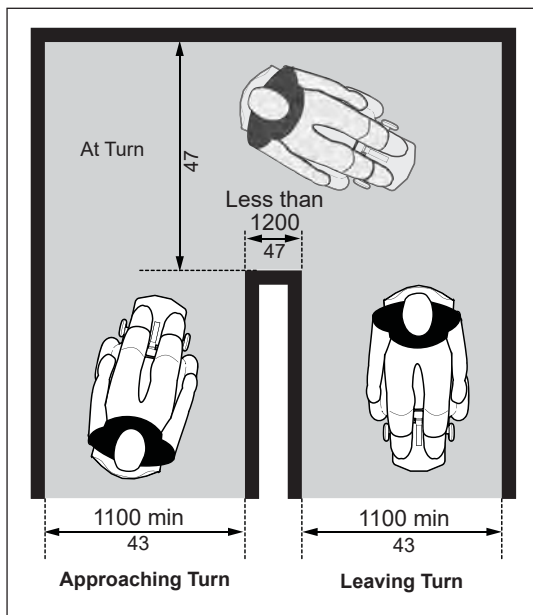


Figure 45a: 180 Degree Turn Around Obstacle less than 1200 mm

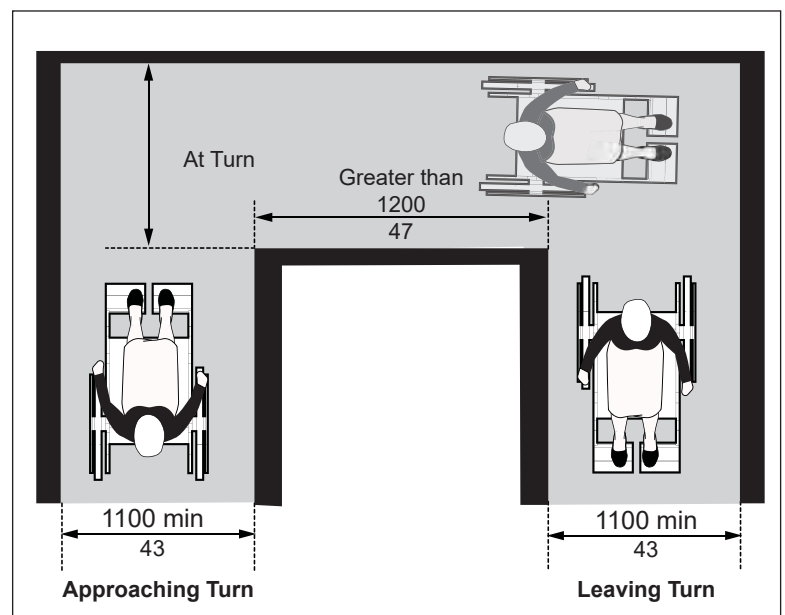


Figure 45b: 180 Degree Turn Around Obstacle greater than 1200 mm

4.3.3 Running and Cross-Slopes

4.3.3.1 Running Slope

- provide gradient of 1:20 (5%) (maximum) (**Figure 46**); and
- where gradient exceeds 1:20 (5%), ensure route is designed as a ramp.

4.3.3.2 Cross-Slope

- provide a gradient of 1:50 (2%) (maximum) (**Figure 47**).

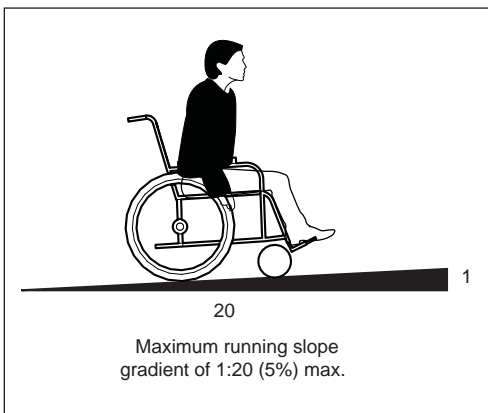


Figure 46: Running Slope

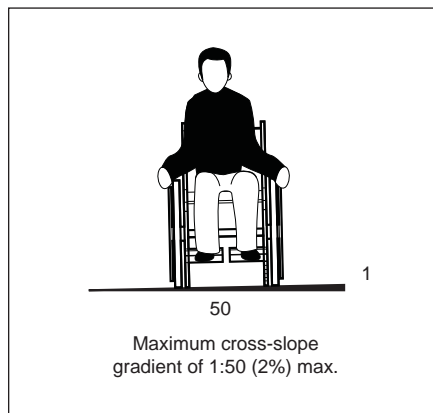


Figure 47: Cross-Slope

4.3.4 Changes in Level

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

- provide high colour contrasted marking on the edge where the change in level is less than 200 mm (8 in);
- where the change in level is between 200 and 600 mm (8 in and 24 in), provide a colour contrasted curb or other barrier protection, 75 mm (3 in) (minimum) high; and
- where the change in level is greater than 600 mm (24 in), 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 new passenger elevators, lifts, moving walkways and escalators provided in multi-storey facilities must comply with the current Ontario Building Code and other applicable requirements identified in the most up-to-date versions of:

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

Best Practice

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 guidelines including signage requirements. The County 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. ensure minimum elevator cab dimension and clear opening width of door are as identified in **Table 6** below:

Table 6: Minimum Dimensions for Elevator Car and Door Clear Width

All dimensions are in millimeters (mm) and inches (in).

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

*Note: * A tolerance of minus 16 mm shall be permitted.*

Source: Information in this Table was adapted from Annex E of CSA-B651-12, "Elevator Requirements for Persons with Physical Disabilities". As identified in this document, information is based on Table 407.2.8 in ICC /ANSI A117.1 (metric values only).

- b. Provide hall call buttons, with visual indicators to identify when car call has been registered and answered), mounted between 890 to 1200 mm (35 to 47 in) from floor, measured to centreline of button;
- c. Ensure clear floor space in front of hall call buttons of 760 mm (30 in) wide by 1220 mm (48 in) depth (minimum);
- d. 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;
- e. Entrance doors with 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 (2 in) high, immediately below the hoistway entrance floor designation;
- f. Interior car floor space of 2030 mm (80 in) wide (measured side to side) by 1370 mm (54 in) depth (measured from back wall to inside face of door) preferred, or 1525 mm (60 in) wide by 1525 mm (60 in) depth (minimum);
- g. Interior car operating controls to be mounted 1220 mm (48 in) high (maximum, to centreline of control preferred), or 1370 mm (54 in) high is permitted, for cars with more than 16 openings, where parallel approach to controls is also provided for users of mobility aids;

Note

Platform lifts are only allowed where alternatives are not considered feasible (e.g., primarily retrofit scenarios). Lifts that require key access and / or an attendant to operate are not recommended.

- h. Provide continuous handrails, mounted with top gripping surfaces at 800 to 920 mm (32 to 36 in) high above floor and with a clearance of 35 to 45 mm (1 ⅓ to 1 ½ in) between handrails and wall, on all non-access walls;
- i. Audible and visual car floor location indicators. Audible signal to be verbal announcement that identifies floor at which car has stopped; and
- j. Emergency two-way communication system (e.g., hands-free speaker phone preferred), with operating controls mounted at 1220 mm (48 in) 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).



Tactile elevator car identification sign.



Elevator sensor door and floor registration buttons.



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 washrooms; 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

Note

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

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

Best Practice

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

Note

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

(1) one universal washroom; and

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

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

Best Practice

Wherever possible, consider the use of privacy walls or specialized configuration of entrance vestibules to avoid the need for doors and power door operators.

4.5.1 Provision and Location

- provide universal washrooms in accordance to **Table 7**;
- provide minimum number of accessible water closet stalls per washroom in accordance to **Table 8**;
- locate centrally within a facility along an accessible route, within 45 metres (147 ft 7 in) (maximum) of regular washrooms; and
- where washrooms are not accessible, provide directional signage to indicate location of nearest accessible washroom on the same floor.

Table 7: Minimum Number of Universal Washrooms per Building

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

Table 8: Minimum Number of Water Closet Stalls Required to be Accessible

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

4.5.2 Multiple Occupancy Washrooms

For multiple occupancy washrooms with accessible water closet stalls:

- identify clearly with signage, indicating male or female where applicable, with other accessibility features (e.g., braille, tactile, International Symbol of Accessibility);
- where doors are provided at washroom entrance, provide a clear width of 860 mm (34 in) (minimum), when the door is in the open position and equip with power door operators;
- ensure lighting level is evenly distributed;
- ensure floor surfaces are slip-resistant, with a maximum slope of 1:50 (2%);

- e. install any drains out of the path of travel;
- f. ensure minimum clearance of 1700 mm (67 in) between the inside face of an in-swinging entrance door and the outside face of an adjacent water closet stall;
- g. ensure minimum clearance of 1400 mm (55 in) between outside wall of stall and any wall-mounted fixtures or other obstructions (**Figure 49**);
- h. provide a clear floor space of 1500 mm by 1500 mm (59 in by 59 in) (minimum) in front of the accessible water closet stall;
- i. ensure a clear turning diameter of 1700 mm (67 in) (minimum) is provided inside washroom circulation area, 500 mm (20 in) (maximum) of which may be under the lavatory to allow users of mobility aids to make a 180° turn (**Figure 48**);
- j. provide accessible lavatories with washroom amenities, as identified in this section;
- k. provide accessible water closet stalls with suitable clear floor space, as identified in this section; and
- l. install audible and visual fire alarm system.

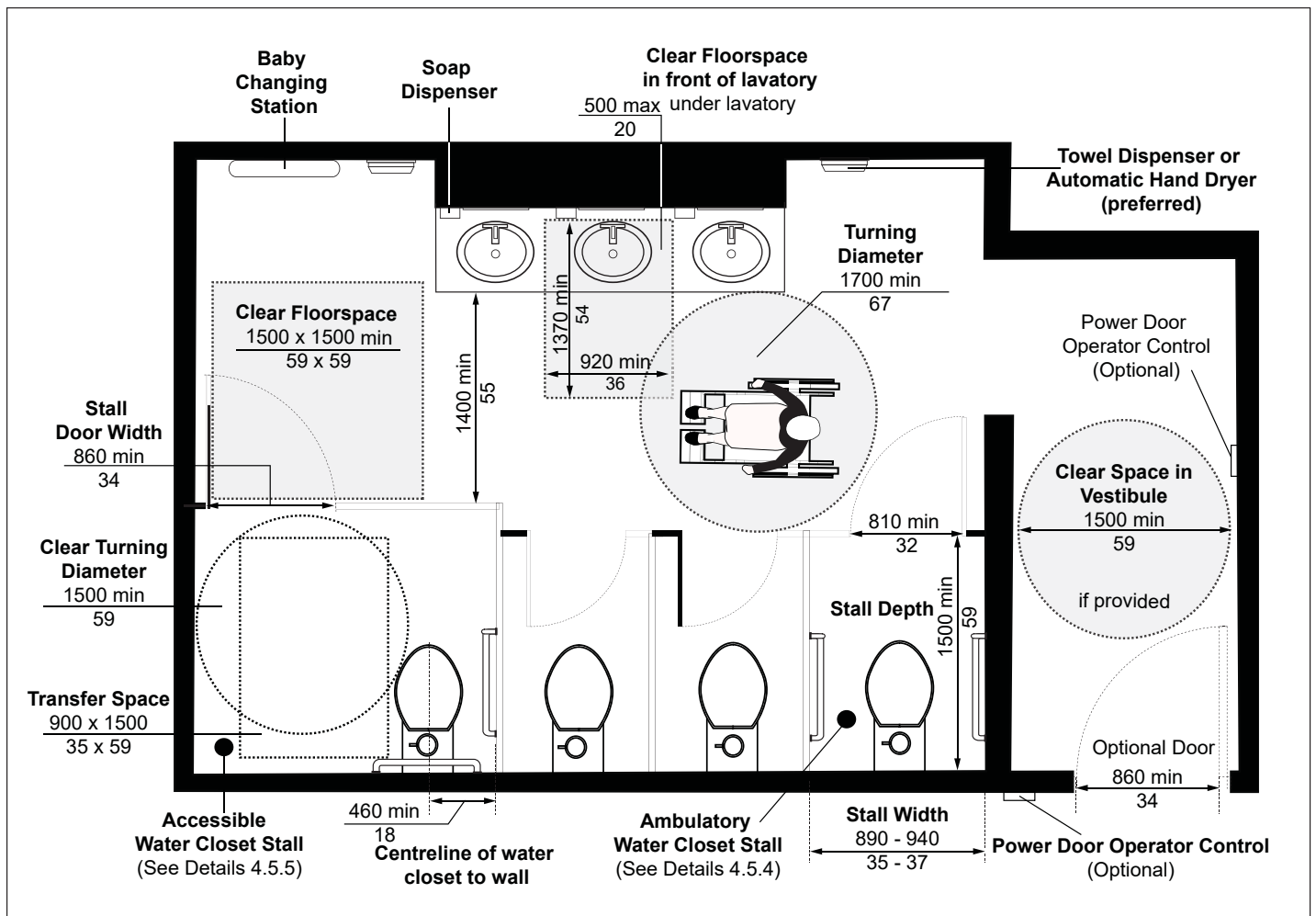


Figure 48: Example of Multiple Occupancy Washroom Layout

Best Practice

Provide a fold-down grab bar mounted on the transfer side of the water closet for additional support.

Note

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

4.5.3 Universal Washrooms

Where universal washrooms are provided:

- a. locate in the same vicinity as other washrooms (e.g., Men's & Women's multiple occupancy washrooms) along the shortest accessible route;
- b. identify clearly with signage, including unisex pictogram (e.g., Male and Female) and the International Symbol of Accessibility;
- c. provide accessible entrance door:
 - i. with clear width of 860 mm (34 in) (minimum), when the door is in an open position;
 - ii. equip with power door operator;
 - iii. provide locking mechanism that can be locked from the inside and released from the outside, in case of emergency;
 - iv. mount graspable operating and locking mechanisms 900 to 1000 mm (35 to 39 in) above floor;
 - v. if it is an outward swinging door, provide door pull 140 mm long (minimum), located on the inside so that its midpoint is between 200 mm and 300 mm from the latch side of the door; and
- d. ensure internal dimension between walls is no less than 2500 mm (98 in);
- e. ensure a clear turning diameter of 1800 mm (71 in) (minimum) is provided inside the universal washroom (**Figure 49**);
- f. ensure floor surface is firm, stable and slip-resistant;
- g. provide one accessible lavatory with other washroom amenities including but not limited to mirror, soap dispenser, paper towel dispenser, automatic hand dryer (preferred), coat hook, and toilet paper dispenser as identified in this section;
- h. provide shelf as identified in sub-section 4.5.8.1;
- i. provide one accessible water closet with suitable rear and side grab bars (e.g., horizontal, L-shaped and fold-down grab bars) as identified in this section;
- j. provide motion sensor for automatic illumination of interior;
- k. provide lighting in accordance with Section 5.7 Lighting requirements, as applicable;
- l. install audible and visual fire alarm systems;
- m. provide a clear floor space 810 mm (32 in) wide by 1830 mm (72 in) long in each universal washroom for an adult-size change table (**Figure 49**);
- n. where the clear floor space provided for an adult-size change table is adjacent to a wall, ensure reinforcement is installed in the wall to permit the future installation of the change table;
- o. where an adult-size change table is installed, ensure a clear floor space of 915 mm (36 in) wide by 1830 mm (72 in) long, parallel to the long side of the adult-size change table;
- p. where installed, ensure baby changing stations and / or adult-size change

- tables adhere to the requirements identified in sub-section 4.5.9.2;
- q. ensure drains are installed out of the path of travel; and
- r. provide an emergency call system with the following features:
 - i. consists of visual and audible signal devices both inside and outside of the washroom, that are activated by a push control device inside the washroom;
 - ii. includes an emergency sign that contains the words “IN THE EVENT OF AN EMERGENCY PUSH EMERGENCY BUTTON AND AUDIBLE AND VISUAL SIGNAL WILL ACTIVATE” in letters at least 25 mm high with a 5 mm stroke and that is posted above the emergency button; and
 - iii. where facilities have the capacity and where staff is available, ensure the call system is linked to a display panel at a reception / information counter or to a centrally monitored station (e.g., security desk).

Note

Emergency call systems with a cancellation feature to turn off the alarm when it is accidentally activated is preferred.

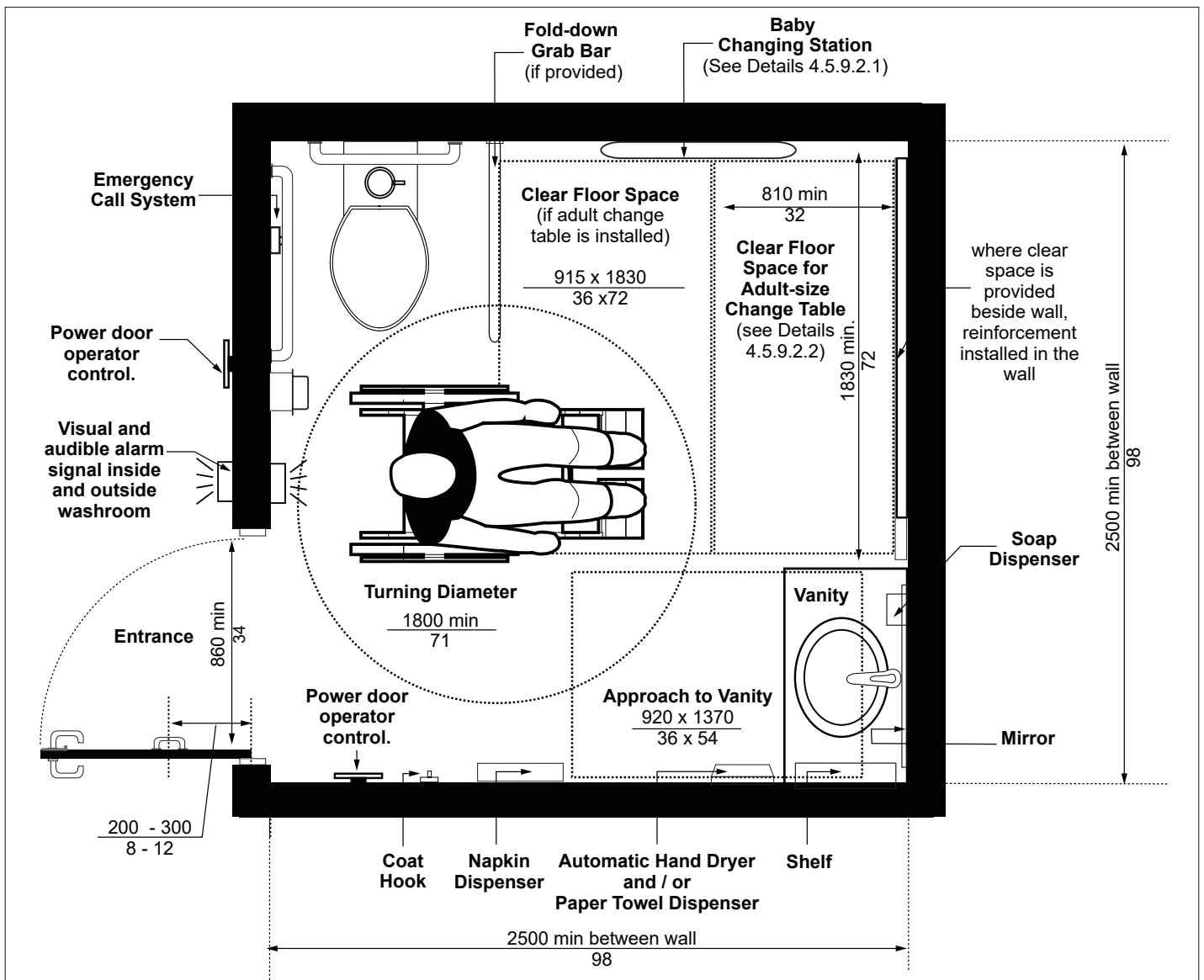


Figure 49: Universal Washroom

Note

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

4.5.4 Ambulatory Water Closet Stalls

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

- a. ensure stall depth is 1500 mm (59 in) minimum, with 890 to 940 mm (35 to 37 in) width;
- b. provide a stall door:
 - i. with clear width of 810 mm (32 in) (minimum);
 - ii. that swing outward, unless the minimum dimensions of the stall identified above are not located within the door swing;
 - iii. with spring-type or gravity hinges so that the door closes automatically;
 - iv. capable of being latched from the inside and released from the outside in case of an emergency;
 - v. with a door pull on both sides of the door, near the latch side of the door, located at a height not less than 900 mm (35 in) and not more than 1000 mm (39 in) above the finished floor;
- c. equip with a water closet located so that its centre line is centred between the partition walls (**Figure 48**);
- d. install L-shaped grab bars, as identified in this section, on each side of the water closet;
- e. provide a sign on the door that indicates that the stall is suitable for users who may require grab bar assistance; and
- f. install a coat hook as identified in this section.

Best Practice

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

4.5.5 Accessible Water Closet Stalls

Where accessible water closet stalls are provided in multiple occupancy washrooms:

- a. provide a clear turning space of 1500 mm (59 in) diameter (minimum) (**Figure 50**); and
- b. mark accessible water closet stall with International Symbol of Accessibility.

4.5.5.1 Stall Doors

- a. when door is in an open position, provide clear width of 860 mm (34 in) (minimum);
- b. ensure the door is aligned with water closet transfer space (e.g., door is positioned on opposite side of water closet) (**Figure 51**);
- c. ensure door swings outward, unless a clear floor area of 915 mm (36 in) wide by 1440 mm (57 in) long (minimum) is provided within the stall or enclosure to permit the door to be closed inside without interfering with the mobility device;

- d. ensure door is self-closing with spring-type or gravity hinges, so that when at rest, the door will be ajar not more than 50 mm (2 in) beyond the jamb;
- 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-type door pull on inside and outside of the door (**Figures 50 & 51**):
 - i. ensure hardware provides high colour contrast with mounting surface;
 - ii. provide length of 140 mm (5 in) (minimum);
 - iii. mount horizontally 900 to 1000 mm (35 to 39 in) high from floor, centered 120 to 220 mm (5 to 9 in) from latch side of the door; and
- h. mount horizontally on the inside of an out-swinging door, with its centered 200 to 300 mm (8 to 12 in) from the hinge edge.

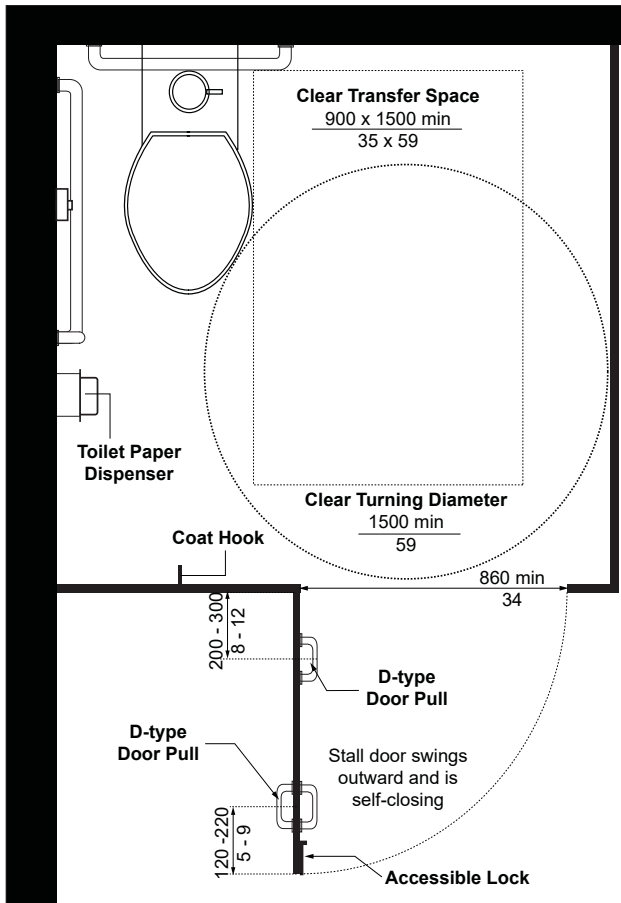


Figure 50: Water Closet Stall - Space Requirements

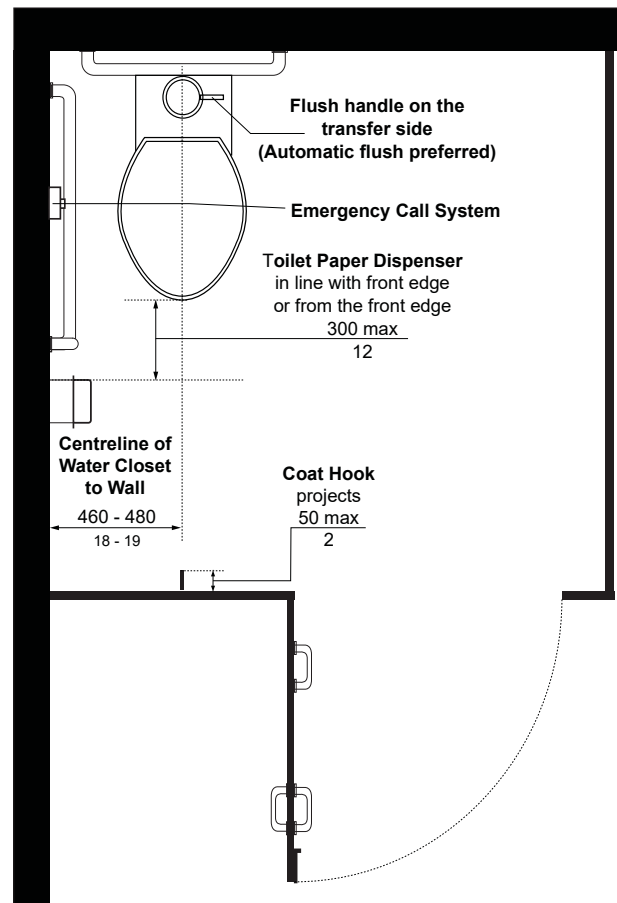


Figure 51: Water Closet Stall Features

Best Practice

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

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 100 mm is recommended between grab bar and toilet paper dispenser.

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

4.5.6 Water Closets

- a. mount seat between 430 mm (17 in) and 485 mm (19 in) high from floor (**Figure 55**);
- b. install water closet so that:
 - i. the centreline of water closet from any adjacent side wall is between 460 mm (18 in) and 480 mm (19 in) and an unobstructed transfer space of 900 mm (35 in) wide by 1500 mm (59 in) deep (minimum) is provided on the other side of the water closet (**Figure 50**); or
 - ii. a clear transfer space of at least 900 mm (35 in) wide and 1500 mm (59 in) deep is provided on each side of the water closet;
- c. provide a back support where there is no seat cover / lid or tank, and where there is a tank, ensure tank lid is securely attached;
- d. ensure seat is not spring activated;
- e. provide internal extension guards that will not allow the seat to slide;
- f. install lever flush control or other flush control operable with a closed fist (e.g., push button control) on transfer side;
- g. mount toilet paper dispenser below the grab bar, 600 to 800 mm (24 to 32 in) high in line with front edge or not more than 300 mm (12 in) from the front edge of water closet; and
- h. install at least one coat hook mounted at 1200 mm (47 in) (maximum) high from floor, with a maximum projection of 50 mm (2 in) from mounting surface.

4.5.7 Grab Bars

Where grab bars are provided:

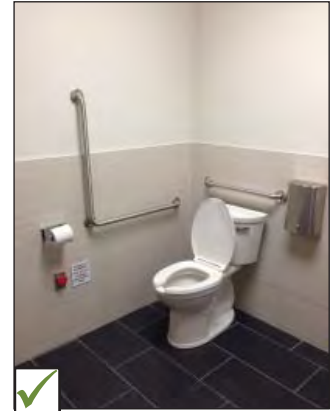
- a. ensure surface is non-abrasive and slip-resistant;
- b. provide grasping surface that is circular in shape, with diameter between 35 and 40 mm (1 ⅓ to 1 ½ in);
- c. ensure clear space of 38 mm (1 ⅓ in) (minimum) and 50 mm (2 in) (maximum) between mounting surface and the inside surface of the grab bar;
- d. ensure a high colour contrast between grab bar and mounting surfaces;
- e. mount securely to withstand a force of 1.3 Kilonewtons applied in all directions; and
- f. ensure grab bar does not rotate within its fittings.

4.5.7.1 Horizontal Grab Bars

- ensure length of 600 mm (24 in) (minimum);
- mount between 840 and 920 mm (33 and 36 in) high from floor level, centered behind water closet (**Figure 52**); and
- where water closet has a water tank, mount grab bar 150 mm (6 in) above the tank.

4.5.7.2 L-Shaped Grab Bars

- ensure length of 760 mm (30 in) (minimum) for both vertical and horizontal components (**Figure 53**);
- mount vertical component 150 mm (6 in) (maximum) from front of water closet; and
- mount horizontal component 750 mm (30 in) high above floor.



Example of grab bars mounting locations on the rear and side wall adjacent to the water closet.

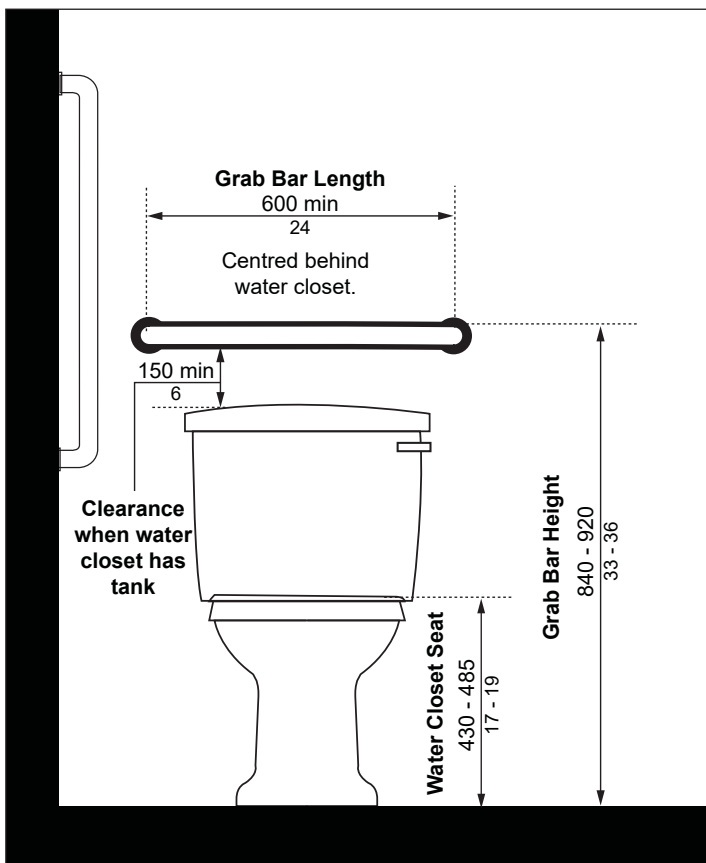


Figure 52: Horizontal Grab Bar (Water Closet with Water Tank)

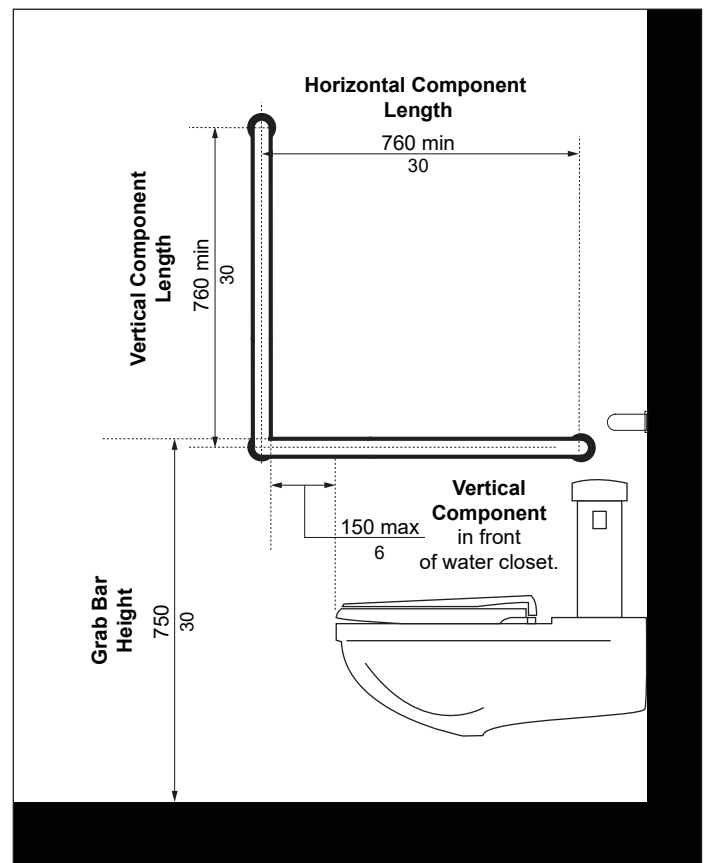


Figure 53: L-shaped Grab Bar (Wall Hung Water Closet with Flush Valve)

Note

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

4.5.7.3 Fold-Down Grab Bars

Where fold-down grab bars are provided for additional support:

- mount on the wall behind the water closet;
- located on the transfer side;
- where transfer space is provided on both sides of the water closet, provide a fold-down grab bar on each side;
- ensure length of 760 mm (30 in) (minimum);
- mount between 390 mm (15 in) and 410 mm (16 in) from centreline of water closet (**Figure 54a**);
- mount with the horizontal component at 750 mm (30 in) high from floor level (**Figure 54b**); and
- ensure force required to pull down grab bar is no more than 22 Newtons.

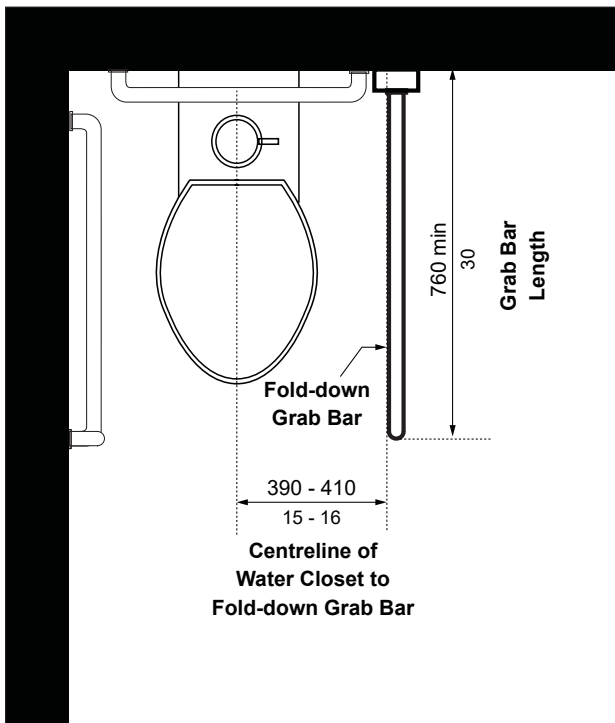


Figure 54a: Fold-down Grab Bar - Plan View

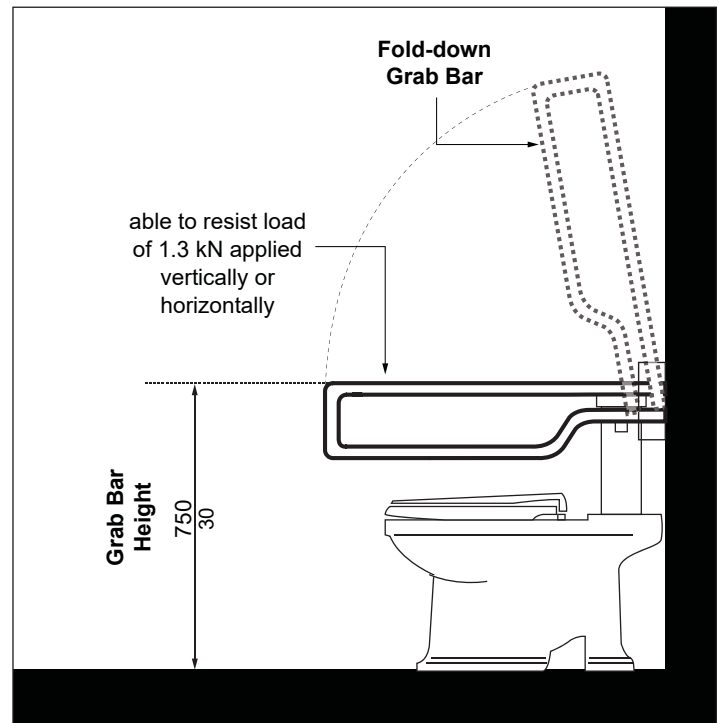


Figure 54b: Fold-down Grab Bar - Elevation View

4.5.8 Lavatories

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

- ensure centerline of lavatory is 460 mm (18 in) (minimum) from adjacent side wall (**Figure 56a**);
- ensure top surface is continuous and colour contrasted with adjacent wall surfaces;
- mount top surface of lavatory 820 to 840 mm (32 to 33 in) high above floor (**Figure 56b**);

- d. provide clearances underneath lavatory no less than (**Figure 56b**):
 - i. 920 mm (36 in) wide;
 - ii. 735 mm (29 in) high at front edge;
 - iii. 685 mm (27 in) high at 205 mm (8 in) back from front edge; and
 - iv. 350 mm (14 in) toe space height from a point 300 mm (12 in) back from the front edge to the wall;
- e. provide automatic control or lever-type faucet without spring loading, located no more than 485 mm (19 in) depth from edge of basin;
- f. provide minimum clear floor space of 920 mm (36 in) wide by 1370 mm (54 in) deep (minimum), of which 500 mm (20 in) depth is allowed under the lavatory (**Figure 55a**);
- g. ensure water pipes are covered or insulated below lavatories (**Figure 55b**); and
- h. ensure water temperature is controlled to a maximum of 43°C.

Best Practice

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

4.5.8.1 Shelves

- a. mount 1100 mm (43 in) (maximum) high above floor;
- b. ensure shelves do not project more than 100 mm (4 in) from mounting surface along an accessible path of travel (**Figure 55b**); and
- c. where provided at lavatory, mount 200 mm (8 in) (maximum) above top surface of lavatory.

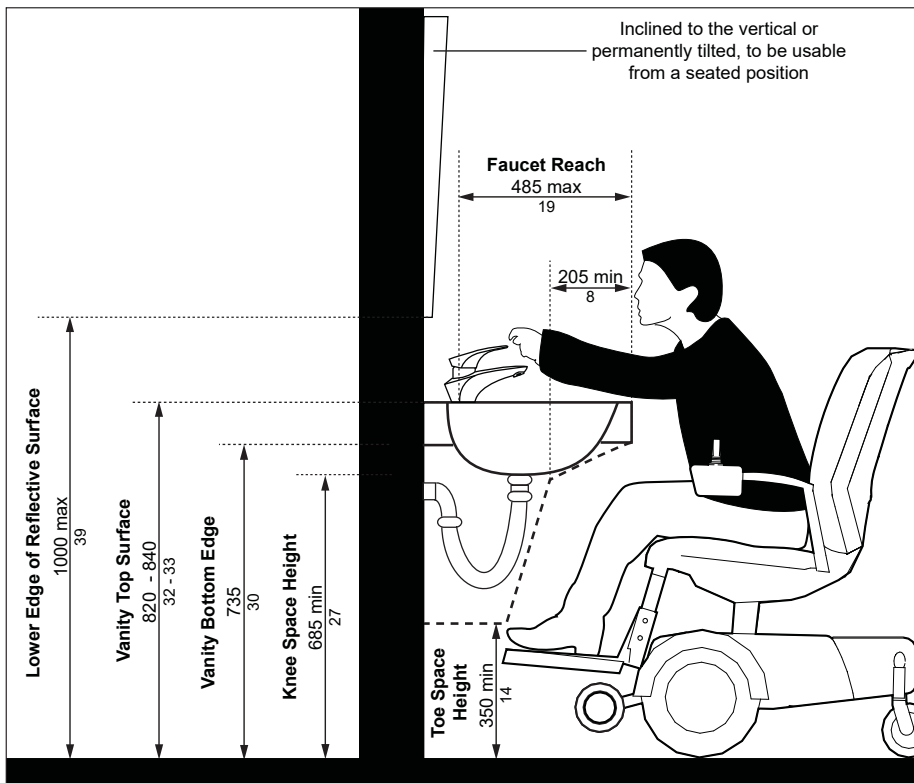


Figure 55a: Lavatories - Section View

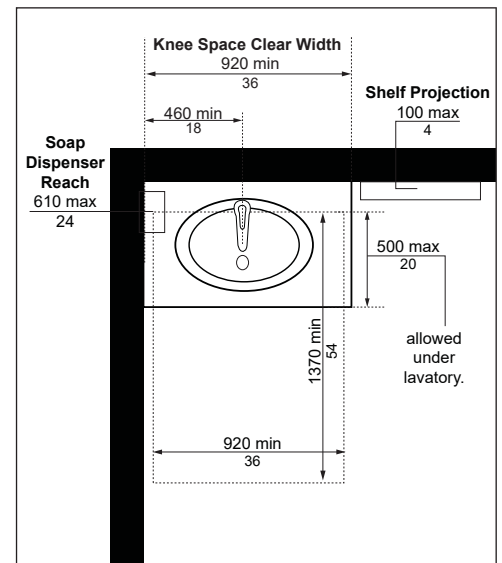


Figure 55b: Lavatories - Plan View

Best Practice

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

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

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

4.5.9 Washroom Amenities

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

- a. ensure wall mounted amenities do not project more than 100 mm (4 in) from wall along an accessible path of travel;
- b. provide high colour contrasted between amenities and mounting surfaces;
- c. ensure any operating controls are mounted between 900 mm (35 in) and 1200 mm (47 in) (maximum) high above floor, operable with one closed fist (**Figure 57**);
- d. ensure the dispensing height of washroom amenities is between 900 mm (35 in) and 1200 mm (47 in);
- e. where amenities are mounted at lavatories (e.g., hand dryers, paper towel dispensers, soap dispensers), install at 1200 mm (47 in) (maximum) high, 610 mm (24 in) (maximum) measured horizontally from the edge of the lavatory;
- f. provide minimum clear floor space of :
 - i. 920 mm (36 in) wide by 1370 mm (54 in) deep to allow front approach; and
 - ii. 1525 mm (60 in) wide by 920 mm (36 in) deep to allow side approach.

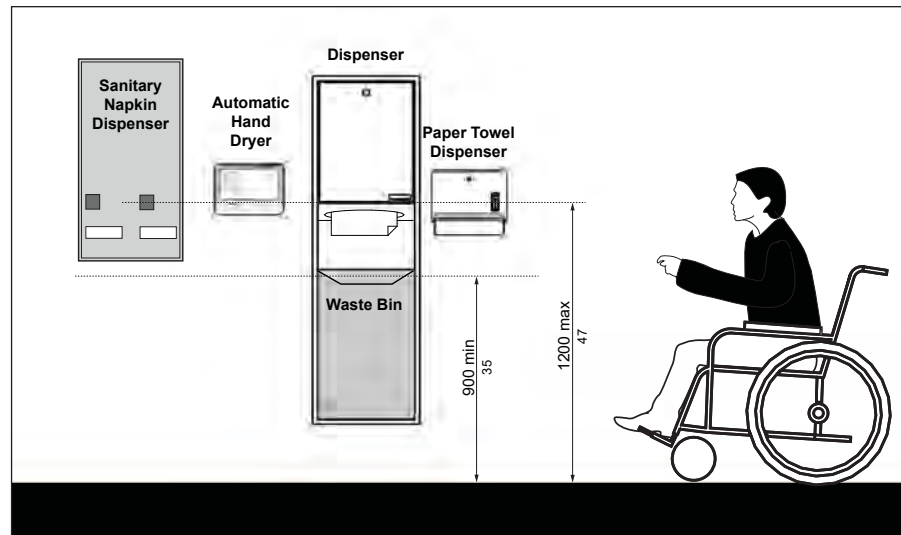


Figure 56: Typical Washroom Amenities

4.5.9.1 Mirrors

- a. mount with bottom edge of the reflecting surface at 1000 mm (39 in) (maximum) high above floor or inclined to vertical to be usable from a seated position (**Figure 55b**);
- 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.

4.5.9.2 Changing Stations and Tables

4.5.9.2.1 Baby Changing Stations

- a. where provided, ensure at least one is accessible for users with disabilities, with unit placed in a location that does not obstruct adjacent paths of travel when in use and positioned in close proximity to a lavatory and waste receptacle;
- b. ensure suitable clear floor space of:
 - i. 915 mm (36 in) wide by 1370 mm (54 in) depth is provided for a forward approach;
 - ii. 1525 mm (60 in) wide by 915 mm (36 in) depth for a side approach (whether standing or seated) in front of unit;
- c. ensure the required floor clearance for changing station does not overlap with floor clearances of other fixtures, when the changing station is folded up;
- d. mount with the highest edge or component of the station between 730 and 865 mm (29 and 34 in);
- e. ensure knee clearance of 685 mm (27 in) high and 480 mm (19 in) depth is provided;
- f. where a folding changing station is provided, ensure projection from wall of 100 mm (4 in) (maximum) when in folded position and located along accessible path of travel; and
- g. where a folding-type is provided, ensure operating control:
 - i. is mounted no more than 1200 mm (47 in) (**Figure 57a**);
 - ii. operable with a closed fist and without tight grasping, pinching of fingers or twisting of wrist.

Best Practice

Ensure baby changing stations are not located in accessible water closet stalls, especially in high use washrooms.

Universal washrooms designed with larger floor space are more suitable to accommodate changing stations, tables and other attendant care amenities (e.g., shelving).

Note

Baby changing stations can be fixed or the folding type.

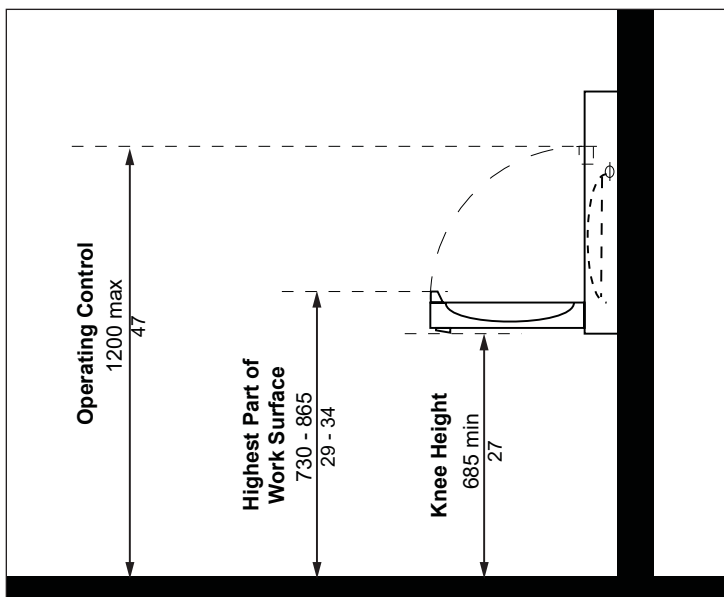


Figure 57a: Folding Baby Changing Station - Section View



Example of a Baby Changing Station.

Best Practice

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

Note

Adult-size change tables located in universal washrooms are of benefit to many individuals, and may be used as changing stations or tables. They allow persons with balance or strength problems to sit and allow persons with disabilities to lie down and be changed with the assistance of an attendant, as might be required.

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

4.5.9.3 Adult-Size Change Tables

Where an adult-size change table is installed in a universal washroom:

- provide a clear floor space of 915 mm (36 in) wide by 1830 mm (72 in) long (minimum), parallel to the long side of the table;
- when fully loaded, ensure the surface height above the floor is adjustable from between 450 mm (18 in) and 500 mm (20 in) at the low range to between 850 mm (33 in) and 900 mm (35 in) at the high range (**Figure 57b**);
- where a fold-down change table is provided:
 - install so that it does not encroach into the clear transfer space adjacent to the water closet;
 - ensure operating mechanisms (e.g., latches, handles and pulls) are 1200 mm high (47 in) (maximum); and
 - ensure operating mechanisms are operable with a closed fist and without tight grasping, pinching of fingers or twisting of wrist;
- ensure changing tables can support a minimum load of 1.33 Kilonewtons;
- provide a high colour contrast between change table surface and adjacent mounting surface; and
- ensure change table surfaces are free of sharp edges or abrasive materials, and are easy to clean.

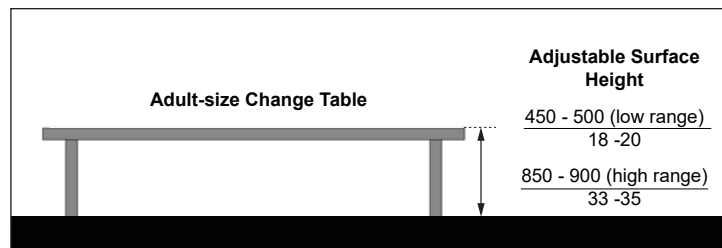


Figure 57b: Adult-Size Change Table - Section View

4.5.10 Urinals

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

- locate within accessible path of travel with no step in front of the urinal;
- mount urinal on wall with the lower rim located 430 mm (17 in) (maximum) above floor, OR provide a floor mounted urinal with the rim level with the floor level (**Figure 58a**);
- ensure the upper rim is no lower than 860 mm (34 in) high above floor;
- ensure depth of 345 mm (14 in) (minimum), measured from the outer face of the urinal rim to the back of the fixture (**Figure 58a**);
- ensure urinal has high colour contrast compared with back wall;
- provide lever, automatic, or other flush control operable with a closed fist, without tight grasping, pinching or twisting of the wrist (e.g., push button

- control) mounted 1200 mm (47 in) (maximum) high above floor (**Figure 58a**);
- g. provide clear floor space of 915 mm (36 in) wide by 1370 mm (54 in) deep (minimum) centered in front of urinal for front approach;
 - h. provide grab bars, on each side of urinal (**Figure 58b**):
 - i. mount vertically, with centreline at 1000 mm (39 in) high above floor;
 - ii. mount 380 mm to 450 mm (15 to 18 in) from centreline of urinal;
 - iii. with length of 600 mm (24 in) (minimum); and
 - iv. with high tonal contrast compared to back wall;
 - i. install centreline indicator for all urinals (**Figure 58b**):
 - i. centred above the urinal 50 mm (2 in) wide (maximum);
 - ii. extending 1300 mm (51 in) (minimum) above floor but never less than 150 mm (6 in) above the upper urinal rim;
 - iii. ensure indicator has high tonal contrast compared with back wall and raised 3 mm (minimum); and
 - iv. where more than one urinal is provided in a washroom, provide a centreline indicator at each urinal;
 - j. where privacy screens are provided (**Figure 58b**):
 - i. provide clearance of 920 mm (36 in) (minimum) between screens;
 - ii. ensure a clearance of 50 mm (2 in) (minimum) from the grab bars;
 - iii. ensure colour contrast between screens and surrounding surfaces; and
 - iv. ensure the vertical outer edge provides a high tonal contrast.

Note

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

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

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

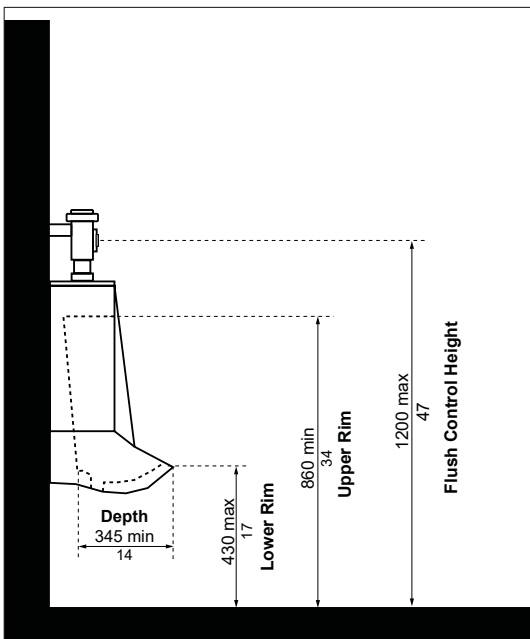


Figure 58a: Urinals - Side Elevation View

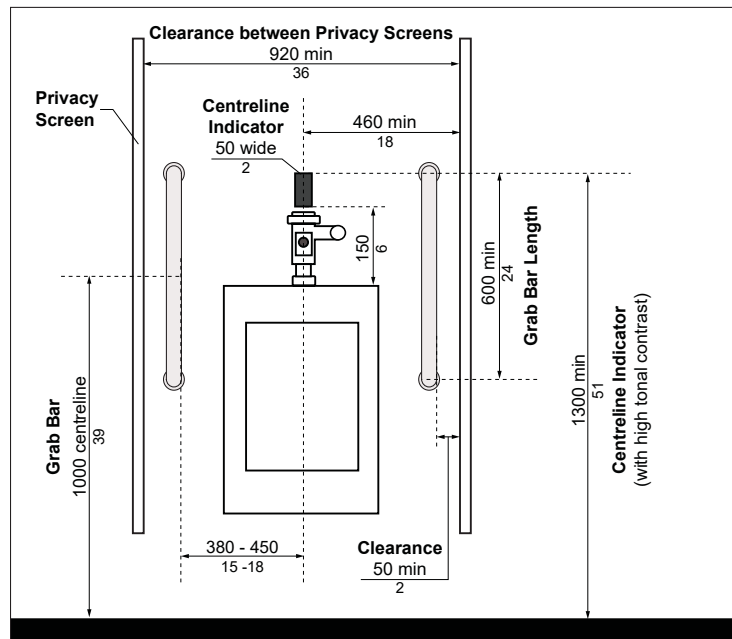
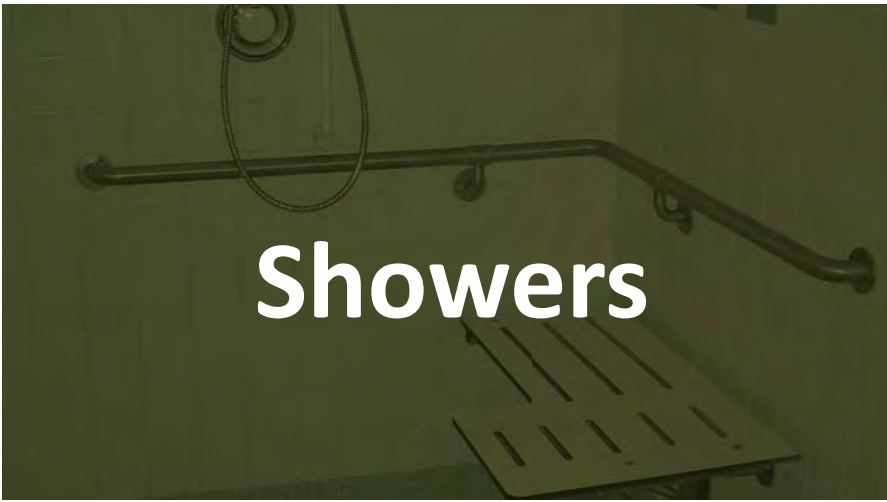


Figure 58b: Urinals - Front View



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.

Reference

- Sec. 5.1 Controls and Operating Mechanisms
- Sec. 5.7 Lighting

4.6.1 Provision

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

Table 9: Minimum Number of Accessible Showers

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

Note

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

4.6.2 Design and Layout

- a. ensure floor space of 1500 mm (59 in) wide by 915 mm (36 in) deep (minimum) (**Figure 59**);
- b. provide additional clear floor space of 1500 mm (59 in) wide by 915 (36 in) mm deep (minimum) at shower entrance (**Figure 59**);
- c. provide level entry or beveled threshold, 13 mm (½ in) 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 (10 foot-candles) (minimum), measured at floor level, is provided in shower area.

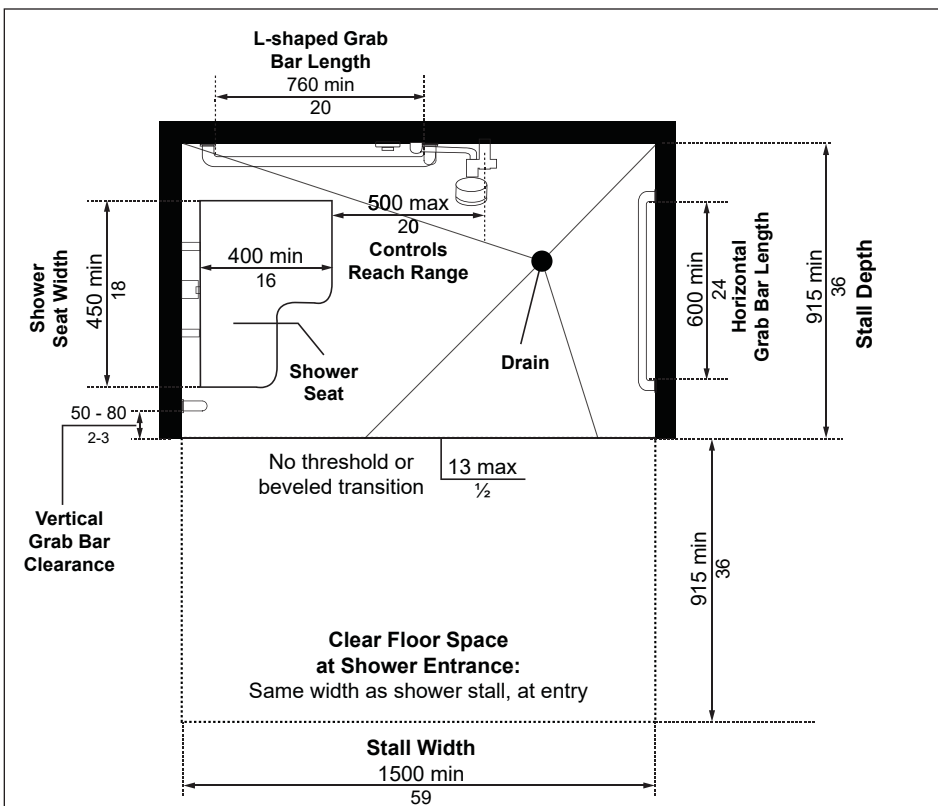


Figure 59: Shower Design and Layout - Plan View

Best Practice

Water-resistant and padded seat surfaces are recommended.

4.6.3 Controls and Accessories

4.6.3.1 General

- a. provide lever type or automatic controls that can be operated with a closed fist, mounted at 1000 mm (39 in) high above floor ;
- b. provide recessed soap holders, mounted above grab bars between 900 and 1200 mm (35 and 47 in), reachable from a seated position;
- c. provide a pressure equalizing or thermostatic mixing valve to control water pressure, mounted at 1000 mm (39 in) (maximum) high above floor; and
- d. ensure shower controls, soap dispensers, faucet and shower head are located no more than 500 mm (20 in) from the side wall adjacent to the bench (**Figure 60**).

4.6.3.2 Shower Head

- a. provide hand-held shower head with flexible hose 1800 mm (70 in) (minimum) length;
- b. ensure the vertical support allows shower head to be adjustable to 1200 mm (47 in) (maximum) height above floor, reachable from seated position (**Figure 60**);
- c. provide vertical support to mount shower head to allow operation as a fixed shower head; and
- d. ensure the vertical support placement does not obstruct the use of grab bars.

4.6.3.3 Shower Seat

- a. provide a fixed shower seat or where a hinged seat is provided, ensure it is not spring-loaded;
- b. mount shower seat on the side wall adjacent to the controls;
- c. provide seat surface is 450 mm (18 in) wide by 400 mm (16 in) deep (minimum) with rear edge 65 mm (2 ½ in) from wall (**Figure 59**);
- d. mount between 430 mm (17 in) and 485 mm (19 in) high above floor, within the front edge of the seat located within 500 mm (20 in) of shower head and controls (**Figure 60**);
- e. ensure surface is water-resistant and padded for comfort; and
- f. mount securely, capable of holding a minimum load of 1.3 kN.

4.6.4 Grab Bars

- a. ensure grasping surface is non-abrasive, slip-resistant and provide high colour contrast compared with mounting surface;
- b. provide circular profile, with diameter between 35 and 40 mm (1 ⅓ to 1 ½ in);
- c. ensure clear space of 50 mm (2 in) (minimum) between mounting surface and grab bar, as well as between ends of grab bars and any adjacent wall (**Figure 60**); and
- d. mount securely to withstand a force of 1.3 kN applied in all directions.

4.6.4.1 Vertical Grab Bar

- a. mount on the side wall adjacent to shower seat:
 - i. length of 900 mm (35 in) (minimum);
 - ii. mount with bottom edge between 600 and 650 mm (24 and 26 in) high above floor to provide additional support when entering / exiting or when transferring to the seat; and
 - iii. provide a clearance between 50 and 80 mm from the adjacent clear floor space (**Figure 59**).

4.6.4.2 L-Shaped Grab Bar

- a. mount on wall opposite to shower entrance between the shower head and shower controls;
- b. ensure length of horizontal and vertical components is 760 mm (30 in) (minimum) (**Figure 59**); and
- c. mount with horizontal component at 850 mm (33 in) high above floor.

4.6.4.3 Horizontal Grab Bar

- a. mount on the side wall opposite from shower seat:
 - i. ensure length of 600 mm (24 in) (minimum) (**Figure 59**); and
 - ii. mount at 850 mm (33 in) high above floor (**Figure 60**).

4.6 Showers

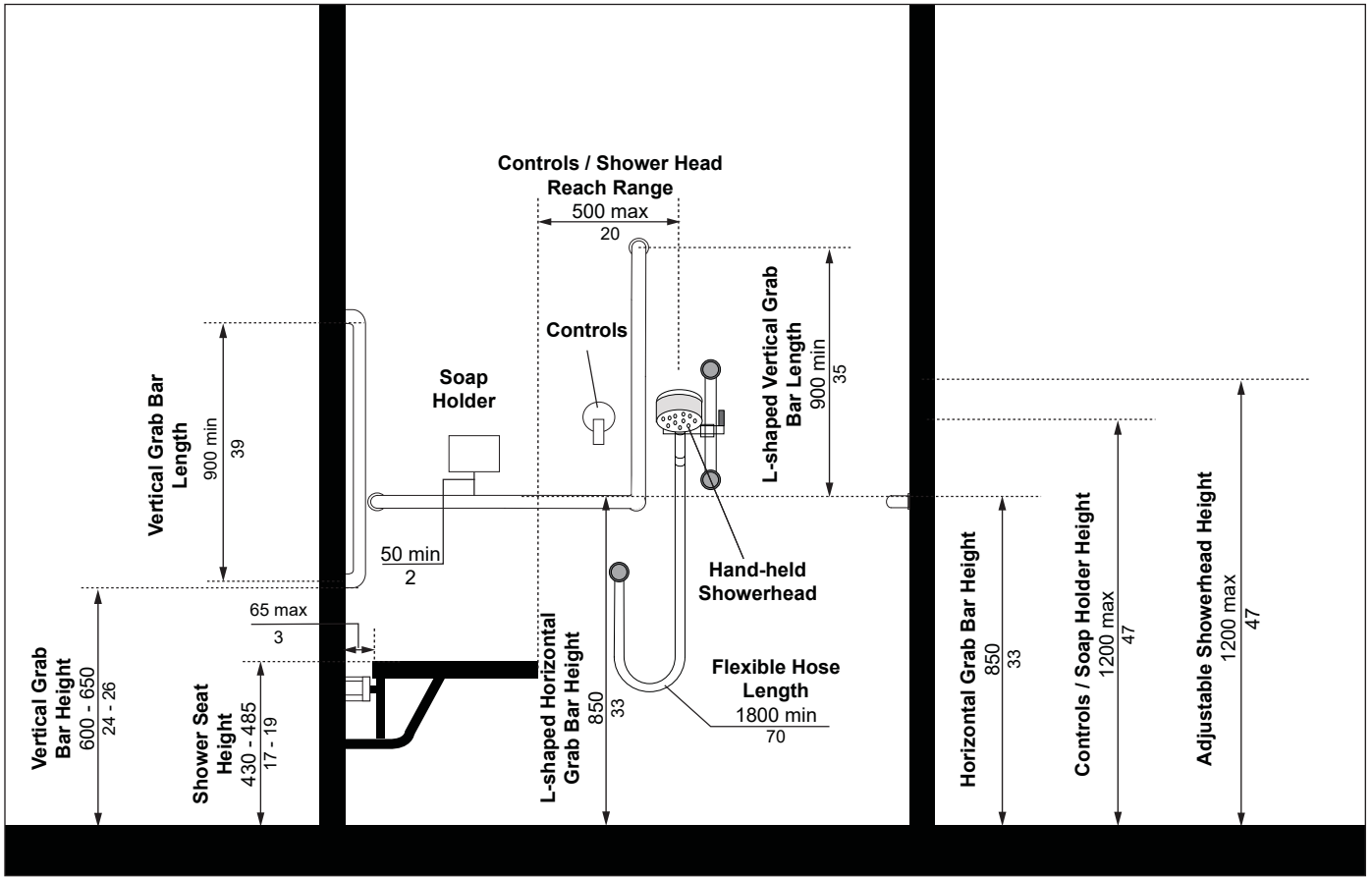


Figure 60: Shower Design - Section View

Interior Maintenance Checklist

4.7

Application

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

Interior Maintenance Checklist

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

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

2. Accessible Parking Spaces (where provided in parking garage, underground parking) <i>(Ref. Section 3.1 Parking)</i>		<i>This section does not apply</i> <input type="checkbox"/>		
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?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
2.2	Are parking spaces, including access aisles, kept clear of obstacles and other obstructions (e.g., garbage)?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 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)?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
2.4	Are pavement markings provided in good condition?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
2.5	Is vertical signage provided at designated accessible parking spaces clearly visible and in good condition?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
2.6	Where provided, are curb ramps kept free of obstructions?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
2.7	Are accessible routes from parking spaces leading to facility entrance clearly marked and free of obstructions?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		

3. Interior Accessible Routes (Ref. Section 4.3 Interior Accessible Routes)			This section does not apply <input type="checkbox"/>	
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?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
3.3	Are floor surfaces routinely inspected to ensure glare issues are reduced?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
3.4	Are suitable cleaning products used to ensure polished floors are not slippery when wet and / or cause glare?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
3.5	Where applicable, are overhead projections no lower than 2100 mm (83 in)?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
3.6	Where provided, are power door operators in good working condition?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
3.7	Are all elevators regularly serviced by qualified personnel (e.g., based on a regular maintenance schedule)?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
3.8	Are considerations made prior to redecoration to maintain a careful colour scheme with suitable colour contrasts?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		

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

5. Systems and Controls (Ref. Section 5.0 Systems, Controls and Communications)			This section does not apply <input type="checkbox"/>	
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?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 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.?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
5.3	If applicable, is the central TTY monitored routinely and is there someone designated to monitor it?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
5.4	Is staff awareness training re: disability issues implemented to ensure they can provide assistance if required?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		

6. Fire and Life Safety Systems (Ref. Section 5.6 Fire and Life Safety Systems)			This section does not apply <input type="checkbox"/>	
Item	Requirements	Compliance	Accessibility Issues	Location Reference
6.1	Are emergency exit routes regularly checked for potential barriers and obstructions?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 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)?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		

6. Fire and Life Safety Systems <i>continued</i> (Ref. Section 5.6 Fire and Life Safety Systems)			This section does not apply <input type="checkbox"/>	
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.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
6.4	Is there an emergency exiting strategy in place for staff and visitors with disabilities, who may require assistance?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
6.5	Are emergency exiting strategies checked regularly to ensure effectiveness and efficiency?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		

7. Signage (Ref. Section 5.8 Signage and Wayfinding)			This section does not apply <input type="checkbox"/>	
Item	Requirements	Compliance	Accessibility Issues	Location Reference
7.1	Where new signage is provided, is it integrated effectively with existing accessible signage?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 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 AODA Accessibility Standards for Customer Service.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		

Notes: _____

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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 call systems);
- 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.

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.

Align controls at the same height, where possible.

5.1.1 Design Features

Ensure accessible controls and operating mechanisms address the following:

- are usable with closed fist and operable with one hand;
- do not require tight grasping, pinching of the fingers, or twisting of the wrist;
- can be used with force of 22 Newtons (maximum);
- where push-button type controls are provided, ensure button surface is 13 mm (½ in) (minimum) in diameter and is not recessed;
- ensure controls are visible from a distance, based on use of high colour / tonal contrast (70% colour contrast minimum) between operable parts and adjacent mounting surface (**Figure 61**);
- mount controls and operating mechanisms (**Figure 62**):
 - no lower than 400 mm (16 in) high for all controls;
 - at 1200 mm (47 in) high for thermostat and manual fire alarm pull;
 - between 900 and 1100 mm (35 and 43 in) high for all other controls and operating mechanisms;
 - so that they extend not more than 200 mm (8 in) and not less than 900 mm (35 in) high above the floor for vertical extended power door operators; and
- locate in prominent and obvious locations, for easy identification.

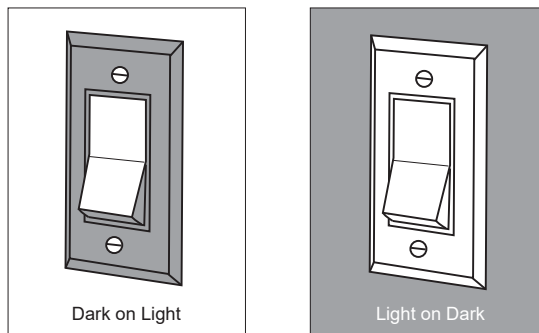


Figure 61: Colour Contrast Between Background and Control

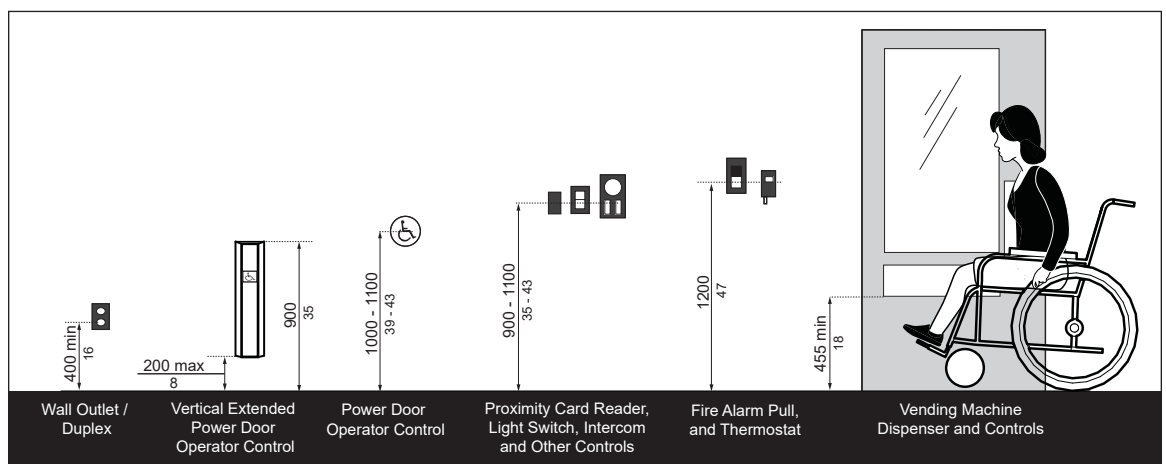


Figure 62: Control Mounting Heights - Elevation View

5.1.2 Floor Space and Reach Requirements

5.1.2.1 Floor Space Requirements

- a. provide a clear floor space at controls and operating mechanisms of:
 - i. 915 mm (36 in) wide by 1370 mm (54 in) depth for a forward approach; and
 - ii. 1525 mm (60 in) wide by 915 mm (36 in) depth for a side approach.

5.1.2.2 Reach Requirements:

For both a forward and side approach, ensure the following mounting heights of controls and operating mechanisms for suitable reach are provided:

- a. where there is no obstruction in front of controls and operating mechanisms:
 - i. no lower than 400 mm (16 in);
 - ii. at 1200 mm (47 in) for thermostat and fire alarm pull controls; and
 - iii. no higher than 1100 mm (43 in) for other controls and operating mechanisms; and
- b. where there is an obstruction of no more than 860 mm (34 in) high:
 - i. no higher than 1100 mm (43 in) , which allows for a touch reach over a 600 mm deep obstruction or a grasp reach over a 500 mm (20 in) deep obstruction (**Figure 63a and b**).

Best Practice

Provide clear floor space or ground surface with turning diameter of 1675 mm (66 in), to allow both side and frontal approach for larger wheeled mobility aids such as powered scooters and wheelchairs.

Note

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

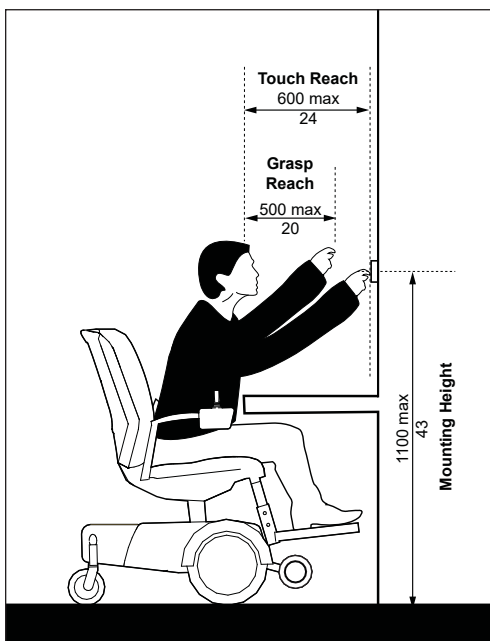


Figure 63a: Maximum Mounting Height for an Obstructed Forward Approach and Reach

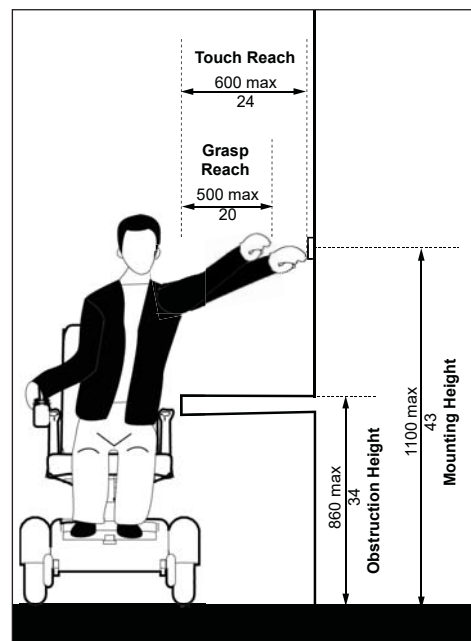


Figure 63b: Maximum Mounting Height over an Obstruction of 860 mm (34 in) (maximum) for Side Approach and Reach

Assistive Listening Systems

5.2

Application

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

- 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.

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

Wireless sound transmission systems, such as FM, infrared or magnetic induction loop, improve sound reception for the hard of hearing by providing amplification which can be adjusted by each user while blocking out unwanted background noise. These systems transmit a signal that is picked by special receivers available for use by people with a hearing disability, whether or not they use a hearing aid.

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

Reference

- Sec. 5.8 Signage and Wayfinding
- Sec. 6.1 Assembly Areas
- Sec. 6.2 Meeting and Multi-Purpose Rooms

Note

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

Hard wired systems (where a jack is provided at a particular seat) will not meet the requirement in this section unless adequate provisions are made to accommodate persons with hearing aids. In choosing the most appropriate system, a number of factors must be taken into account including cost, installation and maintenance, suitability to the audience, ease of operation and the need for privacy. Information on designers and suppliers of these systems may be obtained from such organizations as the Canadian Hearing Society.

5.2.1 Design Features

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

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

5.2.2 Assistive Listening Devices

5.2.2.1 Permanent Assistive Listening Systems

Where permanent systems are provided:

- a. the minimum number of required receivers is equal to 4% of the total number of seats, but never less than two; and
- b. the minimum number of required receivers to be hearing aid compatible is 25% of the total number of receivers that are provided, but never less than one.

5.2.2.2 Portable Assistive Listening Systems

- a. provide at least one portable assistive listening system, with a minimum of two receivers included for facilities with assembly spaces on multiple floor levels (e.g., this provides enhanced flexibility for the systems to be available and used at different locations);
- b. provide access to electrical outlets or supplementary wiring to support portable assistive listening systems; and
- c. ensure portable assistive listening systems include hearing aid compatibility.

Note

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

Receiver Hearing Aid Compatibility:

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

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

Where public address systems are provided:

- 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

To achieve a suitable acoustical environment, which can provide 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., avoid hard floor surfaces such as marble and terrazzo);
- c. design ceiling shapes so that echoes do not occur;
- d. minimize all background noise (e.g., fans, mechanical systems, air conditioners and diffusers) in meeting rooms and assembly areas where spoken word is key to understanding proceedings;
- 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

5.5.1 Design Features

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

- locate controls at a height of 900 mm (35 in) to 1100 mm (43 in) from the floor;
- mount controls at least 600 mm (24 in) clear of the arc of any door swing, where required (**Figure 64**);
- where electronic keypads or push button systems are provided, ensure buttons are raised from surface, mounted on surface with high tonal contrast and have raised numerals or letters to assist users with vision loss;
- ensure both audible and visual indicators are provided to alert users when access has been granted or denied;
- where proximity card readers (e.g., swipe cards) are used at doors equipped with power door operators, ensure activation of both systems is synchronized; and
- provide high colour contrast on system controls, compared to mounting surface.

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.

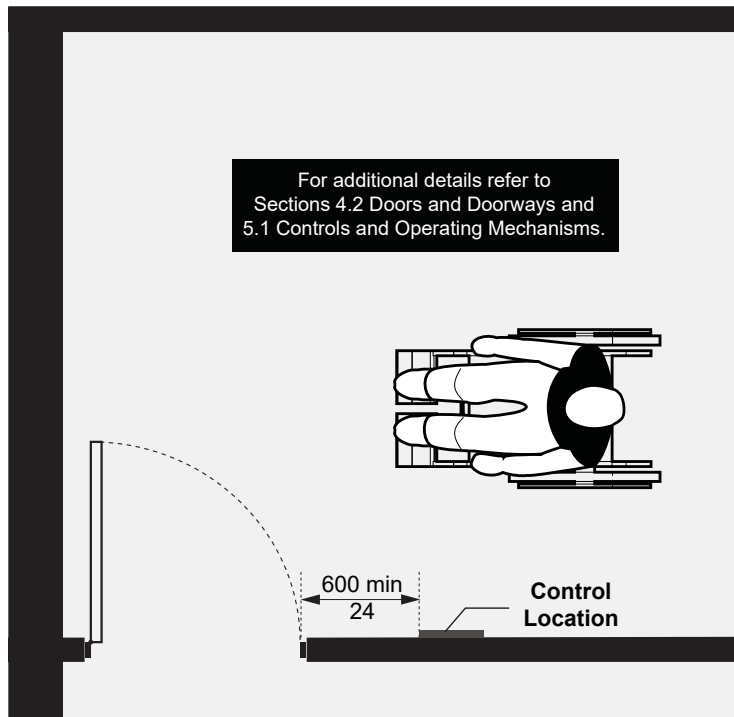


Figure 64: Proximity Card Reader Location - Plan View



Example of proximity card reader system that is large in size with high colour contrast compared to mounting surface for enhanced visibility.



Example of proximity card reader system with visual indicator.



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);
- ‘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.

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;
 - i. for facilities with floors above or below grade, develop a fire safety and evacuation plan, indicating in detail the preferred evacuation strategies for persons with disabilities (e.g., “Buddy System” where staff can help co-workers with disabilities evacuate);
 - ii. ensure the base of evacuation plans are posted no higher than 1200 mm (47 in) from the floor (**Figure 65**);
 - iii. ensure evacuation plans incorporate a font size of 14 point (minimum);
 - iv. ensure evacuation plans are available in alternate formats; and
 - v. provide signage to identify evacuation plans;
- b. mount controls and operating mechanisms:
 - i. between 900 mm and 1100 mm (35 and 43 in) from floor for emergency and life safety controls and operating mechanisms such as fire extinguishers, first aid kits and defibrillators; and
 - ii. at 1200 mm (47 in) high from floor for manual fire alarm pull.

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.

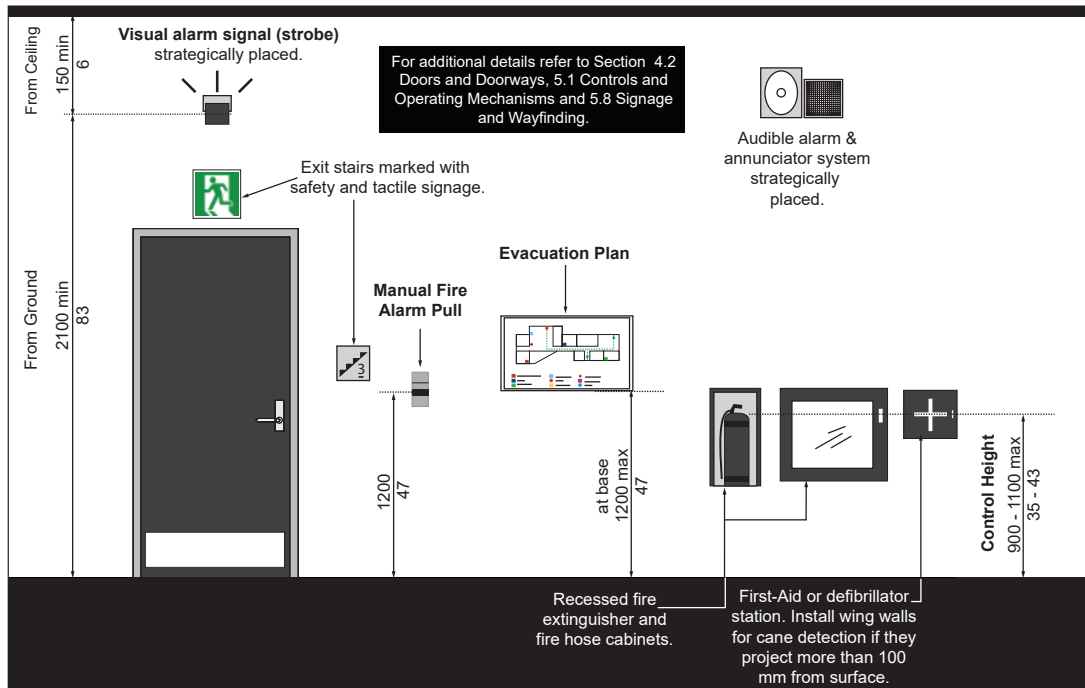


Figure 65: Fire Safety and Evacuation Features - Elevation View

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 washrooms).

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.

5.6.2 Visual Alarm Signals

Where visual alarm signals are provided for users with hearing loss:

- integrate visual alarm signals with required audible fire alarm system, including during retrofit projects where feasible;
- mount visual alarm signals in close proximity to audible alarm signals at 2100 mm (83 in) (minimum) high above floor level, or 150 mm (6 in) below the ceiling, whichever is lower (**Figure 65**);
- where visual alarm signals are provided in any common / public corridor, hallway, lobby or room, ensure they are placed no more than 15 metres (49 ft) apart, on the horizontal plane;
- provide visual alarm signals around the perimeter of large rooms and spaced at a maximum of 30 metres (98 ft) intervals; and
- ensure light and flashing features are based on the following criteria:
 - use a xenon strobe type or equivalent for light or lamp fixture;
 - ensure clear or nominal white colour (e.g., unfiltered or clear filtered white light);
 - provide maximum pulse duration of 0.2 seconds, with a maximum duty cycle of 40 percent;
 - 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;
 - ensure a flash intensity of 75 candela (minimum) with a flash rate between 1 Hertz (minimum) and 3 Hertz (maximum); and
 - 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.

5.6.3 Areas of Refuge

Where required exits from a floor area are not accessible, areas of refuge are required. Areas of refuge are a temporary and safe waiting space for evacuation in a fire situation and provide a known place for firefighters to help persons unable to use the stairs.

The requirements of this section are intended to reflect a combination of best practices for providing temporary refuge for persons with disabilities. The Ontario Building Code (OBC) acknowledges that measures identified in the OBC cannot provide absolute safety for all occupants in the fire area and that it may be necessary to develop special arrangements in the fire safety plan to evacuate persons with disabilities from these areas. Refer to the Ontario Building Code for detailed requirements related to “Protection on Floor Areas with a Barrier Free Path of Travel” [OBC, Section 3.3.1.7 and Appendix A-3.3.1.7.(1)].

5.6.3.1 Provision

- a. provide a minimum of two (2) designated spaces, and / or incorporate the number of paces as identified in **Table 10**;

Table 10: Provision of Area of Refuge Spaces

- b. provide a clear floor space of at least 915 by 1370 mm (36 by 54 in) for each area of refuge space required (**Figure 66**); and
- c. locate spaces clear of any adjacent door swing and away from pedestrian exit routes.

5.6.3.2 Design and Layout

Where areas of refuge are provided:

- a. locate on an accessible route;
- b. ensure they are served directly by an exit or a fire fighter’s elevator;
- c. ensure any door leading to an area of refuge complies with Section 4.2 “Doors and Doorways”;
- d. ensure they are located in an area that is separated from the floor area by a fire separation with a fire-resistance rating that is equal to that required for an exit; and
- e. ensure they are smoke-protected in buildings of more than three stories.

Best Practice

Provide power door operators at doors leading to a designated area of refuge.

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 ‘Area of Refuge’ is determined by facility occupancy and level of use.

Note

Refer to Ontario Building Code (OBC) and applicable Fire Code requirements for fire and smoke protection, including fire separations / zones and travel distances between zones.



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

5.6.3.3 Signage

- provide signage in accordance with Section 5.8 “Signage and Wayfinding”;
- identify accessible routes to areas of refuge with directional signage throughout the floor area;
- provide identification and directional signage to indicate location of an area of refuge and area of refuge spaces (**Figure 66**);
- identify the location of areas of refuge on all publicly displayed evacuation plans; and
- ensure all areas of refuge are designated in the facility’s evacuation plan and procedure documents.

5.6.3.4 Communication and Emergency Features

- provide a two-way hands-free communication system with controls mounted between 900 and 1100 mm (35 and 43 in), connected to an emergency response system (**Figure 66**); and
- ensure the communication system includes both audible and visual notification devices to indicate “help is on the way”.

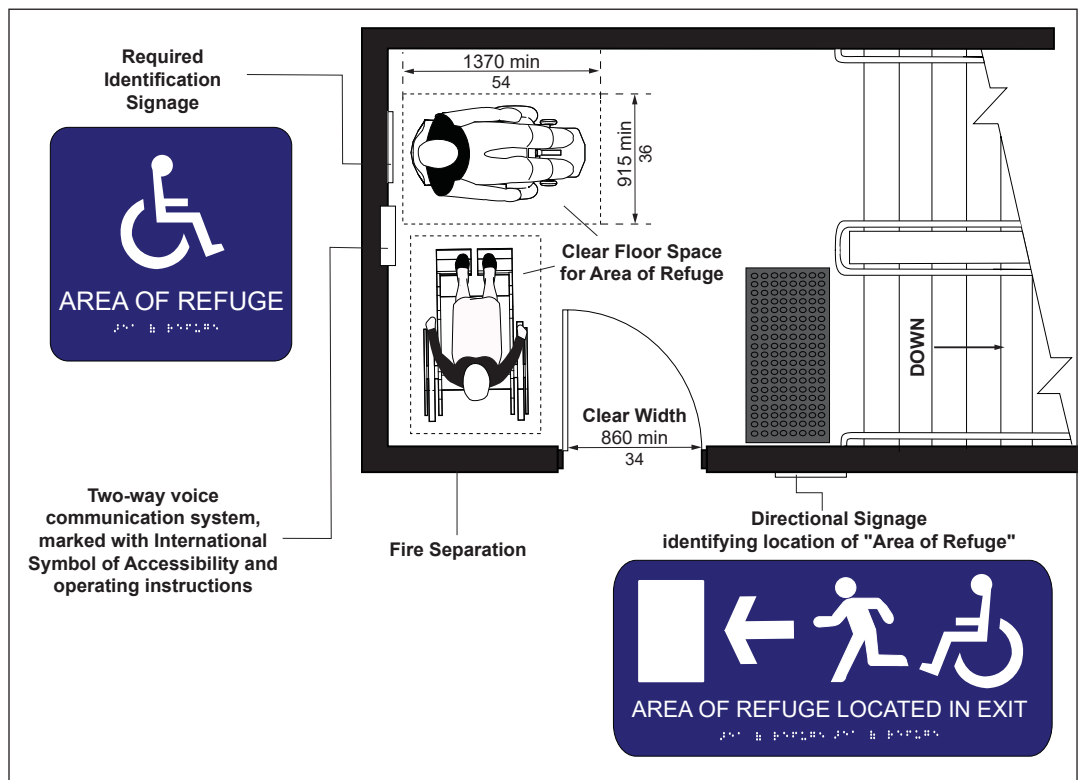


Figure 66: Example of Area of Refuge at Exit Stair



5.7

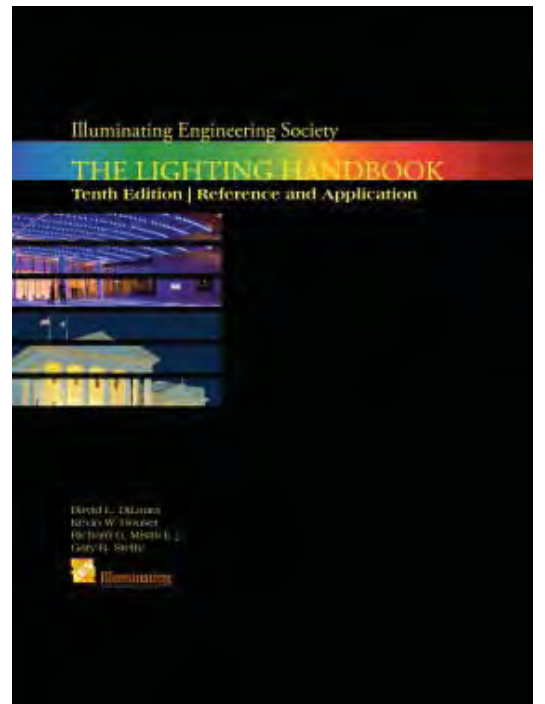
Application

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

For measuring lighting levels (e.g., lux), a digital light metre is typically used to verify the overall performance of fixtures and / or of the site and facility lighting system as a whole.



Example of digital light metres for measuring lighting levels (Source: Extech).



Note

For additional information on lighting requirements, refer to the Illuminating Engineering Society's "The Lighting Handbook", latest version.

Best Practice

The Canadian National Institute for the Blind (CNIB) recommends increasing IESNA suggested lighting levels by a range of 25 to 50 percent to address the accessibility needs of people with vision loss.

For emergency lighting, preferred lighting level of 10 lux (1 foot-candles) minimum is required at exits, exit stairs or other paths of travel, measured at the walking surface.

County to refer to additional lighting standards / requirements for other specialized facilities that may not be identified in Table 11, including Long Term Care Facilities and Courtrooms (e.g., other Provincial standards or best practices may be in effect or need additional review / consultation as part of detailed design).

Note

Sources include:

- IESNA: Illuminating Engineering Society of North America, 2011.
- CNIB: Canadian National Institute for the Blind, Clearing Our Path, 2009.
- CSA: Canadian Standards Association B641 Accessible Design for the Built Environment, 2012.
- OBC: Ontario Building Code, 2012.

5.7.1 Lighting Level Requirements

For lighting level requirements for interior and exterior environments:

- ensure enhanced lighting levels beyond IESNA requirements (e.g., CNIB) for elements in both interior and exterior environments are provided, as summarized in **Table 11**; and
- provide the highest lighting level (lux) where identified in **Table 11** (e.g., highlighted in bold).

Table 11: Lighting Requirements for Exterior and Interior Environments

Typical Elements, Features and Locations	Lighting Level (lux)			
	IESNA (2011)	CNIB (2009)	CSA (2012)	OBC (2012)
	Min. / Avg.	Enhanced (+ 25 - 50%)	Min.	Min.
Common Elements (both Exterior & Interior)				
Ramps	50 (avg.)	62.5 - 75	50	50
Stairs	50 (avg.)	62.5 - 75	50	50
Rest Areas	50 (avg.)	62.5 - 75	50	-
Signage	-	200	200	-
Parking Areas				
Exterior	10 (min.)	12.5 - 15	-	-
Parking Garage	10 (min.)	12.5 - 15	-	-
Exterior Circulation				
Routes (e.g., sidewalks)	10 (avg.)	12.5 - 15	50	-
Interior Circulation				
Public Corridors	50 (avg.)	62.5 - 75	-	50
Elevator Lobby	100 (avg.)	125 - 150	-	-
Elevator Cabs	50 (avg.)	62.5 - 75	100	-
Building Amenities				
Reception	150 (avg.)	187.5 - 225	-	-
Lobbies/ Waiting Areas	100 (min.)	125 - 150	-	-
Service Counters	150 (avg.)	187.5 - 225	-	-
Public Telephones / ATM	200 (avg.)	250 - 300	200	-
Operating Controls and Mechanisms	-	-	100 or 200 where reading is required	-
Plumbing Facilities				
Washrooms General	50 (avg.)	62.5 - 75	-	200
Washroom Fixtures	150 (avg.)	187.5 - 225	-	200
Showers	100 (avg.)	125 - 150	-	200
Special Rooms & Facilities				
General Assembly / Courtrooms	100 (avg.)	125 - 150	-	-
Multi-Purpose Rooms	300 (avg.)	375 - 450	-	-
Offices - Workstation	300 (avg.)	375 - 450	-	-
Food Court - Cashier / Food Displays	200 (avg.)	250 - 300	-	-
Food Court - Seating and Circulation	150 (avg.)	187.5 - 225	-	-
Change Room	-	-	-	300

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 (83 in) (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.

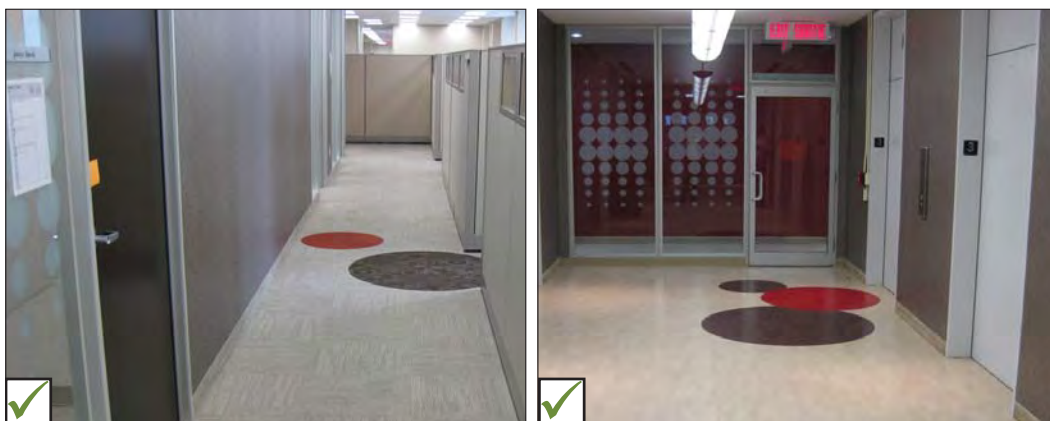
Note

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

- select lighting sources, materials and finishes that do not reflect glare, including implementing strategies to control natural lighting sources wherever possible;
- ensure floor surface finishes such as vinyl, terrazzo and ceramic tile, mosaics or other materials have a matte or satin finish;
- provide matte or satin wall finishes (e.g., paint, vinyl coverings, stone, marble, wood, plastic or laminate) to prevent and minimize glare;
- provide curtains, blinds, screens or other strategies to shield bright, natural lighting sources, especially where direct sunlight may cause glare;
- select light fixtures that prevent or minimize any potential for direct glare (e.g., with diffusers, lenses, or recessed light sources; and
- 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.



Application

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

Recognizing that signage programs and wayfinding strategies are customized based on facility types and use of space, the information and criteria in this section is provided as a starting point.

There are different types of signage for various purposes:

- regulatory signs, which include prohibition signs denoting an order forbidding an action, and mandatory signs which denote an order requiring an action;
- warning signs such as caution and danger signs denote a potential hazard and a definite hazard, respectively; and
- identification signs, which include rooms, titles, names or numbers are provided for general orientation or specific information, such as washrooms, routes of egress, stairwells, doorways or offices.

Best Practice

Avoid using vertical wording and electronic scrolling signage.

Where scrolling signage has to be used, ensure characters and symbols move slowly across the screen.

Keep information on signage short and simple.

Using a combination of lower case and upper case lettering is easier to read than using all upper case lettering. The “shape” of the text or message is more legible and creates its own image for familiarity.

Avoid very fine type and very thick type font.

Note

Consistent locations include height considerations for overhead or wall-mounted signs, as well as uniform placement of identification signs for facilities and services.

Nearsighted persons might have to approach much closer to read a sign than persons with average visual acuity. Signs at eye level allow persons to get closer to the sign.

5.8.1 Signage

5.8.1.1 Design Features

- ensure signage surfaces have matte, eggshell or non-glare finish;
- ensure signage is of uniform design;
- provide colour contrast between signage and mounting surfaces;
- where used to give the same type of information within the same facility, ensure signage is consistently shaped, coloured and positioned;
- where facilities or elements, including but not limited to washrooms, elevators, telephones, information kiosks, routes, ‘Areas of Refuge’, and parking facilities are accessible, provide signage with the International Symbol of Accessibility to designate as accessible (**Figure 67**); and
- provide lighting level of 200 lux (20 foot candles) (minimum) at signs.

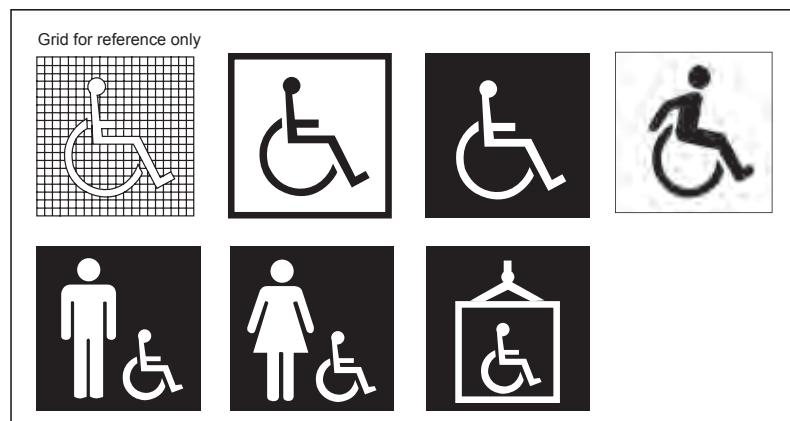


Figure 67: Examples of International Symbols of Accessibility

5.8.1.2 Character Features and Sizes

- ensure text characters (e.g., letter or number) are sans serif font type and have Arabic numerals;
- where text is provided, ensure it is bilingual;
- provide width to height ratio between 3:5 and 1:1 (**Figure 68**);
- provide stroke width to height ratio between 1:5 and 1:10;
- ensure characters are not italic, oblique, script, highly decorative or of other unusual forms;
- provide high tonal contrast between text characters and background surface;
- ensure the minimum character height is provided as per viewing distance as identified in **Table 12**; and
- use an uppercase “X” for character measurement.

Table 12: Character Height Relative to Viewing Distance

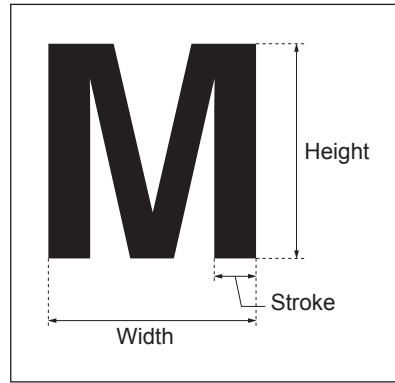


Figure 68: Character Features and Sizes

Note

Some factors affecting ease with which text can be distinguished from its background include shadows cast by lighting sources, surface glare, and the uniformity of the text and background colours and textures.

Where illuminated signage is provided, avoid using red, blue or green LEDs on a black background as they are unreadable for most people with vision loss.

5.8.1.3 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:

- ensure pictogram has a field height of 150 mm (6 in) minimum);
- provide text descriptors and braille directly below the pictogram field and not in the pictogram field;
- provide high tonal contrast between pictogram the field;
- use the International Symbol of Accessibility to identify accessible facility features, spaces, elements and amenities (**Figure 67**); and
- 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 69**).

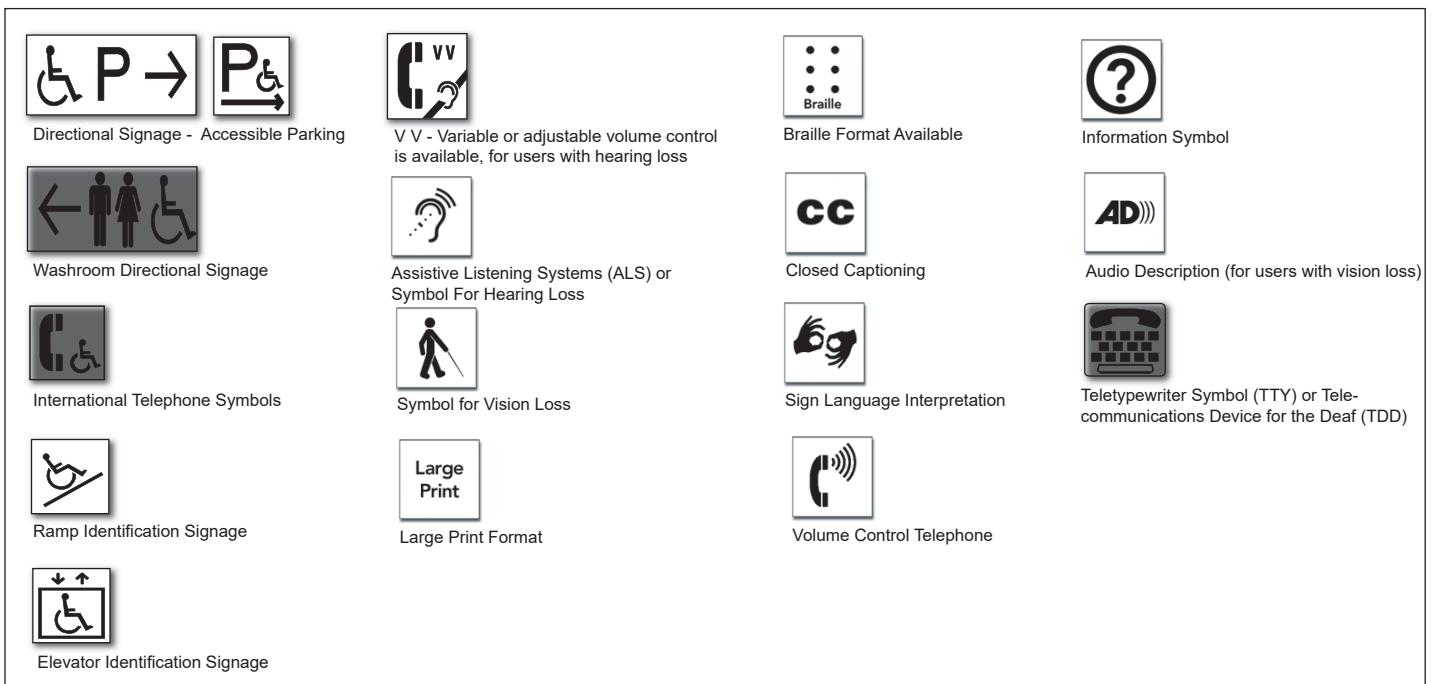


Figure 69: Example of Typical Pictograms and Symbols

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).

Avoid mounting signage directly on external glazing where possible as it may reduce visibility and legibility of text.

5.8.1.4 Braille

Where braille is provided on signage:

- a. ensure it is uncontracted braille (Grade 1) bilingually;
- b. ensure braille dots have a domed or rounded shape;
- c. locate immediately below the corresponding text (e.g., room numbers, names) and / or pictogram; and
- d. where text is multi-lined, place braille below the entire text.

5.8.2 Tactile Signage

Signage with tactile features (e.g., braille, raised characters / text, symbols or pictograms) are designed to be read by touch.

5.8.2.1 Design Features

Where tactile characters are provided:

- a. ensure text characters (e.g., letter or number) and pictograms (where provided) are raised between 0.8 to 1.5 mm above the surface (**Figure 71**);
- b. ensure the edges of the text characters are gently rounded;
- c. provide high tonal contrast between the tactile characters and the background surface;
- d. ensure all raised text characters, pictograms or symbols are accompanied by equivalent description in bilingual braille;
- e. where pictogram is provided, ensure they are 150 mm (6 in) (minimum) high (**Figure 70**); and
- f. for text characters (e.g. letter or number):
 - i. ensure they are sans serif font and Arabic numerals;
 - ii. ensure text is bilingual;
 - iii. ensure height of characters are between 16 and 50 mm ($\frac{3}{4}$ to 2 in); and
 - iv. ensure text is entirely in upper case lettering as it is easier to read by touch, compared to a combination of upper and lower case letters.

5.8.2.2 Mounting Locations

Where signage with tactile features is provided:

- a. mount at 1220 mm (48 in) (minimum) high, measured from the baseline of the lowest tactile character and 1525 mm (60 in) (maximum) high, measured from the baseline of the highest tactile character (**Figure 70**);
- b. where provided at a door, install consistently on the wall beside the latch edge of door, 150 mm (6 in) +/- 10 mm from the door frame;
- c. where provided at double doors with one active leaf, mount signage to the right of the right hand door;

- d. where there is no wall space at the latch side of a single door or on the right side of the double door, install signage on nearest adjacent wall;
- e. install to allow users to approach within 100 mm (4 in) of sign location, clear of any door swing or protruding objects;
- f. mount so that a clear floor space of 455 mm by 455 mm (18 by 18 in) (minimum), centred on the tactile characters is provided beyond the arc of any door swing between the closed position and the 45 degree open position; and
- g. ensure a clear wall area of 75 mm (3 in) wide (minimum) around the sign is provided.

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 72**).

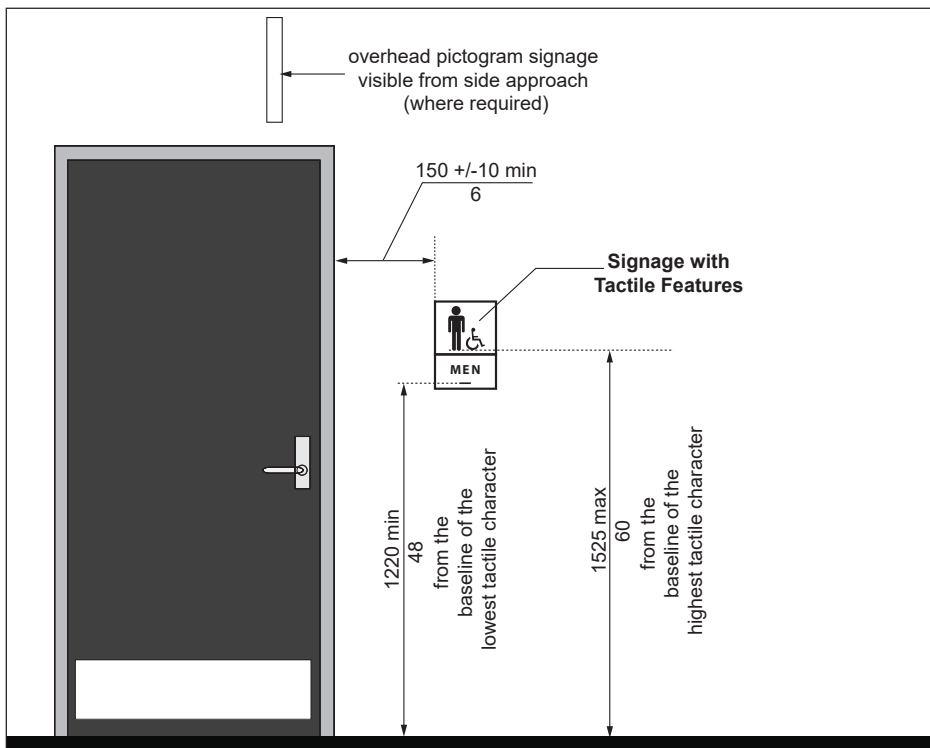
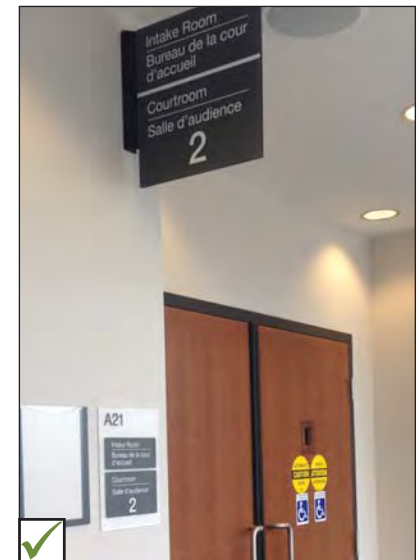


Figure 70: Mounting Location of Signage with Tactile Features - Elevation View



Example of overhead signage and tactile room identification signage.

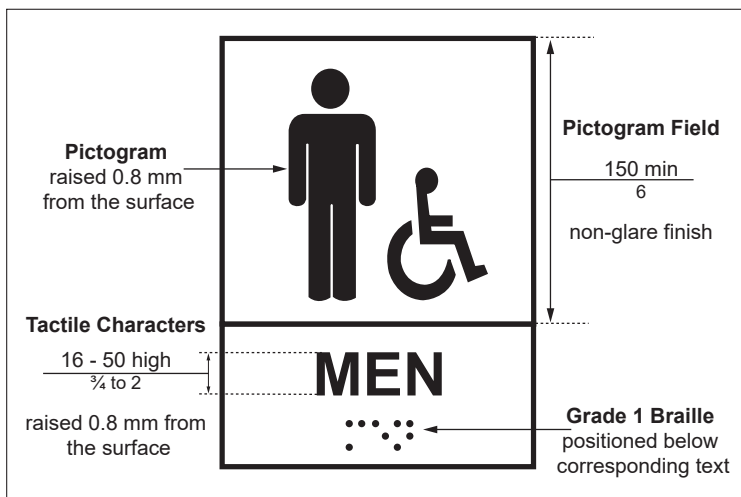


Figure 71: Signage with Tactile Features

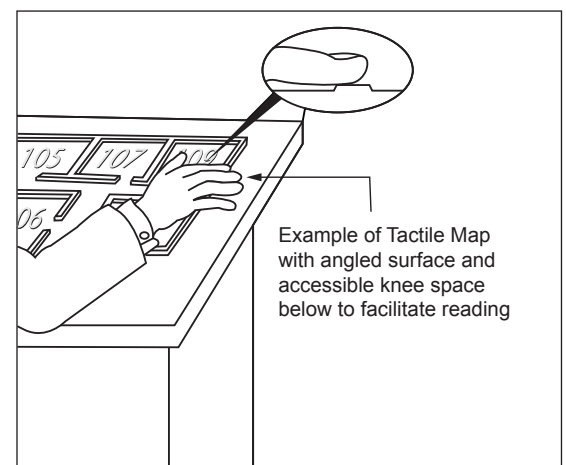


Figure 72: Tactile Map (Best Practice)

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.

Mount signs so that they face the direction of travel as they are easiest to notice and read for people who might have limitation moving their head or have reduced peripheral vision.

5.8.3 Wayfinding Principles

- a. ensure consistent design, strategic placement and ideal mounting heights at key decision-making points along accessible routes for all signage;
- b. provide high tonal contrast between signage and mounting surfaces for full visibility;
- c. ensure there is no information overload or cluttering of signage to avoid confusion; and
- d. 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).

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 1700 mm (67 in) is preferred to accommodate larger mobility aids.

Where there is extensive glazing, consider providing a strip at a lower level, between 850 to 1000 mm (33 to 39) high above finished floor level.

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 (36 in) wide by 1370 mm (54 in) deep (minimum) for forward and 1525 mm (60 in) wide by 915 mm (36 in) deep (minimum) for side approach by users of mobility aids;
- b. locate bottom sill height no more than 1100 mm (43 in) above the finished floor;
- c. where ventilation controls are provided, mount between 400 and 1100 mm (16 and 43 in) above the finished floor to be reachable from a seated position (**Figure 73**);
- d. do not locate horizontal structure (e.g., window transom) between 900 and 1300 mm (35 and 51 in) above the floor; and
- e. where wall systems include extensive use of glazing, provide horizontal marking strips:
 - i. 50 mm (2 in) in height, extending full width of glazed area, mounted 1350 to 1500 mm (53 to 59 in) above finished floor; and
 - ii. ensure high colour contrast is provided for users with vision loss.

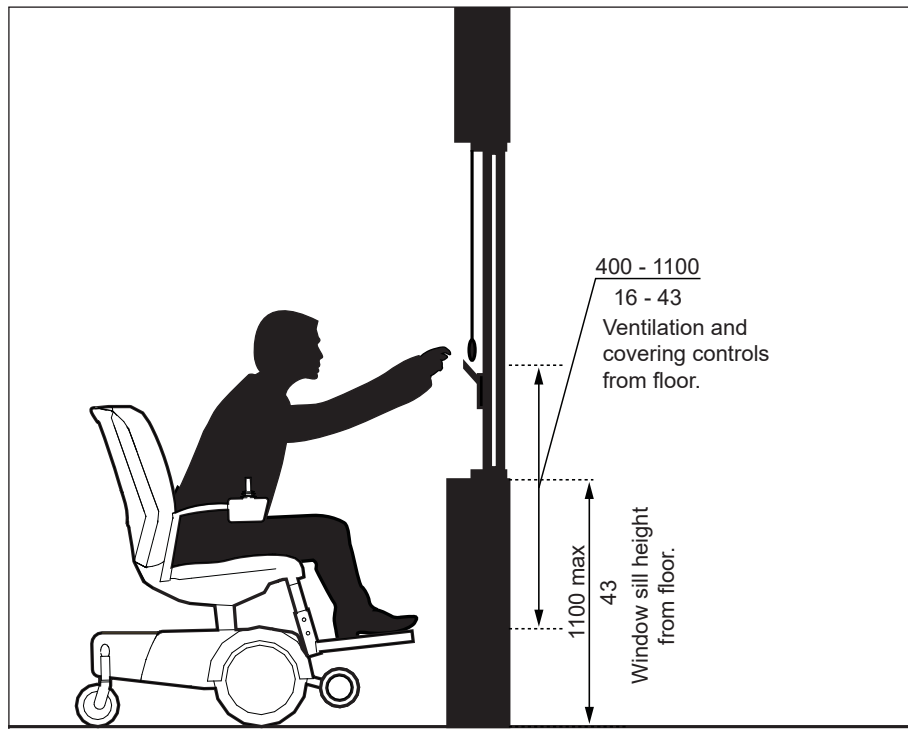


Figure 73: Window Design Features - Elevation View

Special Facilities and Spaces

6.0

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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 13**.

Table 13: Common Assembly Areas

Civic	Entertainment / Cultural	Educational	Sports
Council Chamber	Theatre	Lecture Hall	Arena
Public Meeting or Hearing Rooms and Auditoriums	Places of Worship	Classroom	Stadium
Courtrooms and Adjacent Areas	Performing Arts Centre	Conference / Symposium Room	Gymnasia
Multi-Purpose Rooms (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.

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

Note

Persons using mobility aids usually sit higher than persons in standard seating and accessible seating spaces should be located to ensure that when they are occupied, the views of others that may be seated behind them are not obstructed.

6.1.1 Design and Layout

- ensure lighting level is evenly distributed throughout all accessible routes and accessible seating spaces;
- ensure a consistent accessible path of travel of 1100 mm (43 in) (minimum) throughout space for circulation;
- provide accessible seating options for users of mobility aids;
- provide assistive listening systems, designed for the type of venue and audience; and
- 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.

6.1.2 Accessible and Adaptable Seating

6.1.2.1 Provision

Where fixed seating is available in assembly occupancies:

- provide accessible seating spaces for users of mobility aids and adaptable seating based on total number of fixed seats, as identified in **Table 14**.

Table 14: Accessible and Adaptable Seating Requirements in Assembly Areas

Total Number of Fixed Seats	Minimum Number of Accessible Seats	Minimum Number of Adaptable Seating
Up to 20	2	1
21 to 40	2	2
41 to 60	2	3
61 to 80	2	4
81 to 100	3	5
Over 100	3% of seating capacity	the greater of 5 seats or 5% of the aisle seating capacity

6.1.2.2 Accessible Seating Spaces

- install directional signage in prominent locations to identify location of accessible seating spaces;
- locate spaces adjoining an accessible path of travel, without infringing on egress from any row of seating;
- 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);
- where accessible seating spaces are situated as part of the designated seating plan, provide a choice of viewing location and ensure there is a clear view of the event taking place (**Figure 76**);
- ensure at least two accessible seating spaces are provided side by side;

- f. when entering from side, ensure clear floor space at accessible seating spaces is 1525 mm (60 in) wide by 915 mm (36 in) deep (minimum);
- g. when entering from rear or front, ensure clear floor space at accessible seating space is at least 915 mm (36 in) wide by 1370 mm (54 in) deep (minimum) (**Figure 74**);
- h. where accessible seating spaces are provided on an elevated platform (**Figure 75**), ensure the lines of sight are:
 - i. comparable to those for all viewing positions;
 - ii. not reduced or obstructed by standing members of the audience; and
 - iii. free of any obstructions (e.g., any barriers, handrails, guardrails or columns); and
- i. ensure accessible seating spaces are positioned so that they do not obstruct sight lines of other users either sitting or standing.

Best Practice

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

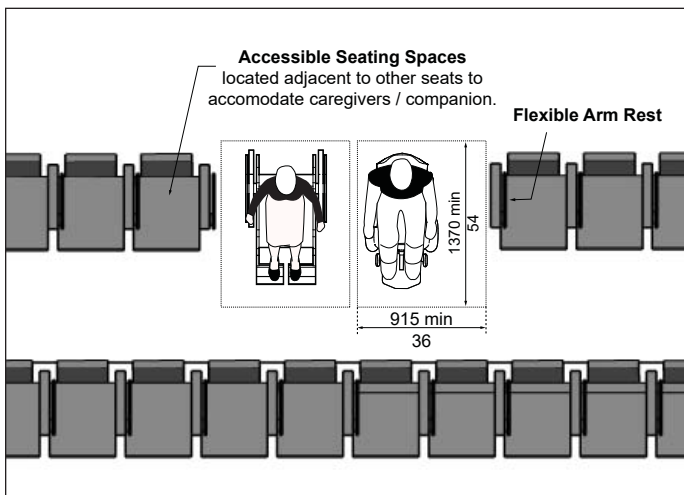


Figure 74: Accessible Seating Space Dimensions

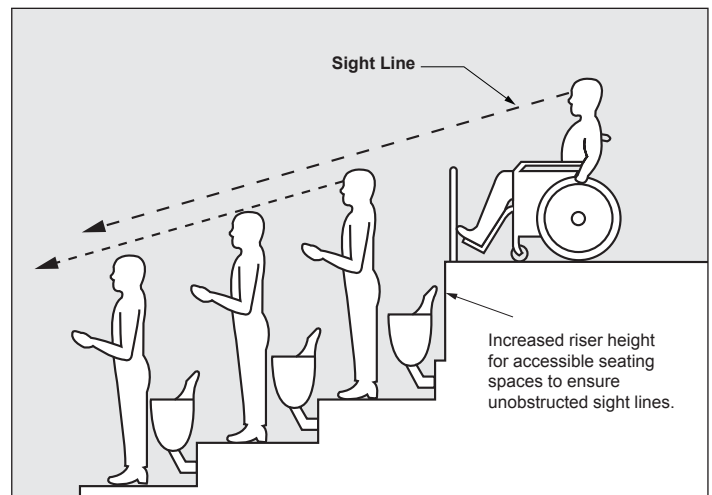


Figure 75: Lines of Sights

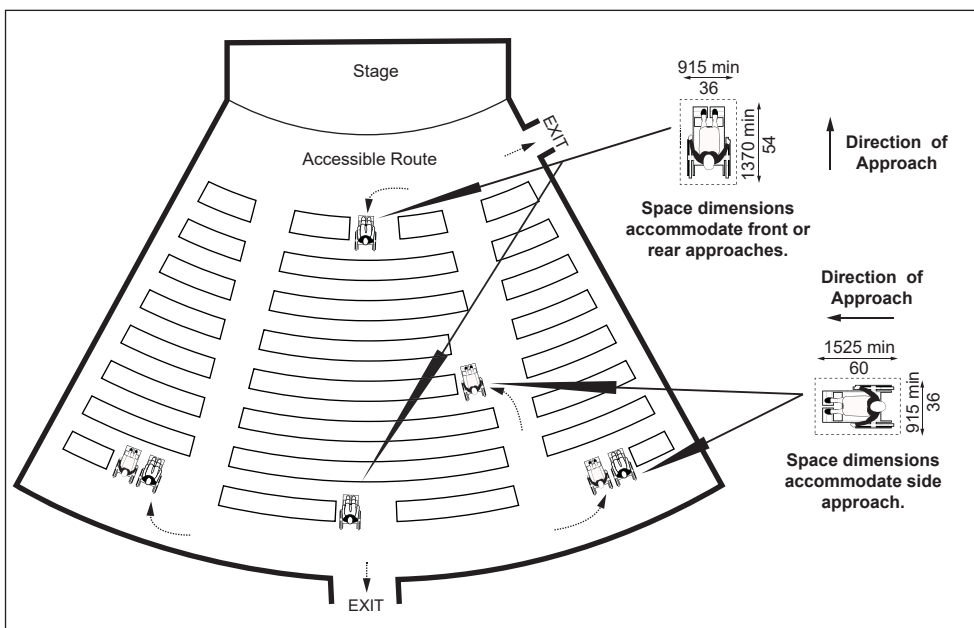
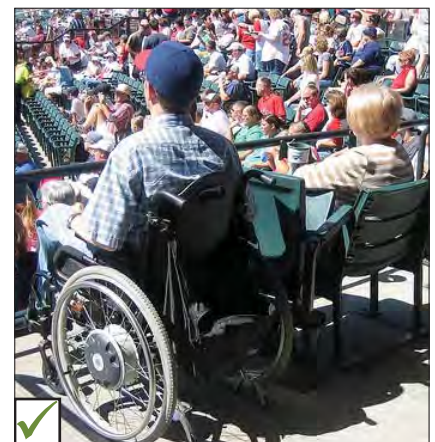


Figure 76: Accessible Seating Plan - Example of Viewing Positions



Designated accessible seating area at stadium.

6.1.2.3 Adaptable Seating

- a. locate adjacent to an accessible route without infringing on egress from any row of seating or any aisle requirements;
- b. equip with a movable or removable armrest on the side of the seat adjoining the accessible route; and
- c. locate, as part of the designated seating plan, and provide a choice of viewing location with a clear view of the event taking place.

6.1.2.4 Storage for Mobility Aids

- a. ensure at least one (1) storage space where not more than 200 fixed seats is provided and a minimum of two (2) storage spaces, where more than 200 fixed seats are provided;
- b. provide a clear floor space of 915 mm (36 in) wide by 1370 mm (54 in) deep (minimum) for each space; and
- c. locate storage space on the same level and in proximity to the accessible seating spaces and seats designated as adaptable seating.



Meeting and Multi-Purpose Rooms

6.2

Application

This section applies to highly-used and large meeting and multi-purpose 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.

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

Note

For larger multi-purpose meeting rooms, consider ways to allow easy and logical subdivision of the room (e.g., partitioning using automatic movable walls, that provide acoustic and visual barriers).

6.2.1 Design and Layout

- locate on an accessible path of travel;
- identify meeting room location with appropriate signage;
- ensure a consistent accessible path of travel of 1100 mm (43 in) clear width (minimum) is provided throughout space for circulation (**Figure 77**);
- provide a turning diameter of at least 1700 mm (67 in) within the room;
- provide accessible tables and work surfaces with suitable knee clearances and seating, as identified in related sections;
- provide assistive listening systems, identified with signage and International Symbol for Hearing Loss;
- where servery or millwork are provided, ensure clear floor space is:
 - 915 mm (36 in) wide by 1370 mm (54 in) deep (minimum) for forward approach; and
 - 1525 mm (60 in) wide by 915 mm (36 in) deep (minimum) for side approach;
- 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.

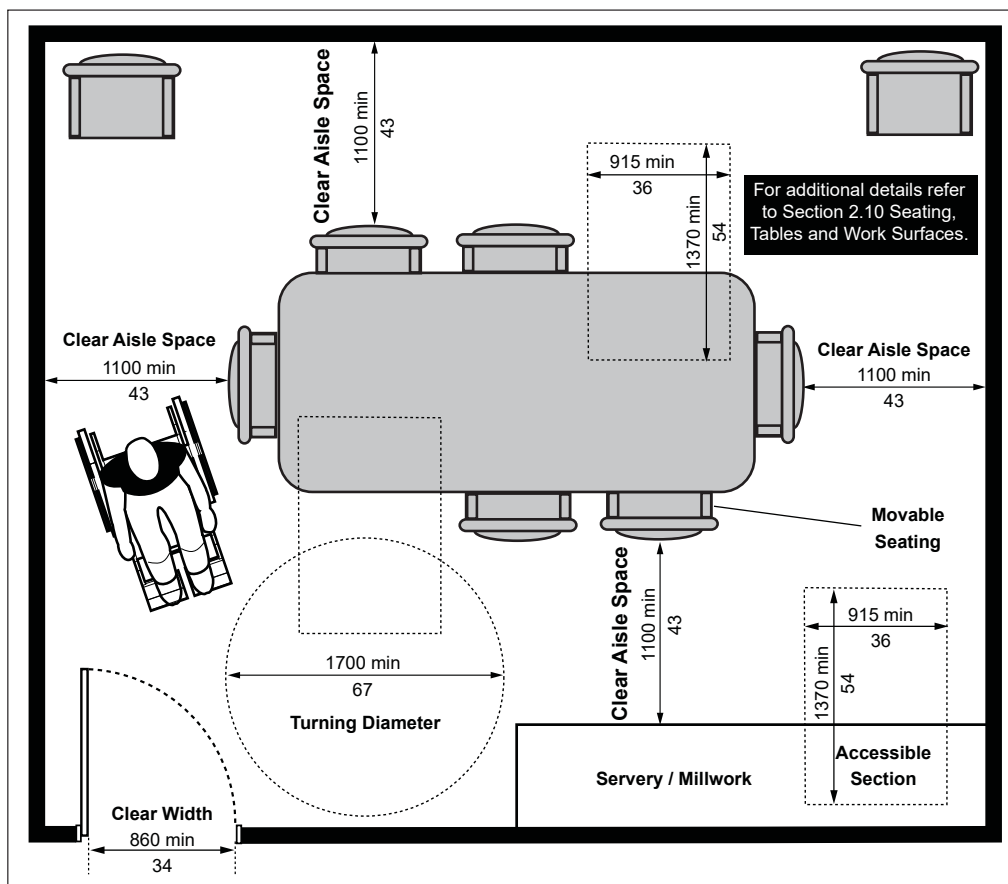


Figure 77: Meeting Room Design and Layout



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

Best Practice

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

Provide exhibits and display labels in alternative formats (e.g., Braille or audio).

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

6.3.1 Design and Layout

- a. ensure accessible path of travel 1100 mm (43 in) (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, identified with signage with International Symbol for Hearing Loss; and
- e. where exhibits and displays are provided:
 - i. mount top surface of display cases at 915 mm (36 in) high (maximum) from floor;
 - ii. provide clear floor space of 915 mm (36 in) wide by 1370 mm (54 in) deep (minimum) for forward approach and 1525 mm (60 in) wide by 915 mm (36 in) deep (minimum) for side approach in front of exhibits;
 - iii. ensure a high 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 1100 mm (43 in) 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. 5.7 Lighting
- Sec. 6.11 Service Counters
- Sec. 6.12 Waiting 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 1700 mm (67 in), to allow both side and frontal approach of larger wheeled mobility aids such as powered scooters and wheelchairs.

6.4.1 Design and Layout

- provide a consistent accessible path of travel of least 1100 mm (43 in) wide throughout spaces for circulation; and
- where layout of cafeteria amenities are dispersed, ensure clear floor space in front of food displays and dispensing equipment of:
 - 915 mm (36 in) wide and 1370 deep (54 in) (minimum) for forward approach; and
 - 1525 mm (60 in) wide and 915 mm (36 in) deep (minimum) for side approach.

6.4.1.1 Food Displays and Service Lanes

Where self-service food displays are provided:

- ensure clear aisle width between tray slide and separating rail is 1100 mm (43 in) (minimum) (**Figure 78b**);
- provide tray slides mounted between 730 and 865 mm (29 and 34 in) high above floor (**Figure 78a**);
- ensure at least 50% of shelves are mounted 400 mm (16 in) to 1370 mm (54 in) for unobstructed side approach; and
- ensure maximum side reach of 500 mm (20 in) deep.

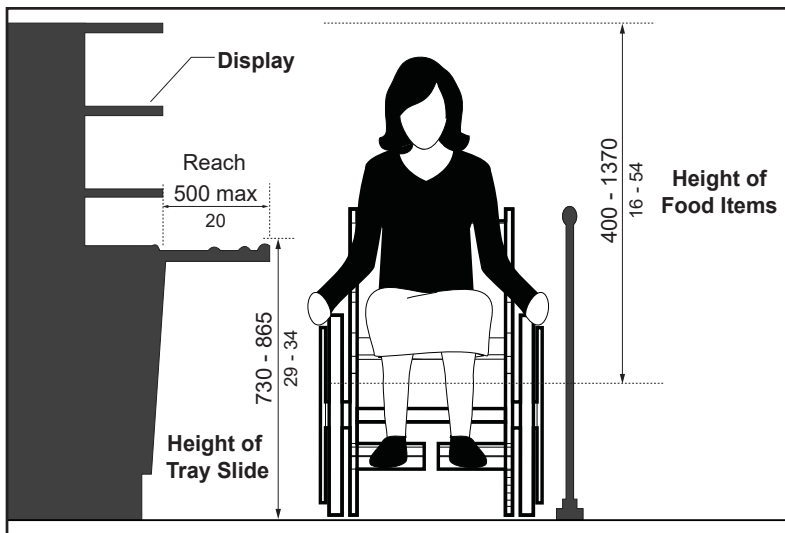


Figure 78a: Food Displays and Tray Slides - Section View

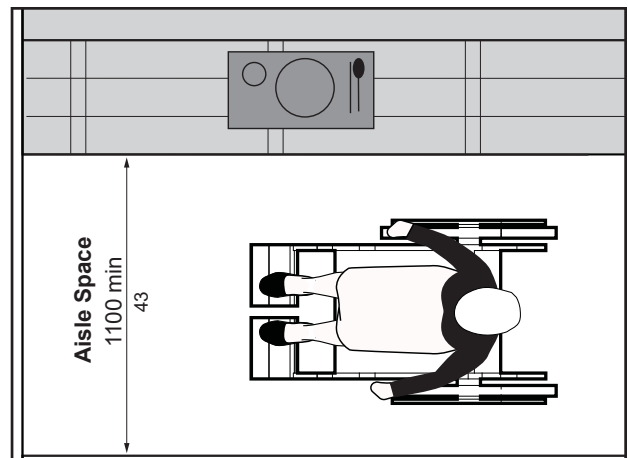


Figure 78b: Aisle Width - Plan View

6.4.1.2 Service and Payment Counter

- a. where provided, ensure at least one service counter is accessible;
- b. provide a clear floor space for:
 - i. forward approach of 915 mm (36 in) wide by 1370 mm (54 in) deep; and
 - ii. side approach of 1525 mm (60 in) wide by 915 mm (36 in) deep; and
- c. ensure staff is 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 1700 mm (67 in) wide by 1700 mm (67 in) deep (minimum) in front of dining areas; and
- d. provide informational and directional signage identifying accessible amenities, with International Symbol of Accessibility.

Best Practice

Flexible seating and tables allow easier accommodations for all users.

Note

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



Accessible cafeteria seating area designated with International Symbol of Accessibility.



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;
- b. ensure the following minimum clear floor space is provided directly in front of kitchen amenities and appliances, and to the one side where drawers or door open:
 - i. 915 mm (36 in) wide by 1370 mm (54 in) deep for forward approach;
 - ii. 1525 mm (60 in) wide by 915 mm (36 in) deep for side approach; and
- c. ensure all controls and operating mechanisms are mounted no higher than 1100 mm (43 in) from floor.

Best Practice

A turning circle of 2500 mm (98 in) is preferred for users of larger mobility aids, including powered scooters and wheelchairs.

6.5.1.1 Pass-Through or Galley Kitchens

For kitchens where counters, appliances or cabinets are on two opposing sides or opposite a parallel wall (**Figure 79**):

- a. provide a clearance of at least 1100 mm (43 in) 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 860 mm (34 in) clear width.

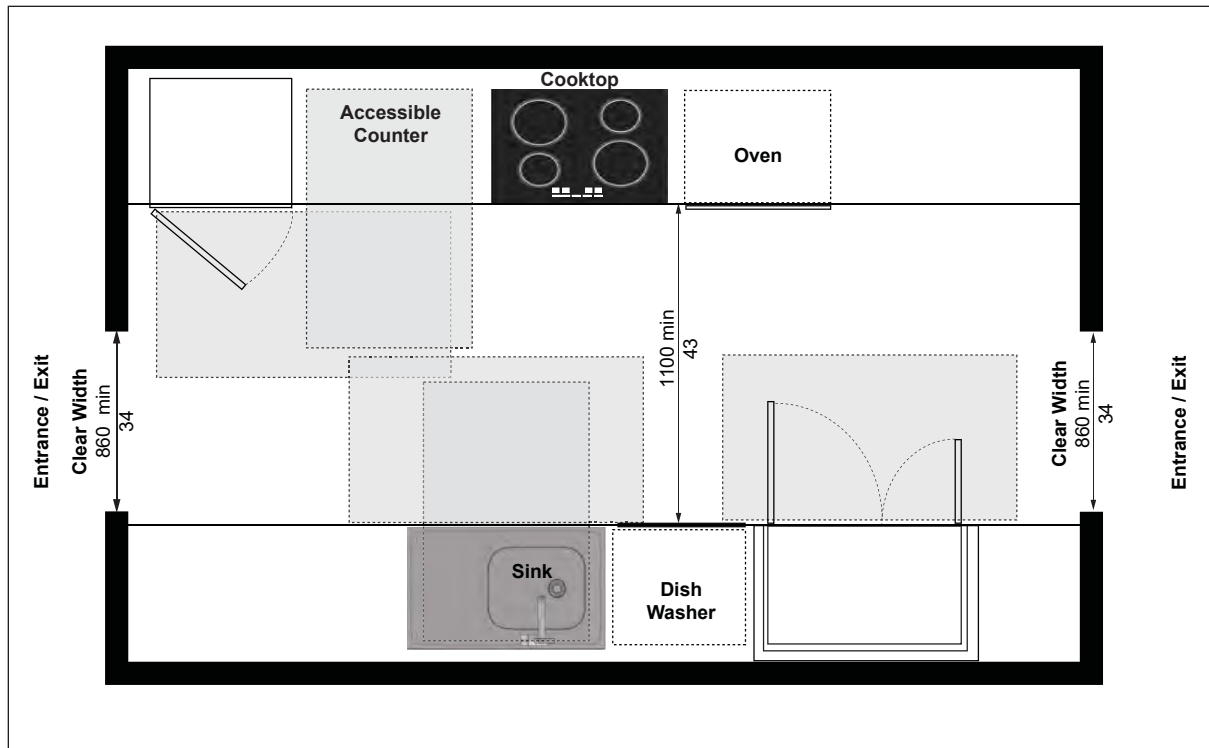


Figure 79: Pass-Through or Galley Kitchen - Plan View

6.5.1.2 U-Shaped Kitchens

Where kitchens are enclosed on three continuous sides (**Figure 80**):

- provide a clearance of at least 1500 mm (59 in) between all opposing base cabinets, countertops or walls within kitchen work areas; and
- ensure entrance / exit clear width is at least 860 mm (34 in).

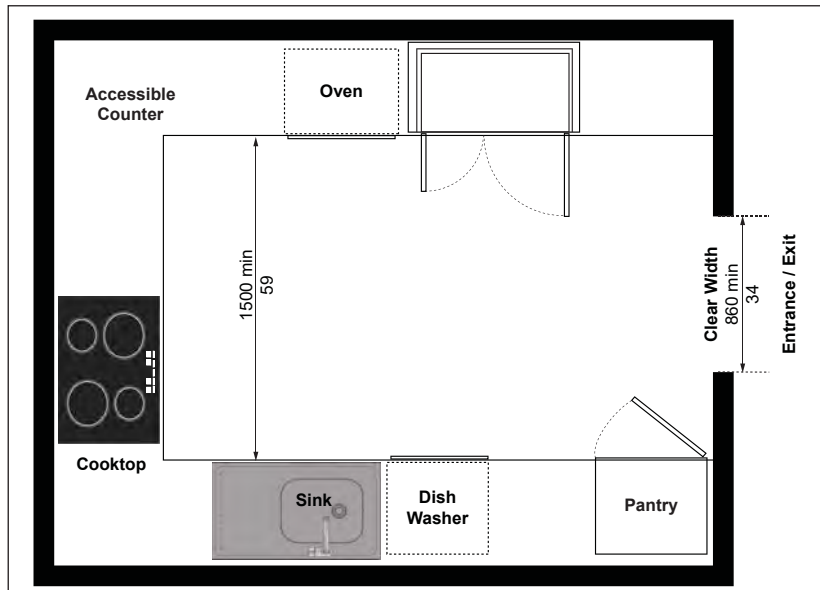


Figure 80: U-Shaped Kitchen - Plan View

6.5.1.3 L-Shaped Kitchens

Where kitchens are L-shaped (**Figure 81**):

- provide a clearance of at least 1100 mm (43 in) between all opposing base cabinets, countertops or walls within kitchen work areas.

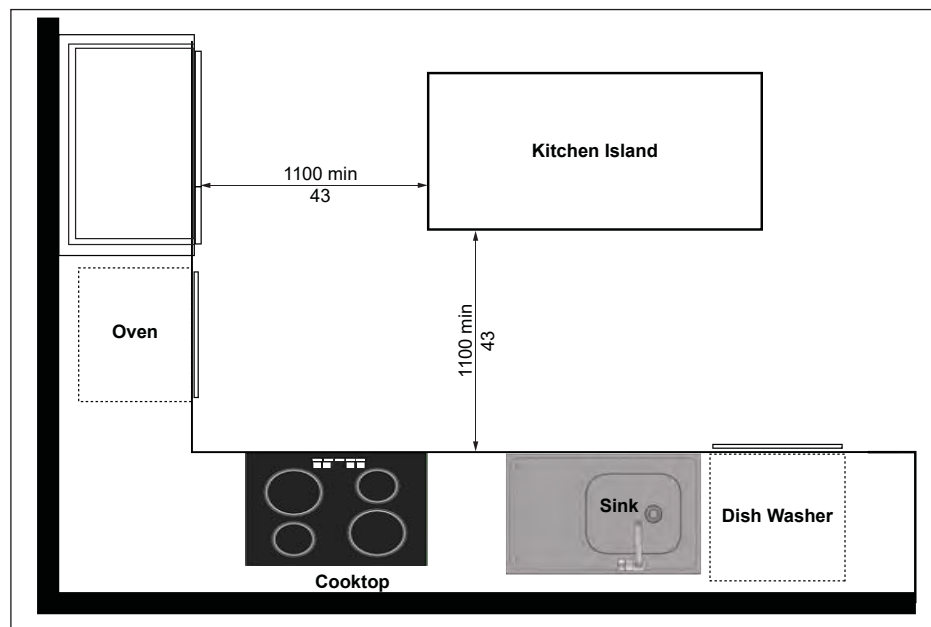


Figure 81: L-Shaped Kitchen - Plan View

6.5.2 Counters and Work Surfaces

For accessible food preparation counters and work surfaces:

- a. ensure a high color contrast is provided between all cabinets, countertops, appliances and adjacent wall surfaces;
- b. ensure there are no sharp or abrasive surfaces underneath counter and work surfaces;
- c. ensure at least one (1) counter / work surface is accessible with:
 - i. dimension of 760 mm (30 in) wide by 600 mm (24 in) deep (minimum);
 - ii. top surface between 730 mm (29 in) and 865 mm (34 in) high (**Figure 82**);
 - iii. a centred knee clearance at least 480 mm (19 in) deep, 915 mm (36 in) wide and 685 mm (27 in) high;
 - iv. a clear floor space of at least 915 mm (6 in) wide by 1370 mm (54 in), which may extend up to 480 mm (19 in) underneath the counter / work surface; and
 - v. electrical outlets installed at the side or front of it.

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.

An additional pull-out workboard below the standard counter surface is recommended.

Continuous countertops are recommended.

Note

Where kitchen islands are provided, consider providing lowered counter with knee clearance.



Accessible counter space and sink with knee clearance.

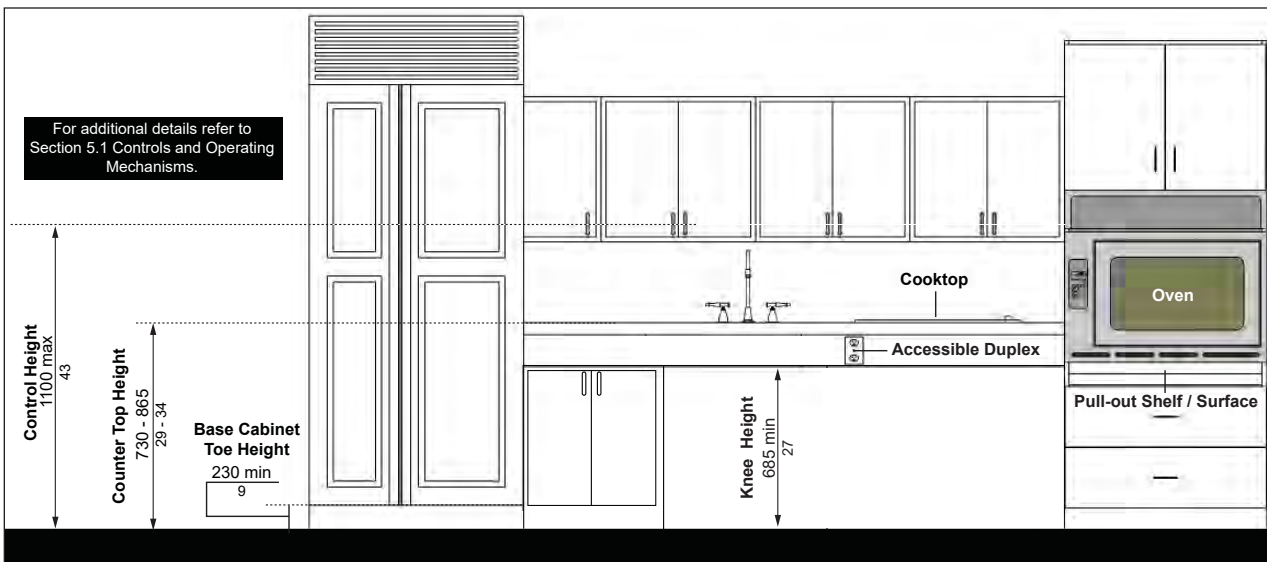


Figure 82: Kitchen Amenities

Best Practice

For kitchen storage, provide shelving above the counter and drawers or pull-out shelves below the counters.

Full-height storage cabinets provide a good range of accessible storage, which is particularly useful because in accessible kitchens, the amount of base storage is reduced by the knee clearance provisions.

Full-extension drawers and shelves provide storage space that is easy to reach and use.

“Lazy Susan” trays also provide accessible storage.

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

Note

Cooktops with flat ceramic surfaces should not be used for people with low vision.

6.5.3 Kitchen Storage

Kitchen storage includes but is not limited to shelves, storage cabinets and drawers. Where provided:

- a. ensure at least one (1) storage unit is 1100 mm (43 in) maximum) high from floor where it is mounted above a counter / work surface;
- b. provide accessible cabinet door hardware (e.g., D-type door pull):
 - i. mount no higher than 1100 mm (43 in) from floor (**Figure 82**);
 - ii. mount close to the bottom for upper cabinets and close to the top for base cabinets; and
- c. ensure toe space of 150 mm (6 in) deep by 230 mm (9 in) high (minimum) is provided at base cabinets, where provided (**Figure 82**).

6.5.4 Sinks

- a. install sink with its centreline at 460 mm (18 in) (minimum) from a side wall;
- b. ensure the rim height of sink is located between 810 to 860 mm (32 to 34 in) high above floor;
- c. provide knee clearance centred on the sink no less than 915 mm (36 in) wide by 685 mm (27 in) high by 200 mm (8 in) deep;
- d. where toe clearance is provided, ensure it is 230 mm (9 in) high by 230 mm (9 in) deep (minimum);
- e. provide automatic faucet or lever-type controls that can be operated with one closed fist;
- f. ensure no sharp or abrasive surfaces under it;
- g. ensure hot water and drain pipes underneath sink are offset to the rear and do not obstruct the knee clearance; and
- h. where hot water and drain pipes abut the knee clearance, ensure pipes are insulated or covered to protect users.

6.5.5 Kitchen Appliances

Kitchen appliances include but are not limited to cooktops, microwaves, ovens, refrigerators and freezers.

6.5.5.1 Cooktops

Where provided:

- a. use appliance models where controls are located away from the burners (e.g., do not require reaching across heating surface to operate);
- b. ensure a clear floor space of 915 mm (36 in) wide by 1370 mm (54 in) deep (minimum), which may extend up to 480 mm (19 in) underneath the cooktop, is provided;

- c. ensure top surface height is located between 810 and 860 mm (32 to 34 in) from the floor;
- d. provide a knee clearance centred on the cooktop of at least 915 mm (36 in) wide by 685 mm (27 in) high by 200 mm (8 in) deep, with additional toe clearance of 230 mm (9 in) deep by 230 mm (9 in) high (minimum);
- e. provide insulation or other protection on the underside where knee clearance is provided; and
- f. provide a work surface on each side and at the same height as the cooktop:
 - i. width of 400 mm (16 in) (minimum); and
 - ii. ensure surface is heat resistant.

6.5.5.2 Ovens

Where provided:

- a. ensure oven controls are located on the front panels of oven;
- b. where microwave ovens are provided, mount at counter height;
- c. where ovens with side-hinged doors are provided:
 - i. provide heat resistant work surfaces with knee space below, adjacent to the latch side of oven door; or
 - ii. incorporate a heat resistant pull-out shelf that pulls out 250 mm (10 in) (minimum) below the oven; and
- d. where ovens with bottom-hinged doors are provided, provide work surface on one side of the door.

6.5.5.3 Refrigerators and Freezers

Where provided:

- a. provide a self-defrosting freezer;
- b. provide a vertical side-by-side type refrigerator / freezer as they are more accessible;
- c. where an over- and-under type refrigerator is used, ensure the freezer shelf space is not more than 1100 mm (43 in) high from the floor; and
- d. provide clear floor space in front of refrigerators / freezers, positioned for parallel approach immediately adjacent to refrigerator / freezer, with the centreline of the clear floor space offset 610 mm (24 in) (maximum) from the front face.

Best Practice

Wall ovens with side-opening door are not recommended.

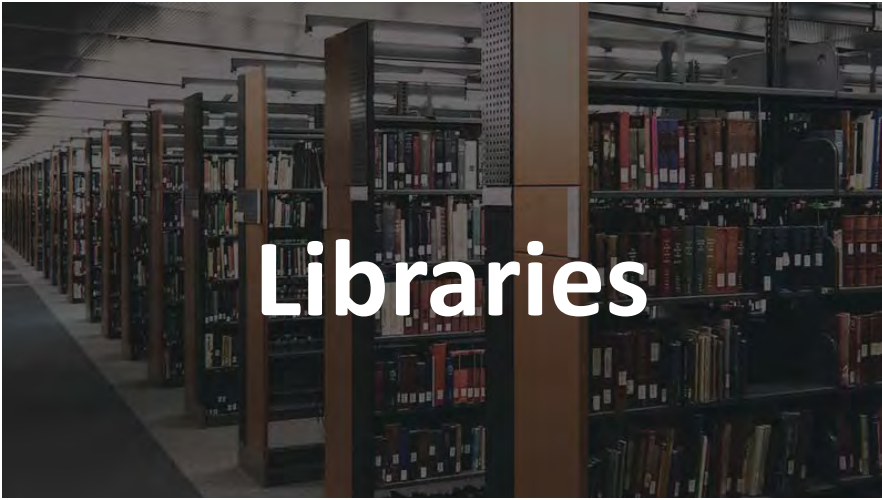
Roll-out shelves or drawers improve access to the refrigerator contents.

Note

Models with freezers at the bottom are recommended, if an over-and-under refrigerator type is provided.

Additionally, floor space should be provided to pull up to the refrigerator / freezer in a mobility aid. This allows opening and closing of the door and ensures space to open the door.

Through-the-door ice and water dispensers are convenient for many users.



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 County 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.

As of January 1, 2013, under the Integrated Accessibility Standards Regulation (IASR), Public Libraries are required to:

- provide access to or arrange for the provision of access to accessible materials where they exist;
- make information about the availability of accessible materials publicly available and provide information in an accessible format or with appropriate communication supports, upon request; and
- additionally, libraries may also provide accessible formats for archival materials, special collections, rare books and donations.

Reference

- Sec. 2.10 Seating, Tables and Work Surfaces
 - Sec. 4.3 Interior Accessible Routes
 - Sec. 4.4 Elevating Devices
 - Sec. 4.5 Washrooms
 - Sec. 5.1 Controls and Operating Mechanisms
 - Sec. 5.7 Lighting
 - Sec. 5.8 Signage and Wayfinding
 - Sec. 6.2 Meeting and Multi-Purpose Rooms
 - Sec. 6.11 Service Counters
 - Sec. 6.12 Waiting and Queuing Areas
- Integrated Accessibility Standards Regulation, Ontario Regulation 191/11.

6.6.1 Design and Layout

- provide a consistent accessible path of travel of at least 1100 mm (43 in) wide throughout spaces for circulation;
- provide turning diameter of 1700 mm (67 in) in order to allow users of mobility aids to make a 180° turn;
- where provided, ensure security gates have a clear width of 915 mm (36 in) (**Figure 83**);
- provide at least one accessible service counter at circulation, information or self-service checkout areas;
- where online catalogues or other workstations are provided, ensure at least 50% are accessible;
- provide at least one assistive listening device to access all multi-media resources;
- ensure acoustic quality is free of unnecessary background noise;
- 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
- ensure library staff are provided with disability awareness / sensitivity training.

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 or online 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 (71 in) is preferred at main circulation routes in order to accommodate higher volumes of traffic.

Note

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

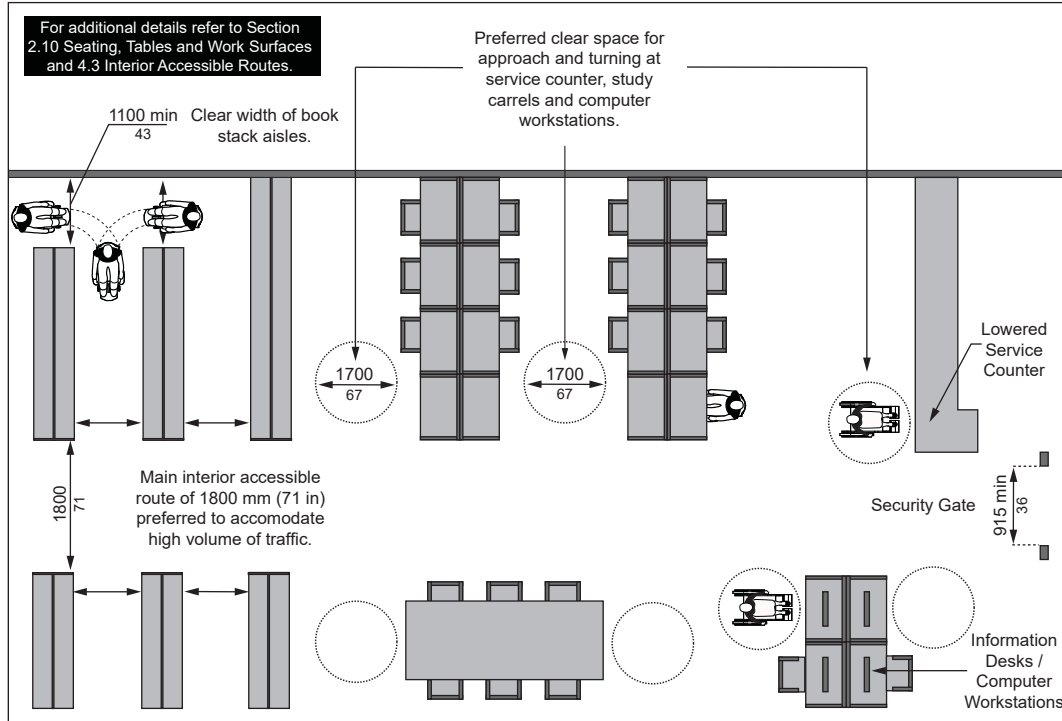


Figure 83: Library Design and Layout - Plan View

6.6.2 Book Drop Slots

For exterior and interior book drop slots:

- a. provide clear floor space in front of drop slot:
 - i. 915 mm (36 in) wide by 1370 mm (54 in) deep for a forward approach; and
 - ii. 1525 mm (60 in) wide by 915 mm (36 in) deep for a side approach;
- b. ensure drop slot is colour contrasted with mounting surface;
- c. locate slot between 860 and 900 mm (34 and 35 in) above the floor (**Figure 84**); and
- d. ensure slot controls are usable with closed fist and operable with one hand.

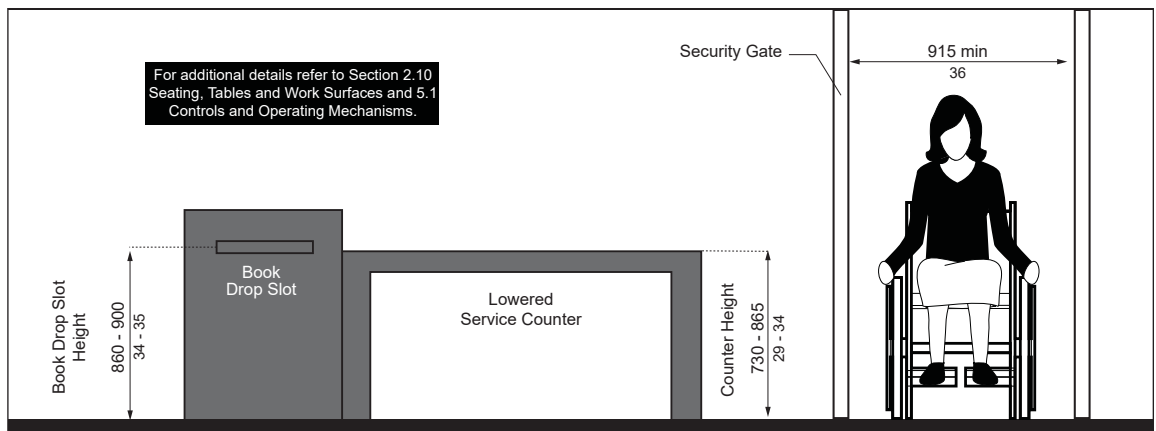


Figure 84: Library Security Gate, Service Counter and Book Drop Slot

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 and 1100 mm (16 and 43 in) high is required to accommodate the reach ranges of diverse users, including small children, seniors and users of mobility aids.

6.6.3 Book Stacks or Carousels

- a. ensure accessible path of travel of at least 1100 mm (43 in) between aisles (**Figure 85**);
- 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.

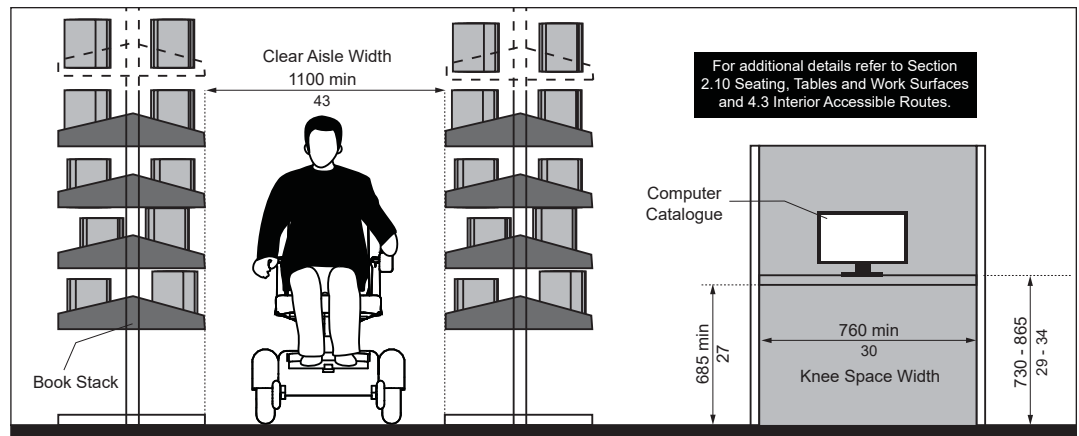


Figure 85: Book Stacks

Best Practice

Ensure accessible workstations have height adjustable surface.

6.6.4 Reading Lounges and Study Areas

- a. provide a variety of seating options (e.g., flexible) for all users;
- b. ensure a high colour contrast is provided between furniture and surroundings;
- c. where study tables / carrels are provided, ensure at least 10% are accessible;
- d. ensure all study carrels and work surfaces provide suitable knee and toe clearances; and
- e. incorporate an electric outlet.

6.6.5 Assistive Technology

Assistive technology should be accessible for library users with varying disabilities. This includes providing:

- a. accessible touch screens at an accessible height and within an accessible reach range, where provided;
- b. adaptive technology such as options for flexible mouse controls, scrolling features, and on-screen keyboards;
- c. specialized equipment for users with vision loss, including screen reading software (e.g., JAWS), scanner, and CCTV magnifiers;
- d. headphones or a standard audio jack within an accessible reach range;
- e. voice recognition software; and
- f. wireless internet connections (“Wi-Fi”) and download centres that are accessible.



6.7

Application

This section applies to offices and related work areas provided for public and staff use. Work areas typically include, but are not limited to:

- office systems furniture (e.g., modular partitions that separate work areas);
- private offices;
- print equipment and supply rooms; and
- storage rooms.

Reference

- Sec. 2.10 Seating, Tables and Work Surfaces
- Sec. 4.2 Doors and Doorways
- Sec. 4.3 Interior Accessible Routes
- Sec. 5.1 Controls and Operating Mechanisms
- Sec. 5.7 Lighting

6.7.1 Design and Layout

- ensure aisle space throughout circulation areas is 1100 mm (43 in) (minimum) wide;
- ensure all doors within offices and common-use work areas are 860 mm (34 in) (minimum) clear width;
- provide minimum clear floor space of 1700 mm (67 in) wide by 1700 mm (67 in) depth in front of office equipment (e.g., photocopier); and
- ensure acoustic quality is free of background noise.

6.7.2 Common-Use Work Areas

- ensure entry is 860 mm (34 in) (minimum) clear width;
- provide interior clear floor space of 1700 mm (67 in) wide by 1700 mm (67 in) (Figure 86);
- provide an accessible work surface with knee space clearance;
- ensure cabinet and storage unit controls are mounted no more than 1100 mm (43 in) high from floor; and
- provide clear floor space of 915 mm (36 in) wide by 1370 mm (54 in) deep in front of office systems furniture (e.g., modular partitions that separate work areas) and storage for forward approach and 1525 mm (60 in) wide by 915 mm (36 in) deep for side approach.

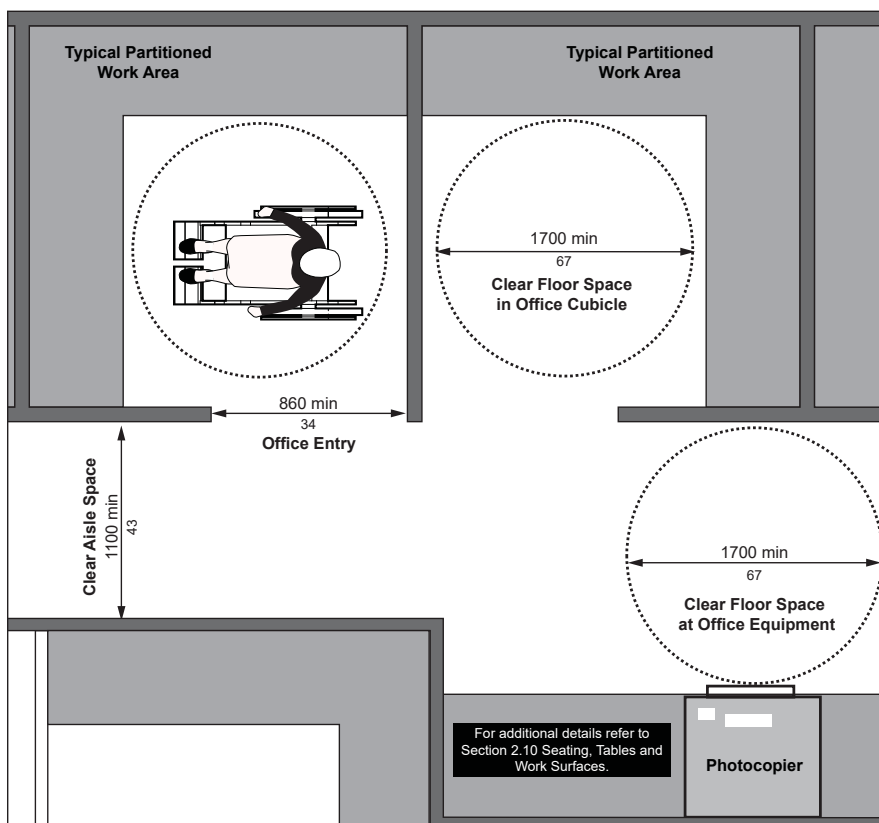


Figure 86: Common-Use Work Areas - Plan View



Recreational and Community Facilities

6.8

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. 6.9 Change Rooms

6.8.1 Design and Layout

The design and layout of recreational and community facilities, typically consists of the following elements.

6.8.1.1 Change Rooms

- a. provide at least one accessible change room, with at least one accessible change cubicle to accommodate parents with children, companions or care givers of the opposite sex.

6.8.1.2 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.

6.8.2 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 860 mm (34 in); and
- c. provide level or beveled access to ice pads or skating rinks.

6.8.3 Exercise and Fitness Facilities

- a. ensure accessibility features are provided, if available, for at least one of each type of equipment or machine; and
- b. provide a clear floor space of 915 mm by 1370 mm (minimum) for a front approach or 915 mm by 1525 mm for a side approach on one side of exercise equipment to allow transfer.

6.8.4 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 (½ in) wide;
- d. provide an accessible path of travel around the perimeter of pool deck at 1100 mm (43 in) (minimum) wide;

Best Practice

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

Where space is available, provide a clear floor space of 1700 mm by 1700 mm (67 in by 67 in) for transfer to exercise equipment.

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 (24 in) wide to clearly delineate the perimeter of the pool deck and locate where any area contiguous to the pool deck may be confused with the deck; and
- f. provide high 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).

Best Practice

Where possible, provide sloped entry or ramp with running slope of no more than 1:20 (5%).

Note

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

For new construction, ensure sloped entry or ramp is provided. Transfer lifts are permitted as an option for existing facilities that cannot be retrofitted to provide a sloped entry or ramp.

6.8.4.1 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 (300 linear feet) of pool wall, provide at least two accessible means of entry and exit.

6.8.4.2 Sloped Entry or Ramp

- a. ensure running slope is no more than 1:12 (8.33%);
- b. provide handrails, mounted between 865 and 965 mm (34 and 38 in) high from surface, extending at top landing only (**Figure 87**);
- c. ensure the clear width between handrails is 1100 mm (43 in) (minimum);
- d. provide top and bottom landing of at least 1670 by 1670 mm (66 by 66 in);
- e. ensure water depth at the bottom of ramp is at least 600 mm (24 in) and not greater than 900 mm (35 in) (**Figure 87**);
- f. provide a hard-surfaced area capable of accommodating a movable barrier separating the area from the deck, and is 750 mm (29 in) (minimum) wide that is contiguous to the entire length of the part of the submerged ramp that pierces any part of the deck; and
- g. ensure the finishes in the submerged portions of the ramps and curbs are different in colour or shade from each other and from that of the pool walls and bottom.

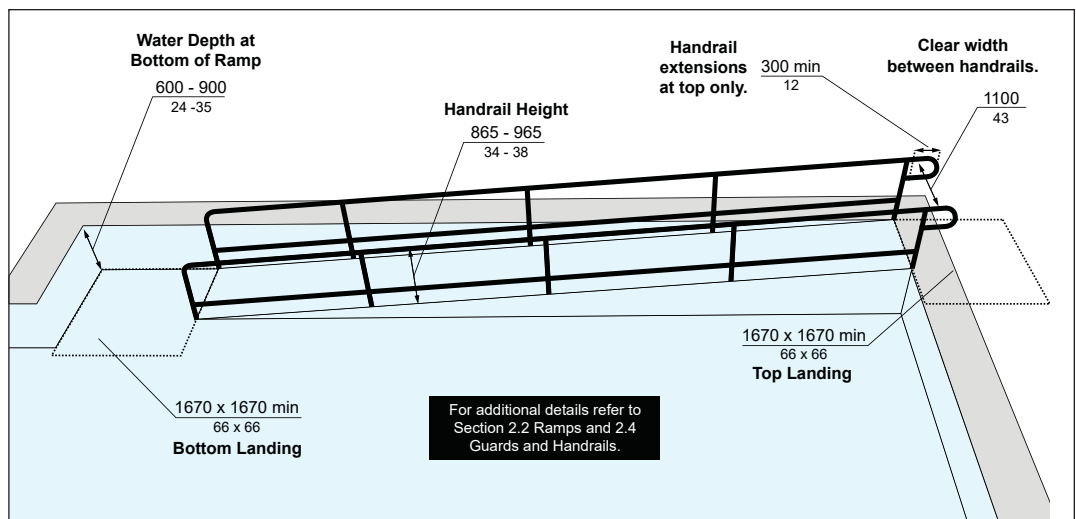


Figure 87: Sloped Entry or Ramp to Swimming Pool

6.8.4.3 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.

6.8.4.4 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 1700 by 1700 mm (67 by 67 in) adjacent to transfer platform;
 - ii. mount platform between 405 and 480 mm (16 and 19 in) high above deck;
 - iii. 480 mm (19 in) depth by 610 mm (24 in) (minimum) width; and
 - iv. slope 1:50 (2%) (maximum) at base of transfer platform;

6.8.4.5 Transfer Steps

- a. tread depth between 355 and 430 mm (14 and 17 in) (**Figure 88**);
- b. tread clear width of 610 mm (24 in) (minimum);
- c. riser height of 180 mm (7 in) (maximum);
- d. provide nosings with rounded edges;
- e. ensure transfer steps extend into the water 460 mm (18 in) (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
- 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 and 150 mm (4 and 6 in) above each step and transfer platform (**Figure 88**); and
 - iv. where continuous grab bar is provided, the top of the grasping surface should be between 100 and 150 mm (4 and 6 in) above the step nosing and transfer step.

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.

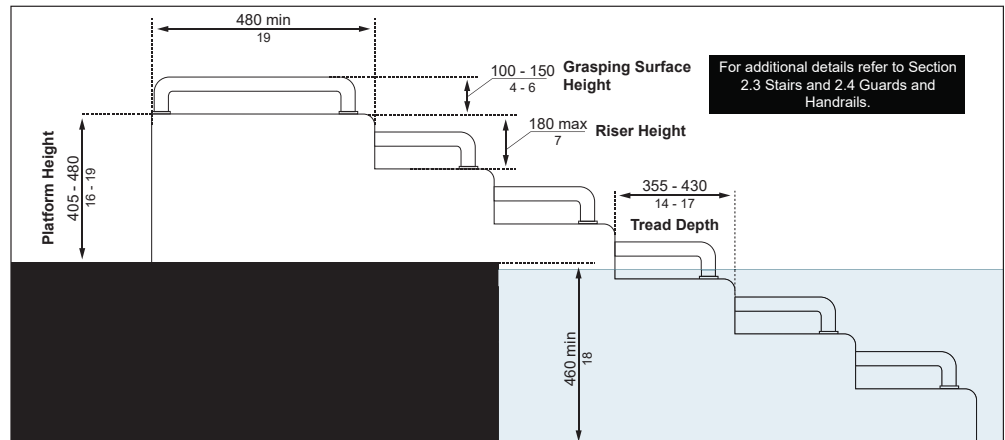


Figure 88: Transfer Stairs or Steps - Elevation View

6.8.4.6 Transfer Lifts

- locate pool lifts on an accessible path of travel and in shallow end, where water level does not exceed 1200 mm (47 in) high;
- ensure the centreline of the seat for the transfer lift is located over the deck and at 400 mm (16 in) (minimum) from the edge of the pool when in the raised position;
- ensure pool seat is firm with suitable padding, with a minimum width of 400 mm (16 in);
- provide a clear deck space of 1700 by 1700 mm (67 by 67 in) on the transfer side of the lift;
- ensure lift is designed to be operable without assistance from both the deck and water and when in use, its controls and operating mechanisms are unobstructed and mounted no higher than 1100 mm (43 in) from pool deck or water surface; and
- ensure single user lifts have a minimum weight capacity of 135 kg and capable of sustaining a static load of at least 1.5 times the rated load.



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

6.8.4.7 Transfer Walls

- a. provide a clear deck space of 1675 mm by 1675 mm (66 in by 66 in) (minimum) beside transfer walls for lateral transfer, outside and adjacent to the accessible route;
- b. ensure the slope of the deck space is less than 1:50 (2%);
- c. provide transfer walls between 405 and 485 mm (16 and 19 in) high from finished pool deck surface, 305 to 405 mm wide (12 to 16 in), and a minimum length of 1525 mm (60 in) (**Figure 89**);
- d. ensure width between grab bars or width between grab bar and edge of wall is 610 mm (24 in) (minimum);
- e. ensure wall surfaces and materials are non-abrasive with all edges rounded;
- f. install at least one grab bar on each transfer wall provided, mounted perpendicular to wall and extending full length of wall; and
- g. provide clearance of 100 to 150 mm (4 to 6 in) between top of wall and grasping surface of grab bars.

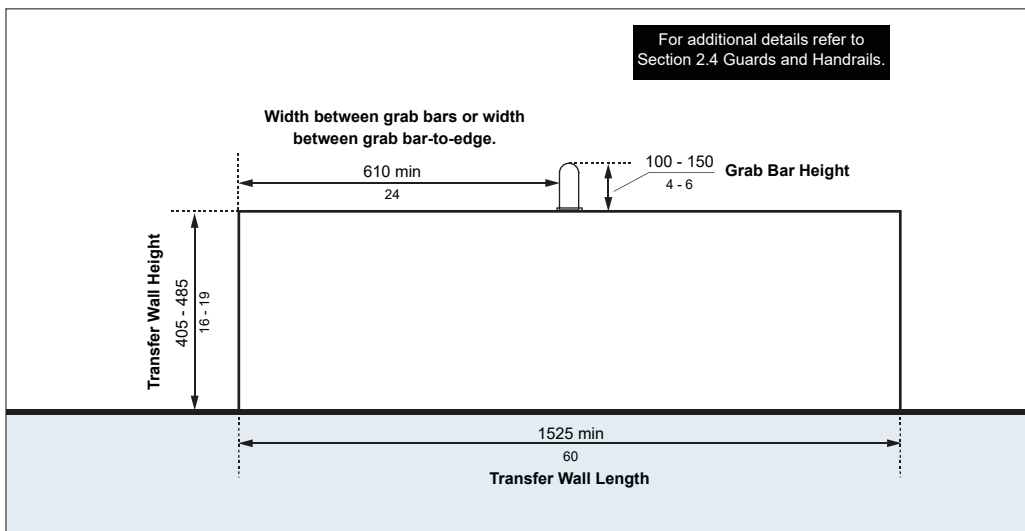
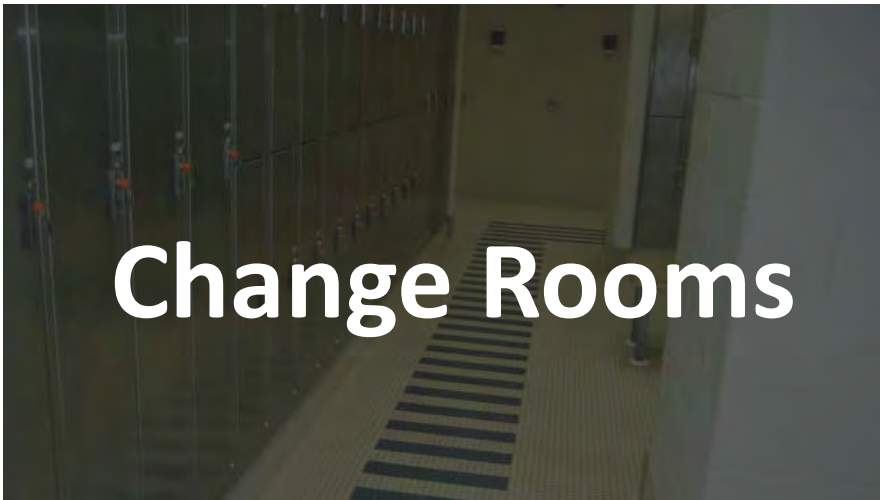


Figure 89: Transfer Wall - Elevation View



Change Rooms



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

Note

The provision of Universal Change Rooms or Stalls as part of Change Rooms and related areas is dependant upon the type of facility. For a Pool facility, often a combination of shared and private spaces are provided for change areas, which often also integrate washroom and shower facilities as part of the overall design. The total number of universal change rooms or stalls should be identified based on the size and occupancy of each facility and the required fixture counts for washrooms and showers.

6.9.1 Provision and Location

For Universal Change Rooms or Stalls that are intended for private use in addition to other public or staff change rooms that may be available:

- a. provide at least one universal change room or stall for each type of other regular change room facility that is provided (e.g., Male, Female or Universal Change Room); and
- b. ensure universal change rooms or stalls are located along an accessible route.

Note

In a retrofit situation, 10% of change rooms, and never less than one, should be universal, for each type of other regular change room facility that is provided.

6.9.2 Design and Layout

- a. where doors are provided at the change room entrance, provide a clear width of 860 mm (34 in) (minimum) and equip with power door operators;
- b. provide a consistent accessible path of travel 1100 mm (43 in) (minimum) wide throughout spaces for circulation in the change room;
- c. ensure a clear turning diameter of 1700 mm (67 in) (minimum) is provided inside change room circulation area to allow users of mobility aids to make a 180° turn;
- d. ensure the floor surface is slip-resistant and allows suitable drainage;
- e. where washroom facilities are provided as part of a change room, provide accessibility design requirements, in accordance with Section 4.5 Washrooms requirements, as applicable;
- f. where shower facilities are provided as part of a change room, provide accessibility design requirements, in accordance with Section 4.6 Showers requirements, as applicable; and
- g. provide an emergency call system with the following features:
 - i. includes an emergency bilingual sign containing the words “IN THE EVENT OF AN EMERGENCY PUSH EMERGENCY BUTTON AND AUDIBLE AND VISUAL SIGNAL WILL ACTIVATE” in letters at least 25 mm (1 in) high with a 5 mm stroke, that is posted above the emergency button;
 - ii. consists of visual and audible signal devices both inside and outside of the change room that are activated by a control device inside the change room; and
 - iii. where facilities have the capacity and where staff is available, ensure the call system is linked to a display panel at a reception / information counter or to a centrally monitored station (e.g., security desk).

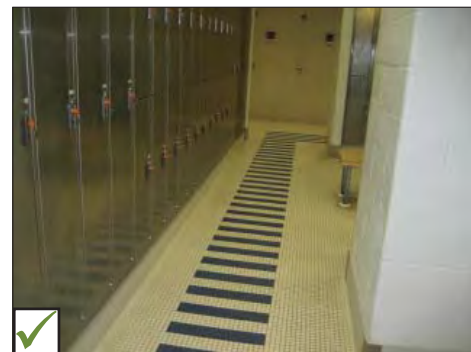
6.9.3 Change Room Amenities

Change room amenities typically include, but are not limited to, benches, lockers, showers and washrooms.

6.9.3.1 Permanent Benches

Where permanent benches are provided:

- a. provide seat height of 480 to 520 mm (19 to 20 in) above finished floor to allow users of mobility aids to transfer;
- b. ensure seat depth between 510 mm to 610 mm, (20 to 24 in) with back support, unless seat surface is permanently positioned against a wall; and
- c. provide high colour contrast finishes to assist with distinguishing bench surfaces from surroundings.



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

6.9.3.2 Lockers

Where lockers are provided:

- a. ensure at least 10% of the total number of lockers but never less than one is designated as accessible;
- b. identify accessible lockers clearly with signage (e.g., International Symbol of Accessibility);
- c. provide a clear floor space in front of lockers of:
 - i. 915 mm (36 in) wide at 1370 mm (54 in) deep (minimum) to allow for a forward approach; and
 - ii. 1525 mm (60 in) wide by 915 mm (36 in) deep (minimum) to allow a side approach;
- d. mount bottom shelf between 400 and 1100 mm (16 and 43 in) high from the floor; and
- e. ensure locking mechanism is mounted between 900 and 1100 mm (35 and 43 in) high above floor;
- f. ensure identification / number signage for all lockers:
 - i. is mounted no higher than 1500 mm (59 in) (centre);
 - ii. provides lettering or number print size between 13 and 19 mm ($\frac{1}{2}$ and $\frac{3}{4}$ in) high, with either raised or recessed lettering; and
 - iii. provides a high colour contrast with the background.

6.9.4 Universal Change Rooms or Stalls

- a. identify clearly with signage (e.g., International Symbol of Accessibility);
- b. provide a clear turning diameter of 1700 mm (67 in) (minimum) inside of the change room or stall (**Figure 90a**);
- c. ensure floor surface is firm, level and slip-resistant;
- d. provide an entrance door or stall door with:
 - i. a clear width of 860 mm (minimum), when door is in an open position;
 - ii. a locking mechanism that can be locked from the inside and released from the outside, in case of emergency;
 - iii. spring hinges or gravity hinges in the case of a stall door, so that door closes automatically, where the door swings outwards; and
 - iv. a power door operator, where an entrance door is required for a private universal change room;
- e. provide adult change bench 1830 mm (72 in) long, 810 mm (32 in) wide and mounted at 480 to 520 mm (19 to 20 in) high;
- f. provide grab bars with specifications identified in Section 4.5.7 Grab Bars:
 - i. install one L-shaped grab bar at the end of the bench, with the vertical component, 150 mm (6 in) (minimum) from front edge of seat and clearance of 150 mm (6 in) minimum) above the bench seat (**Figure 90b**);
 - ii. install one horizontal grab bar, 1200 mm (47 in) minimum) long, mounted 750 to 850 mm (30 to 33 in) high and centered on the long side of the bench;
 - iii. provide motion sensor for automatic illumination of interior; and
- g. include full length mirror.

Best Practice

Where space is available, provide a 2500 mm (98 in) turning diameter inside universal change room.

Note

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

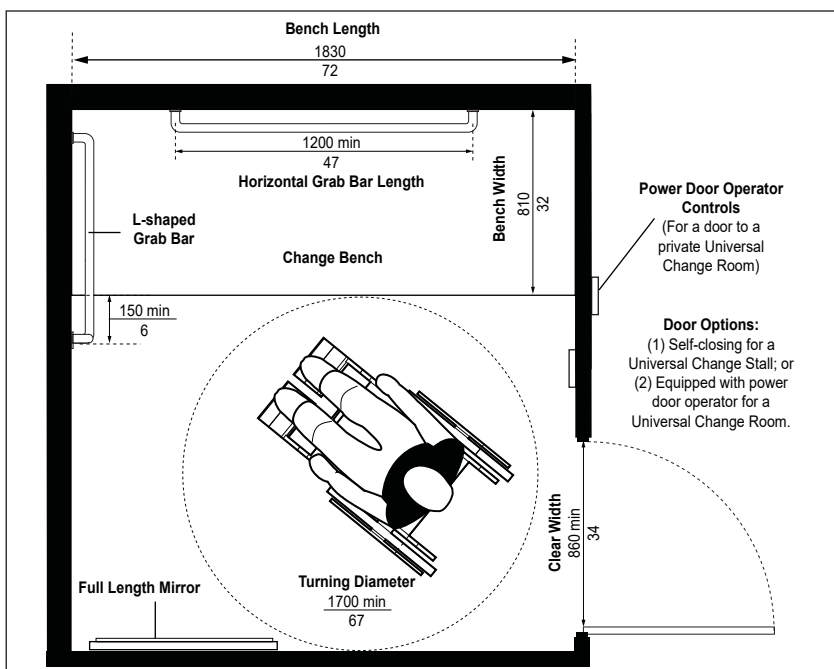


Figure 90a: Universal Change Room or Stall - Plan View

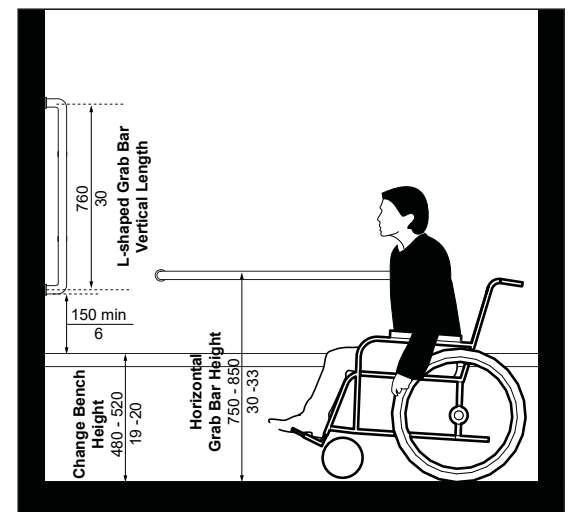


Figure 90b: Grab Bar Dimensions

Balconies and Terraces

6.10

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 Paths of Travel
- Sec. 4.2 Doors and Doorways

Exception

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

6.10.1 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 (79 in) (minimum) (**Figure 91**);
- d. ensure threshold is beveled at slope of 1:2 (50%) (maximum), where transition is between 6 to 13 mm (¼ to ½ in); 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 (¼ in) between each.

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

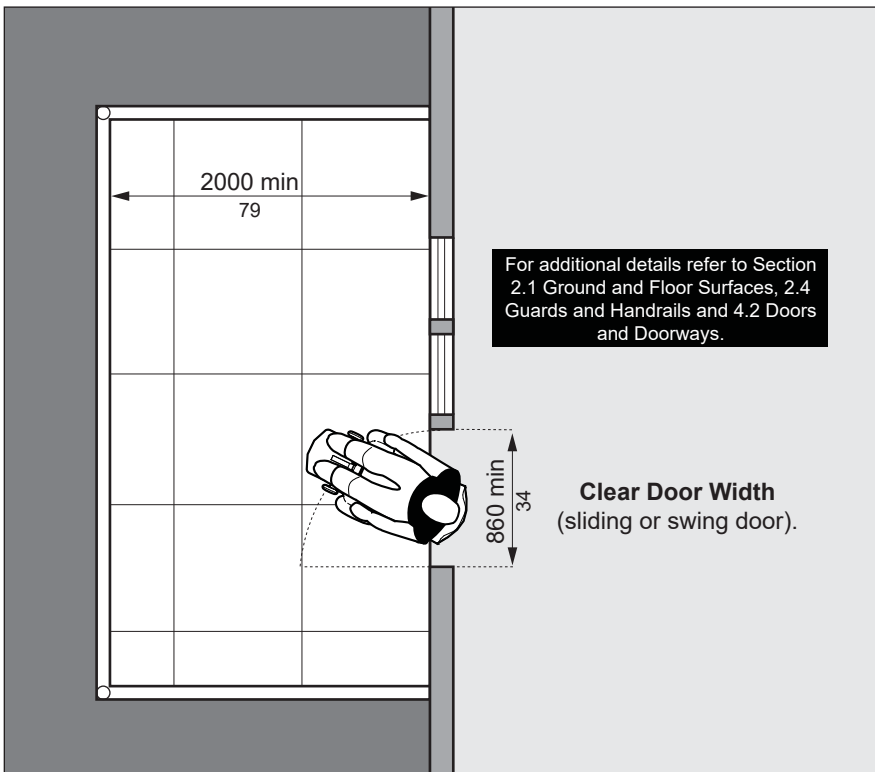
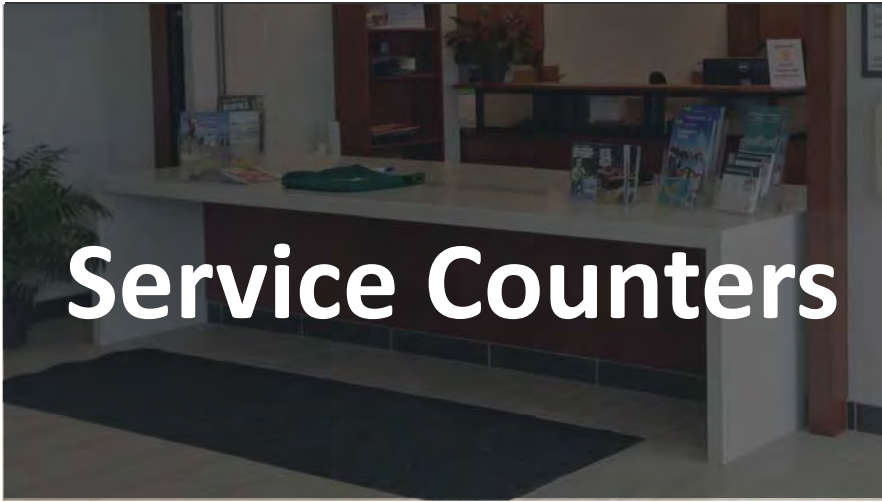


Figure 91: Balcony / Terrace - Plan View



Service Counters

6.11

Application

This section applies to service counters used by both the public and staff, whether the services are obtained in the buildings or outdoors. 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.

6.11.1 Provision

- where a single queuing line serves a single or multiple counters, ensure each service counter is accessible; and
- where there are multiple queuing lines and service counters, ensure at least one (1) service counter is accessible for each type of service provided.

6.11.2 Design and Layout

- locate on an accessible path of travel;
- where there are multiple queuing lines and service counters, provide signage (e.g., International Symbol of Accessibility) to identify the accessible service counter(s) (**Figure 92**);
- provide clear floor space in front of service counters for users of mobility aids (**Figure 94**):
 - 915 mm (36 in) wide by 1370 mm (54 in) deep to allow forward approach; and
 - 1525 mm (60 in) wide by 915 mm (36 in) deep to allow side approach;
- ensure service counter surface provides a high colour contrast compared with adjacent surfaces to identify counter when approaching; and
- provide a lowered counter usable from seated position:
 - with top surface mounted between 730 and 865 mm (29 in and 34 in) high above floor;
 - ensure a clear knee space under the counter of at least 480 mm (19 in) deep by 915 mm (36 in) wide by 685 mm (27 in) high (**Figure 93**); and
 - ensure maximum forward reach of 635 mm (25 in) deep across top.

Best Practice

Ensure sources of light (natural or artificial) are not positioned directly behind service counters as they place people in silhouettes, which is a problem for people who lip read and people with vision loss.

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.

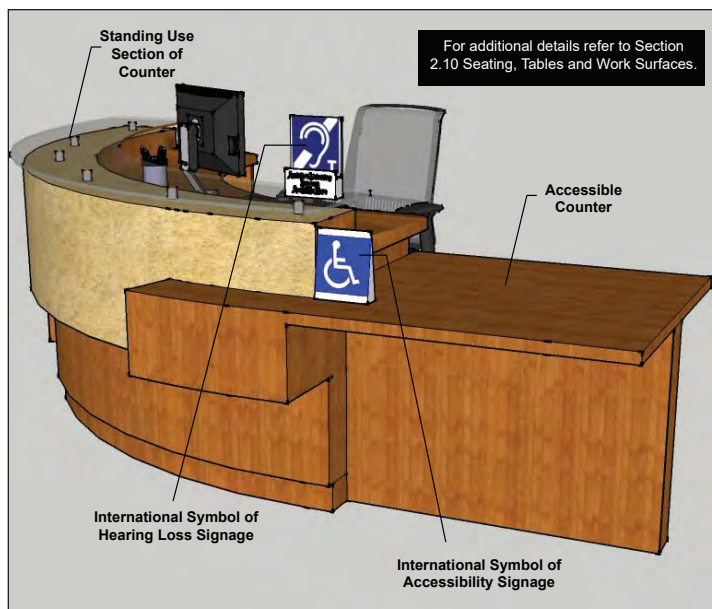


Figure 92: Example of Typical Service Counter



Figure 93: Dimensions of Accessible Service Counter

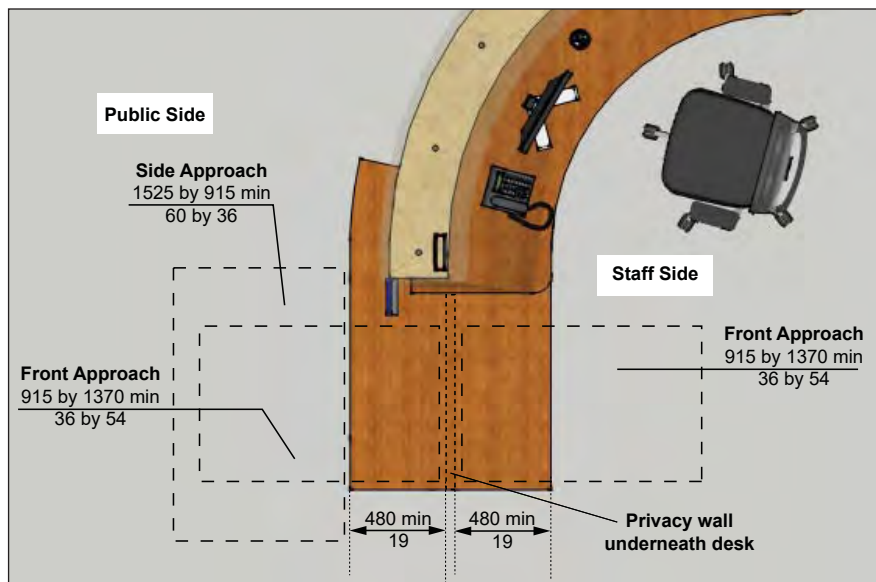
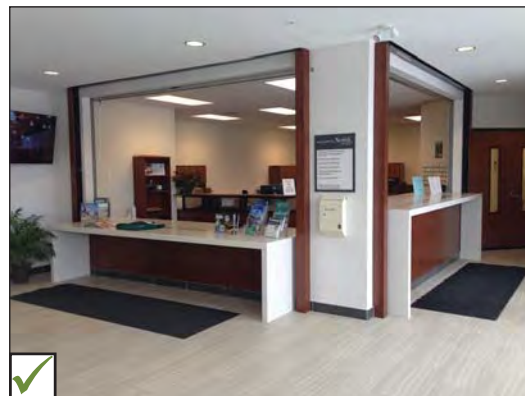


Figure 94: Clear Floor Space Requirement at Accessible Service Counter - Plan View



Example of service counters with both a standing use section and an accessible lowered section with suitable knee clearances and clear floor 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.

6.11.3 Communication Systems

Where communication systems are provided at service counters:

- ensure counter areas are well-lit to assist staff and visitors with hearing loss who may communicate by lip reading;
- where speaking ports are provided, provide at least one speaking port at 1000 mm (39 in) high (maximum) from floor level;
- where no staff person is available, provide an information phone or call bell with information signage, with controls mounted at 1100 mm (43 in) (maximum);
- integrate TTY service or alternate devices for visitors who are Deaf, deafened or hard of hearing;
- where assistive listening systems are available, ensure signage with International Symbol for Hearing Loss is provided to indicate devices are available for use (**Figure 92**); and
- 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.

6.11.4 Additional Resources

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



Waiting and Queuing Areas

6.12

Application

This section applies to waiting and queuing areas in both interior and exterior environments.

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
- Sec. 6.1 Assembly Areas
- Sec. 6.4 Cafeteria and Dining Facilities
- Sec. 6.10 Service Counters

Best Practice

Provide companion seating immediately adjacent to the accessible seating.

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

Provide a range of seating options such as wider seats.

Note

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

6.12.1 Waiting Areas

Where waiting areas are provided:

- position the waiting area so that it is clearly visible when entering the facility;
- provide directional and informational signage to identify and guide users to waiting areas, where they may not be clearly visible when entering a facility;
- ensure a lowered counter with suitable knee clearance for users of mobility aids is provided, where there is a counter;
- where fixed seating is provided, ensure at least 3% of the seating is accessible but in no case fewer than one accessible seating space;
- where accessible seating is provided:
 - provide a clear floor space of 915 mm (36 in) wide and 1370 mm (54 in) depth, adjacent to fixed seating / waiting area and away from the main path of travel, for users of mobility aids to position themselves, their equipment, a service animal, or maneuver throughout the space (**Figure 95**);
 - locate adjacent and connected to an accessible path of travel; and
 - provide variety of seating options, including back and arm supports for various users; and
 - ensure accessible seating is integrated with the overall layout of other seating that is provided in waiting areas;
- provide a building directory for large facilities, especially where no rooms are assigned; and
- where lower coffee or telephone tables are provided adjacent to seating / waiting areas, ensure the top surface is 510 mm (20 in) high (minimum), for reach from a seated position.

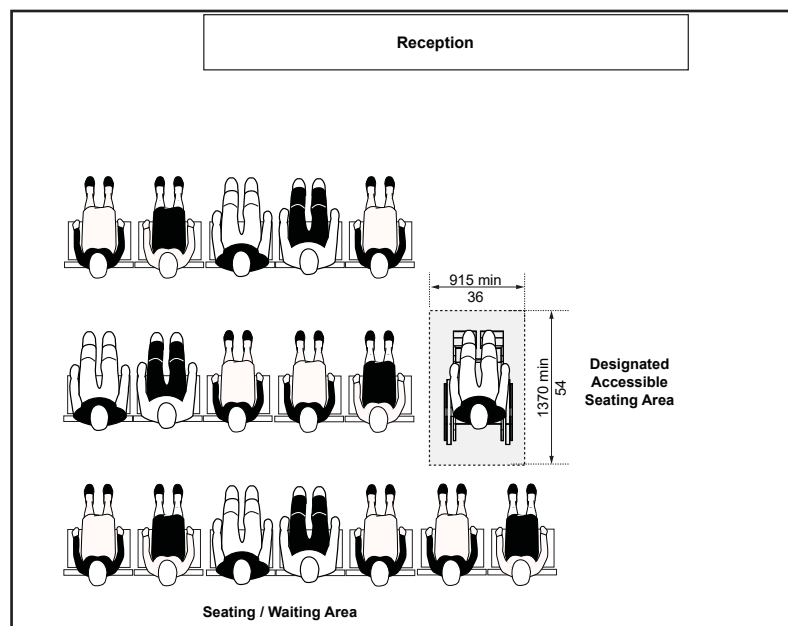


Figure 95: Waiting Area - Plan View

6.12.2 Queuing Areas

Where queuing areas are provided:

- locate on an accessible path of travel; and
- provide directional and informational signage to identify location of queuing area entry.

6.12.2.1 Fixed Queuing Guides

When providing fixed queuing guides:

- ensure clear width of 1100 mm (43 in) (minimum) between guides (**Figure 96**);
- provide clear floor space of 1700 mm (66 in) wide by 1700 mm (66 in) deep (minimum), where queuing guides change direction and where they begin and end;
- ensure lower edge or base guides are cane-detectable, mounted at or below 680 mm (27 in) from floor, with supports;
- provide a high tonal contrast between guide surfaces and adjacent surroundings (e.g., for enhanced visibility); and
- ensure guides have a glare-free finish.

Best Practice

Provide clear floor space of 2500 mm by 2500 mm (98 by 98 in) at entry, exit and turn locations to accommodate larger wheelchairs and scooters.

Consider including rest areas with accessible seating along the queuing system, where queues are longer than 10 metres (394 in). Additionally, provide a rest area at the end of the queuing system for people to wait for companions who are queuing.

Note

Rope or flexible banding is not recommended for permanent queuing systems because they are more difficult to detect with a long cane and are unstable. When temporary queuing guides are provided, ensure they are cane detectable and stable.

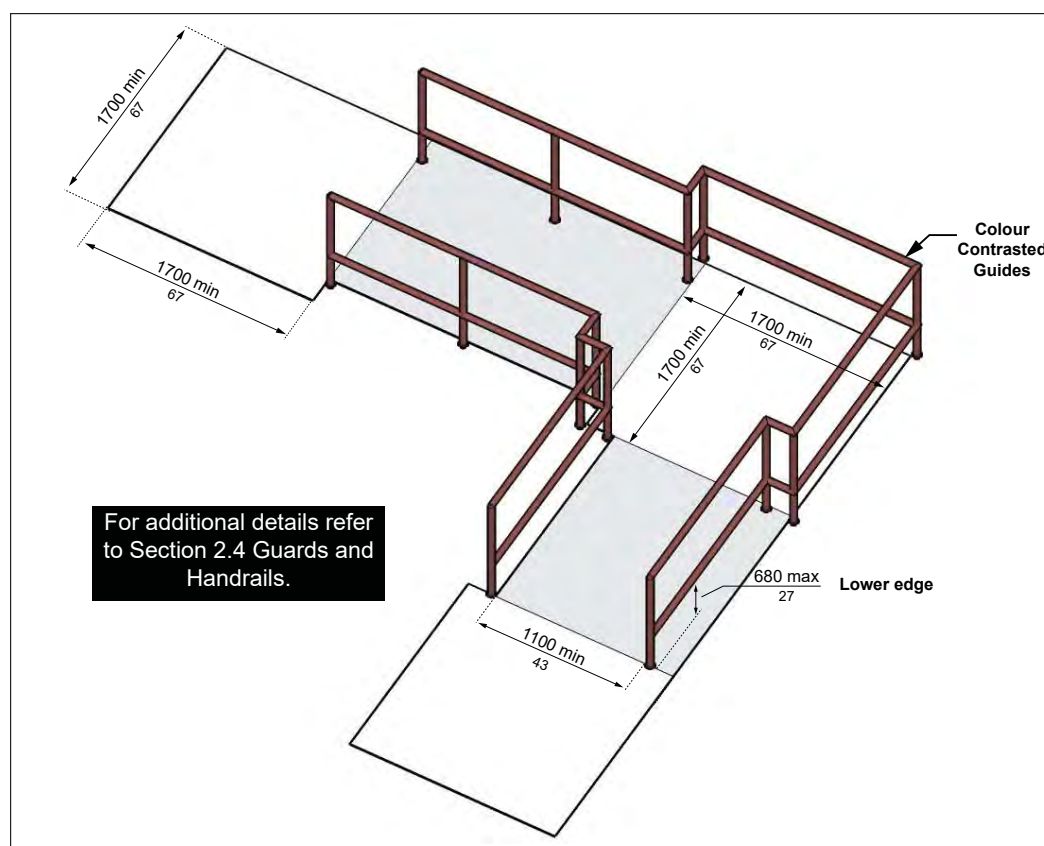


Figure 96: Fixed Queuing Guides

Elevated Platforms or Stages

6.13

Application

This section applies to elevated platforms or stages for both interior and exterior environments. Stages are typically provided in auditoriums, courtrooms, 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.

6.13.1 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. provide tactile walking surface indicators (TWSI):
 - i. 610 mm (24 in) from edge of elevated platform or stage, extending full length (**Figure 97**); and
 - ii. depth of 610 mm (24 in) (minimum).

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.

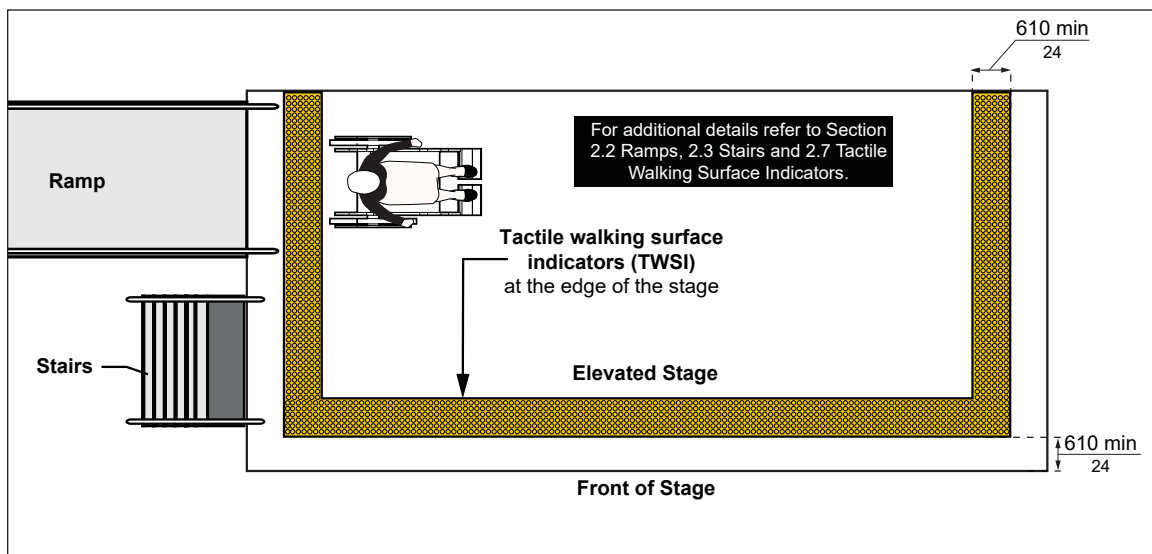


Figure 97: Elevated Platform or Stage - Plan View



6.14

Application

This section applies to courtrooms and adjacent areas in court facilities, provided for public and staff use (e.g., members of the judiciary, courthouse staff, crown, police, defence counsels, defendants, members of counsel, etc...). Courtroom and adjacent areas typically include, but are not limited to:

- public gathering areas;
- holding cells;
- prosecutor areas; and
- judicial chambers.

Reference

- Sec. 2.2 Ramps
- Sec. 2.9 Public Telephones
- 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. 5.2 Assistive Listening Systems
- Sec. 5.7 Lighting
- Sec. 5.6 Fire and Life Safety Systems
- Sec. 6.1 Assembly Areas
- Sec. 6.11 Service Counters
- Sec. 6.13 Elevated Platforms or Stages

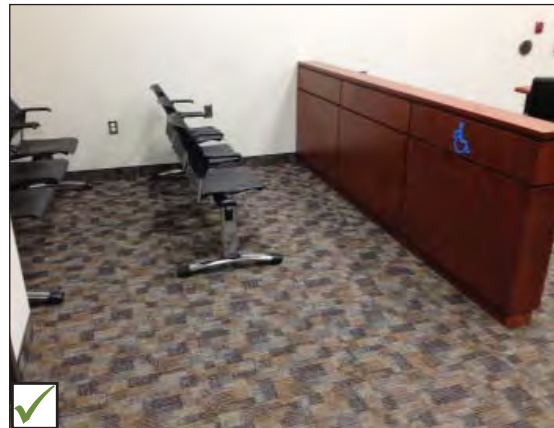
6.14.1 Design and Layout

6.14.1.1 Courtrooms

- a. ensure accessible circulation aisles are at least 1100 mm (43 in) throughout courtrooms;
- b. provide accessible seating spaces for users of mobility aids, including variety of accessible seating options (e.g., back and arm supports);
- c. ensure tables, work surfaces and service counters provide suitable knee and toe clearances;
- d. provide assistive listening systems designed for courtrooms; and
- e. ensure at least one accessible route is provided to elevated areas, where provided within courtrooms.



Example of courtroom layout.



Example of accessible seating space for users of mobility aids inside the courtroom.

6.14.1.2 Holding Cells

- a. provide a clear accessible interior route of at least 1100 mm (43 in) wide throughout circulation areas;
- b. provide accessible seating, where bench seating is provided;
- c. where washroom facilities are provided within holding cells, ensure accessible washrooms are provided;
- d. where telephones are provided adjacent to the holding cells, ensure accessible telephones are provided; and
- e. provide an audible and visual emergency system.



6.15

Application

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

Reference

- Sec. 2.6 Rest Area
- Sec. 2.10 Seating, Tables and Work Surfaces
- Sec. 3.3 Exterior Paths of Travel
- Sec. 4.5 Washrooms

6.15.1 Design and Layout

- ensure a minimum of twenty percent (20%) of tables and no fewer than one (1) in outdoor public use eating area are accessible;
- ensure accessible tables provide suitable knee and toe clearance (**Figure 98b**)
- provide a clear space of 2000 mm (79 in) (minimum) on all sides of the table (**Figure 98a**);
- locate on an accessible path of travel or trail;
- ensure ground surface leading to and under tables is firm, stable and no steeper than 1:50 (2%);
- provide directional signage at strategic locations to identify the location(s) of accessible tables and / or public use eating areas;
- where barbecues are provided in outdoor public use eating areas, ensure they are placed away from the accessible path of travel and on a surface with high colour and textural contrast with the adjacent surfaces; and
- where washrooms are provided, ensure accessible features (e.g., at least one universal toilet room, per cluster of regular washrooms).

Best Practice

Disperse the locations of accessible tables in outdoor public use eating areas to provide a choice for users with disabilities.

Consider fixing accessible tables and seating so that they cannot be moved to an inaccessible location.

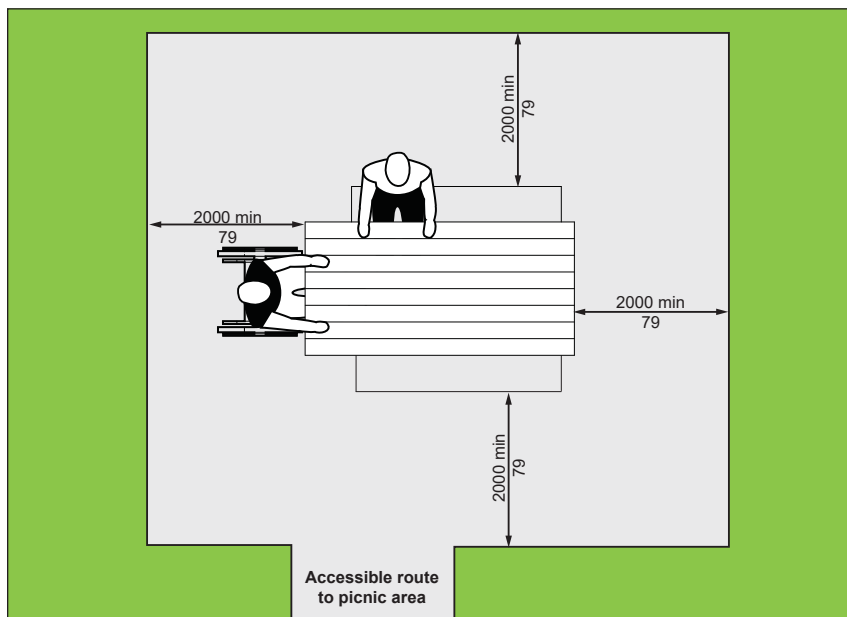


Figure 98a: Picnic Table Design and Features - Plan View

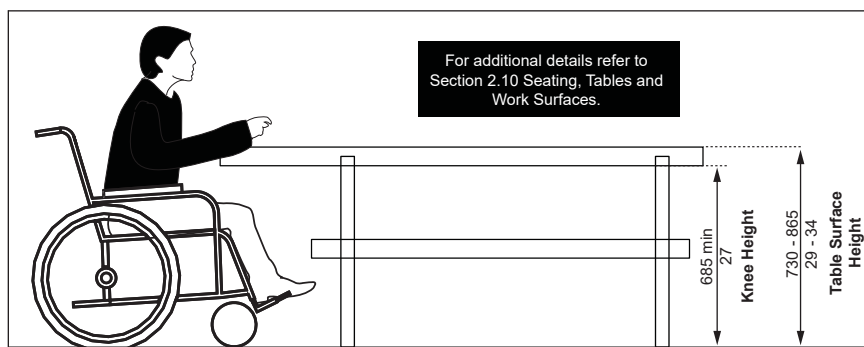


Figure 98b: Picnic Table Design and Features - Elevation View

Recreational Trails, Beach Access Routes and Boardwalks

6.16

Application

This section applies to:

- newly constructed and redeveloped recreational trails that the County intends to maintain, but it does not apply to trails solely intended for cross-country skiing, mountain biking or the use of motorized snow vehicles or off-road vehicles, wilderness trails, backcountry trails and portage routes;
- newly constructed and redeveloped beach access routes that the County intends to maintain, including permanent and temporary routes that are established through the use of manufactured goods, which can be removed for the winter months; and
- boardwalks that are part of newly constructed or redeveloped recreational trails and beach access routes that the County intends to maintain.

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.

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. 2.10 Seating, Tables and Work Surfaces
- Sec. 3.3 Exterior Paths of Travel
- Sec. 5.8 Signage and Wayfinding
- Sec. 6.15 Outdoor Public Use Eating Areas

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).

6.16.1 Recreational Trails

6.16.1.1 Consultation Requirements

Before constructing new or redeveloping existing recreational trails, the County will consult with the Accessibility Advisory Committee, the public, and persons with disabilities on:

- a. the slope of the trail and;
- b. the need for, and location of, ramps on the trail; and
- c. the need for, location and design of,
 - i. rest areas;
 - ii. passing areas;
 - iii. viewing areas;
 - iv. amenities on the trail; and
 - v. any other pertinent feature.

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.

6.16.1.2 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 where there is option 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 99**).

Best Practice

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

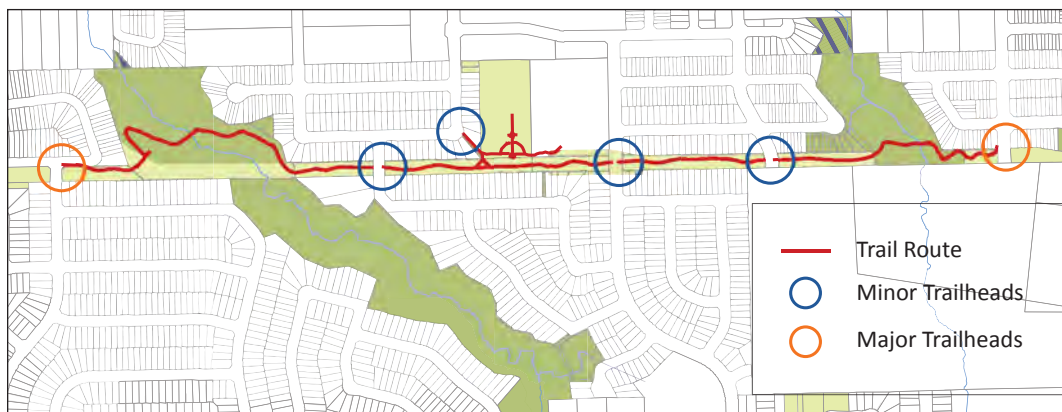


Figure 99: Example of Trail with Multiple Trailhead Options

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.

6.16.1.3 Trail Entrance / Exit Points

- a. provide 850 mm to 1000 mm (33 to 39 in) clear opening whether entrance includes a gate, bollard or other entrance design; and
- b. ensure entrances are maintained and clear of obstructions that can reduce the clear width of the entrance.

Note

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

6.16.1.4 Trail Clear Width

- provide clear width of 1000 mm (39 in) (minimum) to 1800 mm (71 in) (preferred);
- where the clear width is less than 1800 mm (71 in), provide a passing space of 1800 mm (71 in) wide by 1800 mm (71 in) (minimum) long, at intervals no more than 30 m (98 ft) (**Figure 100**);
- ensure headroom clearance is 2100 mm (83 in) (minimum) above the trail; and
- ensure no obstructions or projections along trail.



Example of trail entrance / exit point.

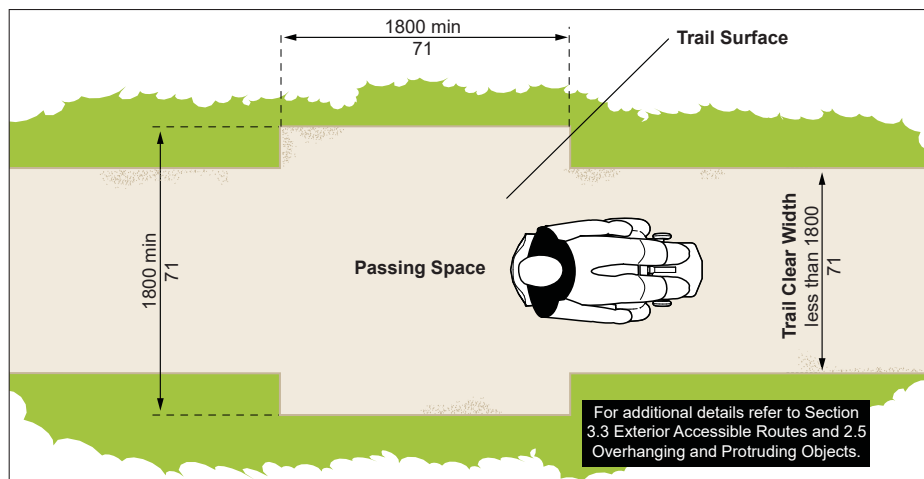


Figure 100: Trail Clear Width

Best Practice

Where running or cross slopes exceed 1:20 (5%), provide level rest areas, 1800 mm by 1800 mm (71 by 71 in) (minimum), every 30 m (98 ft).

Note

For detailed guidance on trail surface design and slope requirements for unique conditions, refer to “Ontario’s Best Trails Guidelines and Best Practices for the Design Construction and Maintenance of Sustainable Trails for All Ontarians” resource document.

6.16.1.5 Trail Surfaces

- ensure surface is firm and stable;
- ensure that openings must not allow passage of an object that has a diameter of more than 20 mm (1 in) (13 mm (½ in) diameter preferred), and that any elongated openings are oriented approximately perpendicular to the direction of travel;
- ensure resistance to damage by normal weather conditions, with ability to sustain typical wear and tear between planned maintenance cycles; and
- ensure type of surface used and expected conditions that may change over time are identified in information signage provided at trailhead.

6.16.1.6 Trail Running and Cross Slopes

- provide a running slope that is as gentle as possible, as permitted by the terrain, to minimize amount of strength and stamina required to use the trail; and
- ensure cross slopes are as gentle as possible, as permitted by the terrain, to provide an even surface for diverse users, including people using mobility aids or have difficulty with balance.

6.16.1.7 Ramps

Where ramps are provided on trails:

- a. provide running slope no greater than 1:10 (10%); and
- b. with the exception of running slope, ensure compliance with ramp requirements from Section 2.2 and elsewhere in this document.

6.16.1.8 Edge Protection

Where recreational trails are constructed adjacent to water or a drop-off, provide edge protection with the following requirements:

- a. constitute of an elevated barrier that runs along the edge the recreational trail to prevent users from slipping over the edge;
- b. have the top of the edge protection at 50 mm (2 in) (minimum) high above the trail surface; and
- c. be designed so as not to impede the drainage of the trail surface.



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

6.16.1.9 Trailhead Signage

- a. For each trailhead along recreational trails, provide signage with the following information (**Figure 101**):
 - i. the length of the trail
 - ii. the type of surface of which the trail is constructed;
 - iii. average and minimum trail width;
 - iv. average and maximum running and cross-slopes;
 - v. the location of features and amenities, where provided;
 - vi. extreme or unique conditions (e.g., steep slopes, obstacles or narrow widths); and
- b. ensure signage text has high tonal contrast with its background in order to assist with visual recognition, with text that includes characters that use a sans serif font.

Note

Colour, texture and tonal contrast can be integrated to assist users with identification of edge protection.

Exception

Where there is a protective barrier that runs along the edge of a recreational trail that is adjacent to water or a drop-off, edge protection does not have to be provided.

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 County locations, and online (e.g., County website or trail related websites, such as “Trail Explorer”, www.trailexplorer.org).

Best Practice

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

Note

The information provided 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.

Best Practice

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

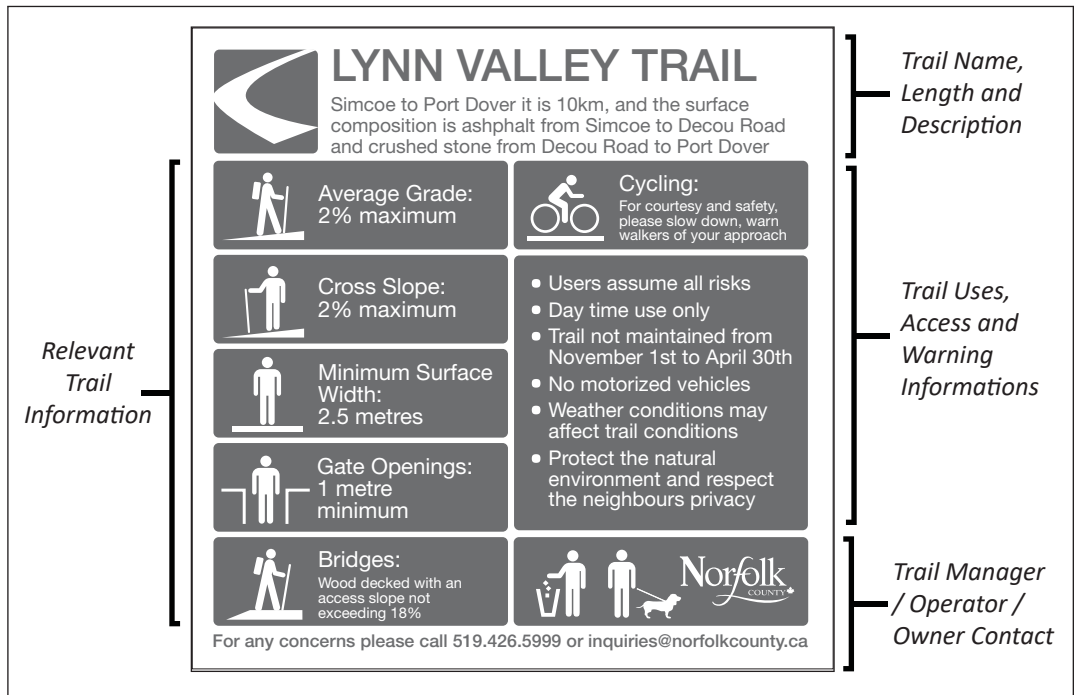


Figure 101: Example of Typical Universal Trail Assessment Process (UTAP) Signage

6.16.1.10 Other Media

- where other media such as park websites or brochures are used to provide information about the recreational trail, beyond advertising, notice or promotion, provide the same information identified on the trailhead signage.

6.16.1.11 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.

6.16.1.12 Additional Resources

- Ontario's Best Trails: www.ontariotrails.on.ca
- Trail Explorer: www.trailexplorer.org
- Universal Trail Assessment Process (UTAP): <http://www.beneficialdesigns.com/services/trails-shared-use-path-assessments/the-universal-trail-assessment-process-utap>

6.16.2 Beach Access Routes

6.16.2.1 Entrances

- a. provide 1000 mm (39 in) clear opening whether entrance includes a gate, bollard or other entrance design.

6.16.2.2 Clear Width

- a. provide clear width of 1000 mm (39 in) (minimum); and
- b. provide headroom clearance of 2100 mm (83 in) (minimum) above beach access route.

6.16.2.3 Surfaces

- a. ensure surface is firm and stable;
- b. ensure that openings must not allow passage of an object that has a diameter greater than 13 mm ($\frac{1}{2}$ in) and that any elongated openings are oriented approximately perpendicular to the direction of travel; and
- c. where the surface of the route is constructed (e.g., not natural):
 - i. ensure surface has 1:2 bevel at changes in level between 6 mm and 13 mm ($\frac{1}{4}$ - $\frac{1}{2}$ in);
 - ii. provide a maximum running slope of 1:10 (10%) at changes in level between 14 mm and 200 mm ($\frac{1}{2}$ - 8 in); and
 - iii. provide a ramp where changes in level are greater than 200 mm (8 in).

6.16.2.4 Running and Cross Slopes

- a. ensure the running slope is 1:10 (10%) (maximum);
- b. ensure the cross slope is 1:50 (2%) (maximum), where the surface area of the beach access route is constructed (e.g., not natural); and
- c. where surface area is not constructed, ensure the maximum cross slope is the minimum slope required for drainage.

6.16.2.5 Ramps

Where ramps are provided on beach access routes:

- a. provide running slope no greater than 1:10 (10%); and
- b. with the exception of running slope, ensure compliance with ramp requirements from Section 2.2 and elsewhere in this document.

6.16.3 Boardwalks

Where a recreational trail or beach access route is equipped with a boardwalk, apply the following requirements.

6.16.3.1 Clear Width

- a. provide clear width of 1000 mm (39 in) (minimum);
- b. where the clear width is less than 1800 mm (71 in), provide a passing space of 1800 mm (71 in) wide by 1800 mm (71 in) (minimum) long, at intervals no more than 30 m (98 ft); and
- c. ensure headroom clearance is 2100 mm (83 in) (minimum) above the boardwalk.

6.16.3.2 Surfaces

- a. ensure surface is firm and stable; and
- b. ensure that openings must not allow passage of an object that has a diameter of more than 20 mm (1 in) (13 mm (½ in) diameter preferred), in any direction and that any elongated openings are oriented approximately perpendicular to the direction of travel.

6.16.3.3 Running and Cross Slopes

- a. ensure the running slope is 1:20 (5%) (maximum);
- b. where the running slope is steeper than 1:20 (5%), the running slope must meet the requirements for ramps identified in this section; and
- c. ensure the gradient of the cross slope is the minimum required for drainage.

6.16.3.4 Edge Protection

- a. provide edge protection that is 50 mm (2 in) (minimum) high; and
- b. ensure the design allows suitable drainage of boardwalk surface.

Recreational Trail Design Checklist

6.17

Application

The information in this Checklist is intended to assist County Staff when reviewing key design options for providing accessible recreational 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 6.16 Recreational Trails, Beach Access Routes and Boardwalks, of the County's Accessibility Design Guidelines for detailed information on accessibility criteria for trails and the UTAP.

Recreational Trail Design Checklist

The following checklist is intended for use by County 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.	<input type="checkbox"/> Y <input type="checkbox"/> 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	<input type="checkbox"/> Y <input type="checkbox"/> N	Comments:
1.1.2(b)	If provided, have the County's amenities been reviewed for compliance with relevant sections of the Norfolk County Accessibility Design Guidelines?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	Comments:

1.2 Trail Clear Width

1.2.1	Is the CLEAR WIDTH of the trail at least 1000 mm (39 in) (1800 mm (71 in) preferred)? <i>Note:</i> Ensure placement of vegetation and permanent design features (e.g., bollards and decorative boulders) does not create obstruction or projection along accessible route.	<input type="checkbox"/> Y <input type="checkbox"/> N	Comments:
1.2.2	Where there are changes in level along the trail, are EDGE PROTECTION at least 50 mm (2 in) high provided and edges clearly marked (e.g., colour and texture contrast) to assist identification?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	Comments:
1.2.3	Is the HEADROOM CLEARANCE above the trail at least 2100 mm (83 in)?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A	Comments:

1.3 Trail Slopes

1.3.1	Is the RUNNING SLOPE as gentle as possible, as permitted by the terrain?	<input type="checkbox"/> Y <input type="checkbox"/> N	Comments:
1.3.2	Is the CROSS SLOPE as gentle as possible, as permitted by the terrain?	<input type="checkbox"/> Y <input type="checkbox"/> N	Comments:

1.4 Trail Surface			
1.4.1	Is the TRAIL SURFACE firm and stable? Identify type of surface and material used to meet accessibility requirements.	<input type="checkbox"/> Y <input type="checkbox"/> 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 tonal contrast and pictograms) identifying amenities that may be available?	<input type="checkbox"/> Y <input type="checkbox"/> N	Comments:
2.1(b)	<p>If yes, does the signage include the following information:</p> <p style="text-align: center;">Trail Name</p> <p style="text-align: center;">Trail Map</p> <p style="text-align: center;">Trail Length</p> <p style="text-align: center;">Trail Surface Type</p> <p style="text-align: center;">Trail Running Slope (Grade)</p> <p style="text-align: center;">Trail Cross Slope</p> <p style="text-align: center;">Trail Manager / Operator</p> <p><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 6.16 Recreational Trails, Beach Access Routes and Boardwalks for more information on the UTAP.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Y <input type="checkbox"/> 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? If yes, describe information to provide on signage.	<input type="checkbox"/> Y <input type="checkbox"/> N	Comments:

3. Additional Considerations

3.1	<p>Does the trail reflect the varied needs of users, the varied natural landscape and the shared desire for varied trail experience?</p> <p><u>Note:</u> Design should incorporate both sustainable and universal design features to ensure the widest range of users can benefit.</p>	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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)?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	Comments:



Inclusive Play Spaces

6.18

Application

This section applies to play spaces designed for children with varying disabilities. Play spaces can be located in a variety of public settings (e.g., parks, schools, childcare facilities or community / recreation centres). Play spaces 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 play space.

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

Reference

- Sec. 2.3 Stairs
- Sec. 2.4 Guards and Handrails
- Sec. 2.8 Drinking Fountains
- Sec. 3.1 Parking
- Sec. 3.3 Exterior Paths of Travel
- Sec. 4.5 Washrooms

Note

Inclusive play spaces 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.

6.17.1 Consultation Requirements

When constructing new or redeveloping existing outdoor play spaces, consultation on the needs of children and caregivers with various disabilities must occur with:

- a. the public and persons with disabilities; and
- b. the Norfolk County Accessibility Advisory Committee.

6.17.2 Design Requirements

When constructing new or redeveloping existing play spaces:

- a. incorporate accessibility features, such as sensory and active play components, for children and caregivers with various disabilities into the design of outdoor play spaces; and
- b. ensure that outdoor play spaces have ground surface that is firm, stable and has impact attenuating properties for injury prevention and sufficient clearance to provide children and caregivers with various disabilities the ability to move through, in and around the outdoor play space.

Ensure the design of inclusive play spaces and features meet the requirements of CAN / CSA Z614-14, Annex H, including:

- i. H.1 Scope;
- ii. H.2 Reference Publications;
- iii. H.3 Reference Definitions;
- iv. H.4 Play spaces (e.g., ground-level and elevated play components, accessible routes, transfer systems, play components and ground surfaces); and
- v. other applicable sections of these Standards, as required.



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

Note

Requirements related to the area surrounding or beyond the play space, including, but not limited to, parking lots, washrooms, drinking fountains, and recreation facilities, are referenced elsewhere in this document

Note

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

6.17.3 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 Z614-14, Annex H). This information is not intended to duplicate existing standards, but is focused on presenting best practices for accessibility.

6.17.4 Entry and Exit Points

Provide a minimum of two accessible ingress / egress points:

- located as part of an adjacent accessible route;
- ensure accessible connections provided to play space surfaces are firm, stable and slip-resistant, as well as providing direct connections to individual play components; and
- provide clear width of 1525 mm (60 in) (minimum).



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

Note

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

6.17.5 Accessible Routes

- provide at least one accessible route within the boundary of the play space, connecting ground-level play components and elevated play components, including entry and exit points of the play components;
- ensure clear width of accessible route is 1525 mm (60 in) (minimum); and
- ensure the maximum slope for an accessible route connecting ground-level play components within the boundary of a play space is 1:16 (6.25%).

6.17.6 Play Space Ground Surface

- a. provide accessible surface materials for play spaces such as poured-in-place rubber, accessible turf, rubber mats and tiles, bonded and engineered wood fibers or shredded rubber.



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

6.17.7 Play Components

- a. provide a high tonal contrast between a play component and its surroundings.

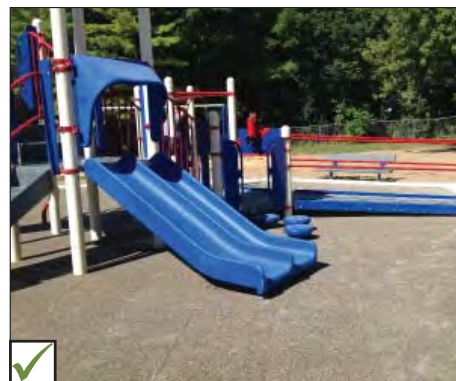
6.17.8 Elevated Play Components

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, as identified in **Table 15**.

Table 15: 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.

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.

6.17.9 Transfer Systems

- provide transfer systems to connect elevated or ground-level play components (e.g., transfer steps or platforms);
- 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
- provide a minimum clear floor space of 915 mm (36 in) wide by 1370 mm (54 in) long adjacent to all transfer locations onto play components (**Figure 102**).

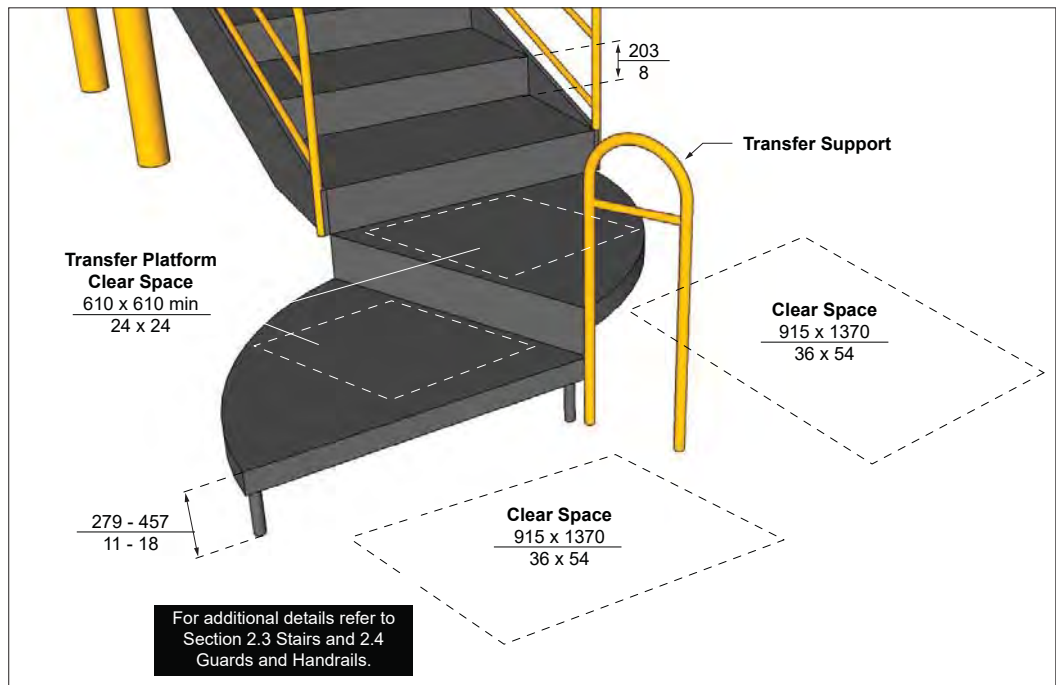


Figure 102: Transfer Systems

6.17.10 Turning Space

- provide clear turning space for mobility aids of 1700 mm (67 in) (preferred) or 1500 mm (59 in) (minimum) diameter on the same level as play components (**Figure 103**).



Figure 103: Turning Space - Plan View

6.17.11 Ground-Level Play Components

A ground-level play component is a play component that is approached and exited at the ground level. Provide the ratio of ground-level play component alternatives, compared to elevated play components, as identified in **Table 16**.

Table 16: 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 an 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

Source: Canadian Standards Association (CAN / CSA Z614-14, Annex H)



Examples of ground-level play components.

Inclusive Play Space Design Guide

6.19

Application

This design guide is provided for use by County Staff when designing new inclusive play spaces.

How to Use the Guide

The **Inclusive Play Space Design Guide** identifies key design features for planning and designing an inclusive play space, 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 play space as well as caregivers and companions. Additional design considerations may also be required related to the broader play space context and environment, including requirements for the site and park where the play space 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 Paths of Travel
- Sec. 4.5 Washrooms
- Sec. 5.7 Lighting

Note

This guide does not provide all requirements for designing an inclusive play space; only key requirements are provided. Refer to Section 6.18, Play Spaces of these guidelines and CAN / CSA Z614-14 (Annex H), for more details.

Designing an Inclusive Play Space

Key Features of an Inclusive Play Space

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 play space.

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

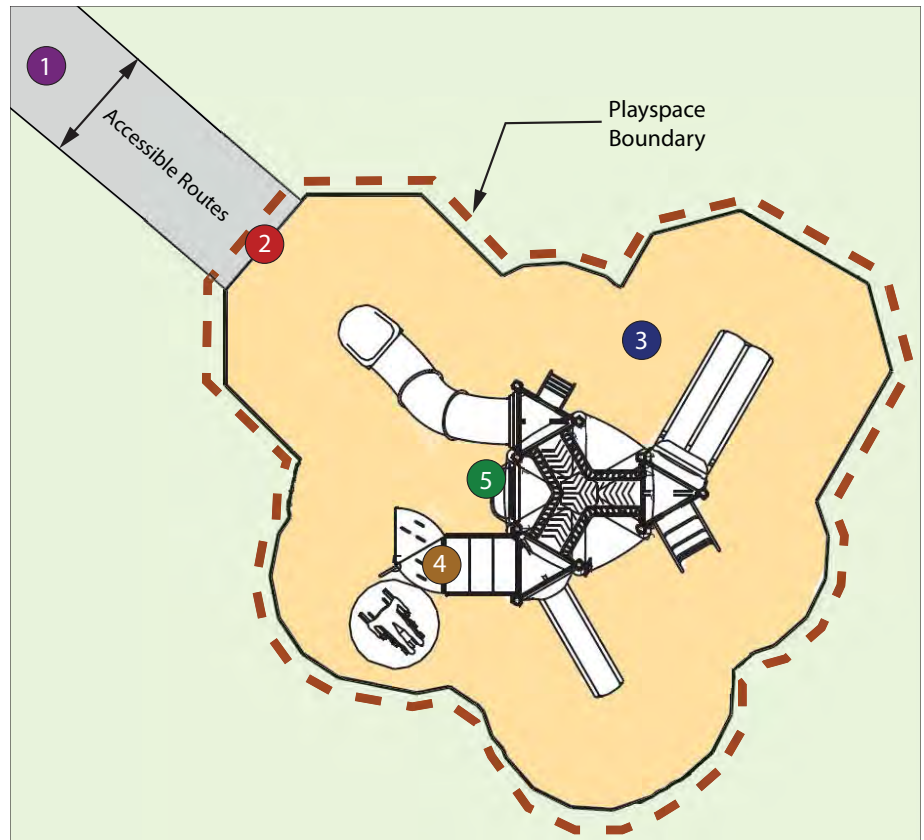


Diagram of Typical Play Space Features

Note: Play Spaces 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 play space.

1 Accessible Routes

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

Key Consideration:

Is there at least one accessible route leading to the play space?



Accessible route connecting to play space.



Accessible route connecting to play space.

2 Entry / Exit Points

Entry / exit points from an accessible route along the boundary of the play space 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 play space?



Play space is at-grade with accessible route.



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

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:

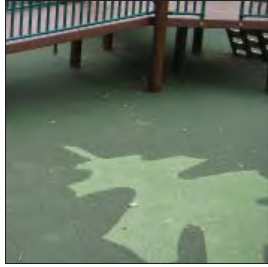
Is the play space ground surface accessible?



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 play space, 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 play space.

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 play space is provided courtesy of the Canadian Playground Safety Institute (cpsionline.ca). The calculator is based on CAN/CSA Z614-14 (Annex H) and can be adapted by the County.



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 site

Step 2) Assess Access to Elevated Components

Total # of Elevated Components =
<ul style="list-style-type: none"> • 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

Courtesy of the Canadian Playground Safety Institute (cpsionline.ca) from the Online Accessibility Course.

Additional Considerations

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

1. Provide age range and number of children using play space;
2. Describe the vision for the proposed play space. 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 Z614-14, Annex H accessibility standards and Section 6.18 Inclusive Play Spaces; 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.

Inclusive Play Space Checklist

6.20

Application

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

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

Note

Refer to Sections 6.18 Inclusive Play Spaces and 6.19 Inclusive Play Space Design Guide of the County's Accessibility Design Guidelines and CAN / CSA Z614-14 (Annex H) for detailed information and accessibility criteria when designing a new inclusive play space.

Inclusive Play Space Checklist

The following checklist is intended for use by Norfolk County Staff when reviewing key design options for inclusive play spaces. The items in this Checklist are colour coded to match the information in Section 6.19 Inclusive Play Space Design Guide.

General Information

Reference (Identification # / 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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 ?	<input type="checkbox"/> Y <input type="checkbox"/> 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? <u>Note:</u> Use the Canadian Playground Safety Institute's accessibility component calculator to determine the required number of play components.	<input type="checkbox"/> Y <input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N Comments:
2.3	Does PLAYSPACE EQUIPMENT meet accessibility requirements of CAN / CSA Z614-14 (Annex H)? <u>Note:</u> A detailed assessment may be required.	<input type="checkbox"/> Y <input type="checkbox"/> N Comments:

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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 or services that are usable by the public 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.

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 Norfolk County.
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 comprised 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	<p>An objective method of documenting trail conditions for universal access. The UTAP:</p> <ul style="list-style-type: none"> - 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	<p>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.</p>
Vision Loss	<p>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.</p>
Vision Panel	<p>A glazed opening in a door leaf which allows people to see through to the other side without opening the door.</p>
Wayfinding	<p>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.</p>

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Feedback Form

7.4

Norfolk County would like to receive comments and information related to any proposed changes to these Accessibility Design Guidelines.

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

Submit to:

Norfolk County
Robinson Administrative Building
185 Robinson Street, Suite 100
Simcoe ON N3Y 5L6
Email: accessibility@norfolkcounty.ca
Phone: 519-426-5870
Fax: 519-427-5900
In person at any customer service centre (Delhi/Langton/Simcoe)



Submitted by:

Name: _____
Company / Organization: _____
Phone Number: _____
Address: _____
Email: _____

Proposed Changes and Rationale:



Proposed Changes and Rationale:

A large, empty rectangular box with a thin black border, intended for providing proposed changes and rationale.