



# Toronto Accessibility Design Guidelines



TADG  
v. 2021





# Preface

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**Message from the City / City Manager / Mayor**

**Acknowledgments**

## Message from the City / City Manager / Mayor

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## Acknowledgements

The City of Toronto would like to thank all participants who contributed their time by providing input for the preparation of these Accessibility Design Guidelines.

All participants involved were committed to creating a practical planning and design resource that would ensure greater freedom of access to and use of all City-owned buildings and sites in the City of Toronto.

Refer to Appendix A for a complete list of internal and external stakeholders directly involved with the preparation and review of these guidelines.



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# Introduction

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## Objective

The City of Toronto recognizes that design *barriers* are a form of discrimination. We want to support the integration and full participation of individuals of all abilities, indifferent of mobility, sight, hearing or cognitive disabilities, to access their environment. Using *accessible* and *universal design* principles prevents and removes *barriers* for everyone so that dignity and independence can be sustained without impediment. 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 greatest extent possible, short of undue hardship. These measures ensure that we comply with relevant legislation such as the Ontario Human Rights Code (OHRC) and the Accessibility for Ontarians with Disabilities Act, 2005 (AODA) and associated Integrated Accessibility Standards Regulation (IASR).

The Toronto Accessibility Design Guidelines incorporate existing legislated built environment accessibility standards, better practices, and *universal design* principles to help meet the rights of people with disabilities, as described in the OHRC and AODA.



## Context

### Background

In April 2004, Toronto City Council approved the first Toronto Accessibility Design Guidelines.

In 2009, Toronto City Council adopted the City's [Commitment to Creating an Accessible City](#) which outlines our commitment to building an inclusive society and providing an *accessible* environment in which all individuals have access to the City's services and programs in a way that respects the dignity and independence of persons with disabilities.

### Accessibility Policy

In 2018, Toronto City Council adopted the [City of Toronto Corporate Accessibility Policy](#). The policy requires that the City maintain the Toronto Accessibility Design Guidelines as the mandatory, guiding accessibility standard for City renovations and newly constructed buildings and public spaces. These measures are to ensure that the Accessibility for Ontarians with Disability Act Integrated Accessibility Standards Regulation (Ontario Regulation 191/11), which became law in 2011, are implemented in order to create a barrier-free and *accessible* Ontario by 2025.

Increasing accessibility leads to increased opportunities for persons with disabilities to access employment and to fully participate in the social, cultural, recreational, economic and political life of Toronto. Moreover, to compete nationally and internationally, a barrier-free city can increase tourism and provide economic advantage. Within the next 13 years, retail spending by persons with disabilities will rise from 14 to 21 per cent of the total consumer market, while accessibility-based improvements to the workplace would allow 550,000 Canadians with disabilities to work more, and increase GDP by \$16.8 billion by 2030 (Conference Board of Canada, *The Business Case to Build Physically Accessible Environments*, 2018).

Toronto is Canada's largest city and one of the most diverse cities in the world. We serve an ever-changing population, including more than 425,000 seniors (Statistics Canada - 2016 Census of Population) and 495,500 persons with disabilities, or 1 in 5 persons, or 20% of the population (Statistics Canada - 2017 - Canadian Survey on Disability).

In Ontario, [Accessibility is Good for Business](#):

- There are 2.6 million persons in Ontario with a disability – that's 24% of Ontario's population.
- About 45% or 1.12 million Ontarians with disabilities have mobility related disabilities.
- More than 40% of this population is over the age of 65. As the population ages, this number will only grow.
- Persons with disabilities have a buying power of over \$50 billion in Canada and \$1 trillion globally. (3)
- 6.2 million Canadians identify as having a disability. Together with their friends and families, persons with disabilities represent the third largest market segment in North America.

The demographic implications are obvious and will drive the need for change. In the upcoming decades, the proportion of the population 65 and over will increase dramatically.

## Toronto City Council Statement of Commitment to Building an Accessible City

### Customer Services

Mandatory Training Requirements, Divisional Customer Service Standards

### Procurement

Accessible Purchasing Guidelines and Templates

### Information & Communications

Digital Accessibility Standard & Communication Guidelines

### Employment

Employment & Accommodation Policies and Guidelines

### Transportation

Complete Streets Guidelines (streetscapes, sidewalks), Taxi Bylaws, Ferry Guidelines

### Public Spaces

Toronto Accessibility Design Guidelines (facilities and public spaces)

- [Corporate Accessibility Policy - Outlines AODA Compliance requirements and roles and responsibility at the City.](#)
- [Multi-Year Accessibility Plan - Supports compliance and outlines specific initiatives that will remove barriers in City programs, services, infrastructure and employment practices.](#)

Every sector of the planning, design and development industry and City of Toronto government provides barrier-free environments to demonstrate the commitment to proactive measures in the elimination and prevention of *barriers* faced by persons with disabilities. These accessibility guidelines address accessibility requirements for the design and construction of new facilities, as well as the renovation of existing facilities owned, leased, or operated by the City of Toronto.

The guidelines are a building block in developing future City policies, guidelines, standards and other initiatives that serve the needs of persons with disabilities in our City. The guidelines support the Official Plan which states that: “a key city-building principle is that public buildings, parks and open spaces should be open and *accessible* to all members of the public including persons with disabilities.”

## Development

These guidelines consolidate various *best practices* and leading standards in the area of *accessible* design that were identified during extensive research and consultation on existing approaches for *accessible* and barrier-free design. The City of Toronto Accessibility Design Guidelines (TADG) were developed with support and direction from advisory committees, numerous City staff representing various City Divisions and external stakeholders as identified in Appendix A. These guidelines are consistent with or exceed existing requirements of the Accessibility for Ontarians with Disabilities Act, 2005 (AODA) and Ontario Building Code (OBC) at time of publication. The most current version of the AODA and OBC should be consulted during design and construction as these legislated minimum requirements may change over time.

The TADG acts as a guiding standard of excellence in accessibility for building and renovating City facilities and public spaces. These guidelines represent a *best practice* standard, and describes a level of accessibility that goes beyond that of the minimum legislative requirements. A complete list of reference guidelines and standards used to inform the development of the TADG can be found in the Appendix A.

TADG is a living document that will be reviewed at minimum every three years by City staff in consultation with the public and the Toronto Accessibility Advisory Committee. Periodic updates will incorporate changes to the legislation, *regulations* and standards as well as new technologies and information. Where there is conflict between requirements found in the TADG, AODA or OBC, City staff will comply with the highest requirements of accessibility.

TADG will be a building block in developing new policies, guidelines, standards and other initiatives that support inclusive environments. The guidelines are in keeping with the Toronto City Council Statement of Commitment which states that:

Diverse communities and groups make up the population of Toronto. The City of Toronto values the contributions made by all its persons and believes that diversity among its persons has strengthened Toronto.

The City of Toronto is committed to building an inclusive society and providing an *accessible* environment in which all individuals have access to the City's services and programs in a way that respects the dignity and independence of persons with disabilities.

The City of Toronto supports the goals of the Accessibility for Ontarians with Disabilities Act (AODA) and will establish policies, practices and procedures which are consistent with the accessibility standards established under the AODA, including *accessible* customer service, information and communication, employment, the built environment and transportation.

The City of Toronto will continue to prevent *barriers* by designing inclusively and supporting positive attitudes that address “ableism” – attitudes which devalue and limit the potential of persons with disabilities.

In working towards its goals under this Statement, the City of Toronto is committed to meeting the requirements of existing legislation and to its own policies and goals related to the identification, removal and prevention of *barriers* to persons with disabilities and becoming a barrier-free city.

## Multi-Year Accessibility Plan - Guiding Principles

The City of Toronto's [Multi-Year Accessibility Plan](#) includes six [Guiding Principles](#). Use of these guidelines should always reflect these principles. Furthermore, where the TADG do not provide specific answers, these principles should be considered. Decisions pertaining to City of Toronto programs, services, facilities and spaces should reflect these guiding principles.

### Leadership and Accountability

The City of Toronto's motto is "[Diversity our Strength](#)". The City demonstrates leadership and excellence in accessibility by applying *best practices* to create maximum accessibility over minimum compliance. Senior leadership in all areas and at all levels of the organization are accountable for advancing accessibility in their areas of responsibility.

### Dignity and Independence

All City of Toronto goods, services and facilities will respect the inherent dignity, diversity and abilities of all individuals. All City of Toronto services, facilities and programs will be provided in a manner that respects the independence of persons with disabilities.

### Integration and Equity

City of Toronto goods, services and facilities will be provided to persons of all abilities in a similar way, unless an alternate measure is necessary to enable persons with disabilities to obtain, use or benefit from the same goods, services and facilities.

### Accessibility by Design

Accessibility must be considered from the earliest planning stages and throughout design and development. The City of Toronto will create permanent inclusive solutions. The City will ensure accessibility at all its facilities and public spaces by designing with accessibility in mind.

### Innovation and Adaptability

The City of Toronto will be open to creative solutions and design new approaches to ensure functionality for all users. Design will consider incorporation of new technologies to create inclusive environments.

### Collaboration and Engagement

Community engagement is essential throughout design planning and development. Involving community and diverse stakeholders as early as possible helps ensure that buildings and spaces are usable without costly remediation later on. A collaborative approach is necessary to enhance the efficiency and effectiveness of City of Toronto services, facilities, programs and spaces.

## Legislative and Policy Overview

The statements and accessibility provisions found in these design guidelines brings the intentions of the Ontario Human Rights Code, the AODA and the City of Toronto Corporate Accessibility Policy and commitments into practice by encouraging *universal design* approaches to all development projects across the City of Toronto.

### Ontario Human Rights Code (OHRC)

Under the Ontario Human Rights Code, persons with disabilities have the right to be free from discrimination in employment, services, goods, facilities and housing. The code promotes the full participation of persons with disabilities in society. This human right is often hindered or prevented by *barriers* occurring during the planning, design and development process. Design *barriers* result in discrimination. If design cannot remove *barriers* to full participation, the City has a duty to accommodate persons with disabilities, short of undue hardship.

### Accessibility for Ontarians with Disabilities Act 2005 (AODA)

In 2005 the Accessibility for Ontarians with Disabilities Act was passed to “improve access and opportunities for persons with disabilities.” The AODA is designed so that public and private sector organizations work with persons with disabilities in making Ontario a more *accessible* province. Under the Act, the City must comply with the Design of Public Spaces Standards which includes requirements on elements such as parking spaces, outdoor *amenities*, *trails*, fixed queuing lines and *accessible* service counters including *maintenance*. In addition, all municipalities are required to develop and maintain Multi-Year Accessibility Plans outlining strategies to identify, remove and prevent *barriers* faced by persons with disabilities with a goal to achieve an *accessible* province. The Toronto Accessibility Design Guidelines are an important part of the City of Toronto's accessibility framework and response to that challenge.

### Ontario Building Code (OBC)

The Ontario Building Code is the formal mandatory legislation governing the construction of all new buildings in Ontario. At the municipal level, the OBC requirements are administered and enforced by the Building Division of the Urban Development Services Department. The OBC addresses accessibility under a variety of requirements as follows:

- Governs construction of new buildings, as well as repairs, renovations and additions to buildings; and
- Stipulates the minimum requirements for building property elements such as parking, *entrances*, public *accessible* routes, *ramps*, stairs, elevators, washrooms, signs and exits.

Note that compliance with the OBC does not always constitute compliance with the Ontario Human Rights Code. The Toronto Accessibility Design Guidelines meets or exceeds the minimum requirements of the OBC and applies a *best practice* methodology to providing universal and *accessible* design.

## City of Toronto Corporate Accessibility Policy

The policy establishes an overarching framework for compliance with the City’s commitment to accessibility and the requirements of AODA. The City of Toronto is committed to building an inclusive society, providing an *accessible* environment in which persons with disabilities can access the City’s goods, services and facilities, including all buildings, public spaces, information and communications, and to the identification, removal and prevention of accessibility *barriers*.

## Principles of Universal Design

*Universal design* is the design of products and environments to be usable by all persons, to the greatest extent possible, without the need for adaptation or specialized design. The intent of the *universal design* concept is to simplify life for everyone by making products, communications and the built environment more usable by more persons, while emphasizing dignity and independence by providing those features that will allow persons to function in their day-to-day setting without assistance, at little or no extra cost. The *universal design* concept considers all persons of all ages, sizes and abilities ([NC State University, The Center for Universal Design, 1997](#)). The 7 Principles of *universal design* are:

### **Equitable Use**

The design is useful and marketable to persons with diverse abilities.

### **Flexibility in Use**

The design accommodates a wide range of individual preferences and abilities.

### **Simple and Intuitive Use**

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills or current concentration level.

### **Perceptible Information**

The design communicates necessary information effectively to the user, regardless of ambient condition or the user's sensory abilities.

### **Tolerance for Error**

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

### **Low Physical Effort**

The design can be used efficiently and comfortably with minimal fatigue.

### **Size and Space for Approach and Use**

Appropriate size and space are provided for approach, reach, manipulation and use, regardless of the user's body position, size, posture or mobility.



## Goals of Universal Design

The goals of *universal design* shift the focus from product usability to a more persons-centric lens to include human performance, health and wellness and social participation. The goals define the outcomes of *universal design* practice in ways that can be measured and applied to all design domains within the constraints of existing better practice resources. They encompass functional, social and emotional dimensions. Each goal is supported by an interdisciplinary framework of anthropometrics, bio-mechanics, perception, cognition, safety, health promotion and social interaction ([Steinfeld and Maisel, 2012, University of Buffalo](#)). The 8 Goals of *universal design* are:

### Body Fit

Accommodating a wide range of body sizes and abilities.

### Comfort

Keeping demands within desirable limits of body function and perception.

### Awareness

Ensuring that critical information for use is easily perceived.

### Understanding

Making methods of operation and use intuitive, clear and unambiguous.

### Wellness

Contributing to health promotion, avoidance of disease and protection from hazards.

### Social Integration

Treating all groups with dignity and respect.

### Personalization

Incorporating opportunities for choice and the expression of individual preferences.

### Cultural Appropriateness

Respecting and reinforcing cultural values, and the social and environmental contexts of any design project.

In addition to the principles and goals of *universal design*, the City of Toronto expects the provisions of an equivalent level of life safety for everyone, including *accessible* methods of leaving a building and communicating in an emergency.

## Guideline Application and Scope

The City of Toronto Accessibility Design Guidelines (TADG) is the mandatory, guiding accessibility standard for all City renovations and newly constructed buildings and public spaces. The application of these guidelines is intended for new construction and development, as well renovations and *replacements* of City-owned, leased or operated facilities, including buildings, infrastructure and outdoor elements and encouraged for all other non-City-owned, leased or operated facilities whether new or retrofitted. Refer to Appendix B.

### Compliance

All work must comply with the list below:

#### Ontario Human Rights Code (OHRC)

The OHRC protects persons from discrimination and supersedes all provincial laws such as the Ontario Building Code. The Ontario Human Rights Commission ultimately determines how to apply OHRC and the “duty to accommodate” and to the point of “undue hardship.”

#### Integrated Accessibility Standards Regulations (IASR), Accessibility for Ontarians with Disabilities Act 2005 (AODA)

The IASR establishes the accessibility standards for information and communications, employment, transportation, the design of public spaces and customer service. The AODA is a law that sets out a process for developing accessibility standards. The goal of the Act to improve the identification, removal and prevention of *barriers* faced by persons with disabilities and to make related amendments to other Acts.

#### Building Code Act, Ontario Building Code (OBC)

The OBC describes a minimum mandatory level of design standards for accessibility within the Province of Ontario. Compliance with the OBC does not constitute compliance with the OHRC.

A series of other legislative acts, standards and guidelines have been referenced in the making of the TADG. The complete list can be referred to in Appendix A and represents the application of a *best practice* standard to achieve highest level of accessibility possible that meets or exceeds the minimum requirements of the OBC, AODA Accessibility Standard, CSA B651-12 and other related municipal accessibility or inclusive design references.

## Conflicts, Acceptable Levels and Technically Infeasible

In addition to these guidelines, designers must also refer to the minimum requirements of the current Ontario Building Code (OBC) and the Accessibility for Ontarians with Disabilities Act (AODA) 'Design of Public Spaces Standard'.

Where conflicts exist between the requirements of these guidelines and legislations enacted by the federal or provincial government, the highest level of accessibility requirements must apply.

The City of Toronto Accessibility Design Guidelines (TADG) does not release the design professional from liability or the need for a comprehensive investigation in the design and construction process.

The term *technically infeasible* refers to the renovation or *replacement* of a building element that cannot meet the requirements of TADG and where a suitable Renovation Compliance Alternative, noted in Appendix B, cannot be applied based on:

- Existing structural conditions that would require altering parts of the structural frame, such as a load-bearing member; and/or
- Other existing major physical or *site constraints* prohibiting the necessary modification or addition of elements, spaces or features for compliance with TADG.

If the proposed work is *technically infeasible* and in the event that the renovation compliance alternative noted in Appendix B cannot be achieved after exhausting all possible options, City staff must follow the *technically infeasible* exemption process.

This process requires extensive documentation and justification by City staff with the support of their consultant/vendor team. Furthermore, the process requires the approval of the appropriate Accessibility Governance Body within the City of Toronto.

## Renovations, Retrofits and Alterations

The City of Toronto Accessibility Design Guidelines (TADG) shall be applied to all renovations and *replacements* of existing facilities and properties; regardless of size or scope of the project.

These guidelines recognize multiple categories of renovation, retrofits and alterations to existing facilities and properties that vary in size and scope. Refer to Appendix B for detailed description of the various categories and scenarios that are applicable. Below is a brief summary:

### Facilities / Properties Owned or Leased

- Category A – *Extensive Renovation*
- Category B – Basic (Non-Extensive) Renovation
- Category C – Alteration / Retrofit / *Replacement*

*Exterior public spaces and elements* that are open and *accessible* to persons such as roads, laneways, *pedestrian clearways*, paved or unpaved *trails* and paths, public squares, parks, campgrounds, play areas and beaches shall comply with these guidelines as follows:

- All newly built *exterior public spaces and elements* described in Section 1 shall comply with the requirements of TADG.
- All existing built *exterior public spaces and elements* being altered, upgraded or replaced shall comply with the requirements of TADG to provide the highest level accessibility possible, having regard for physical *barriers* and technical constraints.

Examples include:

- (a) If a renovation or *replacement* is necessary for an existing *entrance*, it is mandatory to meet the requirements of TADG. The priority should be that the primary *entrance* be an *accessible entrance*.
- (b) If the existing means of access is an escalator or stairs, then provide a renovation or *replacement* to accommodate another means of access such as an elevator that is *accessible* and meets the requirements in this guideline.
- (c) If the *replacement* of different building elements, when considered together, results in the renovation of a room or space, the entire space should be made *accessible* and meet the requirements in this guideline.
- (d) Painting, wallpapering or any other changes to existing finishes are considered to be a *replacement* and should meet the requirements in this guideline for finishes and *colour/ brightness contrast*.
- (e) If a renovation is necessary for an existing exterior *ramp*, the *ramp* should meet the requirements in this guideline.

Unless *technically infeasible*, the renovation or *replacement* of existing building elements should at a minimum be set on an interior and exterior *accessible path of travel* to existing washrooms, drinking fountains and areas of refuge to provide access to the common building *amenities*.

## Renovation Compliance Alternative

Where the renovation of existing buildings becomes difficult to meet the requirements of the City of Toronto Accessibility Design Guidelines (TADG) or such guideline applications are claimed as *technically infeasible*, the renovation compliance alternatives section provides an alternate solution more suitable and in compliance with the Ontario Building Code minimum.

If a building is listed as heritage, the renovation compliance alternatives provided in TADG only apply if the requirement does not impact the heritage value. See section 'Historic Sites and Heritage Properties' for more details.

In both cases, approval to proceed using the renovation compliance alternative or *technically infeasible* exemption permission must refer to the procedure outlined in Appendix B and follow the procedure for approval and compliance documentation required.

In the text of this guideline, renovation compliance alternatives are identified in a square bracket with 'R-' and the section number referenced. For example, [R-1.1.1.1]. Refer to the Section 'How to Use this Guideline' for more details.

## Building Additions

Additions to existing facilities are considered to be new construction and expected to meet all of the recommendations in the City of Toronto Accessibility Design Guidelines, and must comply with the Ontario Building Code requirements of Section 3.8. Barrier-Free Design.

## Historical and Heritage Properties

The use of the City of Toronto Accessibility Design Guidelines is mandatory for *extensive renovations* and *replacements* to the City's historic sites, heritage zones and heritage properties listed on the City of Toronto's 'Heritage Preservation Services' (sites can be searched on City of Toronto home page). Consult with the City Planning's, Urban Design - Heritage Preservation Services staff prior to design for all renovations and capital *replacements* to heritage properties.

Canada's Historic Places document '[The Standards and Guidelines for the Conservation of Historic Places in Canada](#)' provides general standards for the preservation, rehabilitation and restoration of historic sites to conserve the heritage value by adopting an approach that provides minimal intervention and respects character-defining elements.

As such, any work on historic sites or heritage properties must be assessed on an individual basis to determine the most effective and least disruptive means of renovation or *replacement* and the extent to which the property can be made *accessible*.

Refer to links below for additional heritage legislative information:

- [Ontario Heritage Act](#)
- [Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11](#)

## Compliance and Quality Assurance

The use of the City of Toronto Accessibility Design Guidelines (TADG) is to be included as a mandatory requirement for all new construction, *extensive renovations* and *replacements* to all of the City-owned, leased or operated facilities or property assets.

All City divisions managing capital construction projects shall ensure compliance with these guidelines during the pre-planning, design, construction documents, preparation, and construction and occupancy phases.

All City divisions issuing City of Toronto – Request for Proposals, Requests for Quotations, Tenders, and Informal Quotation requests for any good and/or design and construction services shall ensure compliance with these guidelines.

If the proposed work cannot meet the requirements of TADG and a suitable Renovation Compliance Alternative noted in Appendix B could not be applied after exhausting all possible options, City staff must follow the *technically infeasible* compliance alternative approval process noted in Appendix B and request the approval through the appropriate governing body under the City's Accessibility Governance Structure.

For easy to read comparison of the TADG - Application Implementation Matrix, refer to Appendix B.

## Enforcement

The use of the City of Toronto Accessibility Design Guidelines (TADG) is to be included as a mandatory requirement for all new construction, *extensive renovations* and *replacements* to all of the City-owned, leased or operated facilities or property assets.

All City divisions managing capital construction projects shall ensure compliance with these guidelines during the pre-planning, design, construction documents, preparation, and construction and occupancy phases. All City divisions issuing City of Toronto – Request for Proposals, Requests for Quotations, Tenders, and Informal Quotation requests for any good and/or design and construction services shall ensure compliance with these guidelines.

If the proposed work cannot meet the requirements of TADG and a suitable Renovation Compliance Alternative noted in Appendix B could not be applied after exhausting all possible options, City staff must follow the *technically infeasible* exemption process noted in Appendix B and request the approval of the City's governing body, Accessible Built Environment Sub-Committee. For easy to read comparison of the TADG - Application Implementation Matrix, refer to Appendix B.

## Exceptions

The City of Toronto Accessibility Design Guidelines does not apply in situations and circumstances where the space or *amenity* is not open to the public and is infrequently accessed, including the following:

### Spaces

- *Service rooms* (electrical rooms, sprinkler rooms and mechanical rooms);
- Elevator machine rooms;
- Janitor rooms;
- *Service spaces* (crawl spaces, attics, utility tunnels);
- Roof spaces without public *amenities*; and
- Other similar areas identified in the Ontario Building Code.

### Facilities

- Buildings which are not intended to be occupied on a daily or full-time basis, including but not limited to Pumping Stations, Storage Sheds, Power Stations and Waste Transfer Stations; and
- Buildings of Group F Division 1 occupancy, as defined by the Ontario Building Code (latest edition with all amendments).





# How to Use this Guideline

## Contents in Section

**Document Composition**

**Overview of Guideline Layout**

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**Defined Terms and Referenced Documents**

**Accessible Format and Screen Reader Capabilities**

**Screen Reader User Tips**

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## Document Composition

The City of Toronto Accessibility Design Guidelines is broken into five parts:

- Part 1.0 – Exterior;
- Part 2.0 – Interior;
- Part 3.0 – Systems and Controls;
- Part 4.0 – Exterior and Interior Maintenance; and
- Part 5.0 – Appendices.

Each part presents a summary of the information contained in the section and a supplementary rationale, which provides a detailed overview and context for the sequence of information and requirements listed. Segments of information in these parts may have application in other relevant parts and sections. Cross-referencing within the document is provided when this overlap occurs.

## Overview of Guideline Layout

### Rationale

The Rationale section identifies the reasoning of why the subsection is written and some key overarching points that should be considered when reviewing the subsection.

### Application

The Application section clarifies where the Key Considerations and Requirements should be applied. The Application section has been added in select subsections where clarifications have most likely been required. Not all subsections have an application statement. For easy to read comparison of the TADG - Application Implementation Matrix, refer to Appendix B.

### Related Sections

The Related Sections list identifies other subsections that should be reviewed because of related or supplemental design considerations or guidance.

### Related References

The Related References list identifies other documents that were used to inform the requirements identified in the subsection. The designer may consult two types of these documents during the project's design process. The first group of related references are internally-produced documents by the City of Toronto and most are publicly available. Some remain as internal reference documents only available to City staff and its applicable vendors, however upon approval of City staff they may be made available for review. The second type of related references are externally-produced documents by other agencies and organizations that are associated with the section or subsection of these guidelines.

## Key Considerations

The same headings are used for Key Considerations and Requirements. The Key Considerations section outlines the rationale and relates primarily to the qualitative elements of the Requirements.

## Requirements

The same headings are used for Key Considerations and Requirements. The Requirements section is typically reserved for the quantitative elements that can be implemented in the built environment.

## 2

### 2.1. Interior Paths of Travel 2.1.1. Interior Accessible Paths of Travel

#### 2.1.1. Interior Accessible Paths of Travel

##### Rationale

Interior *accessible paths of travel* should provide a continuous, unobstructed route providing interior access to elements and spaces throughout a building. It is important to assess the intended occupants of a building in order to implement adequate space to ensure the highest level of access is provided.

##### Application

The scope of this section applies to interior aisles, corridors and hallways.



#### Related Sections

- 1.1.7. Handrails
- 1.1.5. Rest Areas
- 2.1.2. Obstacles
- 2.7.1. Floor Surfaces

#### Related References

- [Office Design Guidelines](#)
- [Office Modernization - Accessibility Toolkit](#)

#### Key Considerations

##### Location

Interior *accessible paths of travel* should be located within *high-use area* and *low-use areas*.

##### Surfaces

A level floor surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. Where carpets are provided, the piles should be low to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

##### Clear Widths

The clear width of interior *accessible paths of travel* should be free from obstacles such as temporary or permanent obstructions, protrusions and overhead objects. *High-use*, interior *accessible paths of travel* should provide clear widths to allow for the simultaneous passage of two persons using *mobility devices*. *Low-use*, interior *accessible paths of travel* should provide clear widths to allow for the passage of one person using a *mobility device*.

## Dimensions

Dimensions used in this standard are in metric units (millimetres) and shown as “mm”. When dimensions are not indicated within a range of maximum or minimum (“Max.” or “Min.”), the dimensions are absolute and should be met.

## Defined Terms and Referenced Documents

Words that are in *italic* font throughout the document are defined in section ‘Defined Terms’.

Standards, guidelines and other related reference documents are hyperlinked throughout the document. For example, [Complete Streets Guidelines](#). Not all documents have publicly available web addresses. Where documents are not hyperlinked, refer to Appendix A.

Renovation compliance alternatives are identified in a square bracket with ‘R-’ and the section number referenced. For example, [R-1.1.2. (1)(a)].

Any cross-referenced information that occurs will be identified and linked to the specific section referenced.

## Accessible Format and Screen Reader Capabilities

The City of Toronto Accessibility Design Guidelines have been created in an *accessible* format in accordance with the City of Toronto’s Digital Accessibility Standard and Information and Communication Standard. The document includes easy to read graphic layout, fonts, language, diagrams and multiple types of referencing, available in large print and screen reader compatible.

## Screen Reader User Tips

This document has been tested and is compatible with screen reader software. Different software may not have the same functionalities and keyboard shortcuts; refer to the screen reader user guide provided with your screen reader software for additional instructions. Tips for JAWS and NVDA and commonly used keyboard shortcuts are below.

### (1) Keyboard Shortcuts for JAWS:

Commonly used keyboard shortcuts for JAWS include:

- (a) The [H] key will navigate to the next section heading;
- (b) The [Insert + F6] keys will provide a list of headings in the document;
- (c) The [Alt + ↑] key will read the prior sentence;
- (d) The [Alt + Numpad 5] keys will read current sentence;
- (e) The [Alt + ↓] key will read the next sentence;
- (f) The [Insert + ↓] keys will read all text from current position;
- (g) The [→] key will fast forward during read all text;
- (h) The [←] key will rewind during read all text;
- (i) The [T] key will navigate to the next table;
- (j) The [Ctrl + Alt + directional arrow] keys will select the cell to the left, right, below, or above in a table; and
- (k) The [Ctrl + Alt + Numpad 5] keys will read the current cell in a table.

### (2) Keyboard Shortcuts for NVDA:

Commonly used keyboard shortcuts for NVDA include: (note: the NVDA key is set to the [Insert] key by default, but can be changed by the user)

- (a) The [H] key will navigate to the next section heading;
- (b) The [↑] or [Numpad 7] key will read the prior line;
- (c) The [NVDA + ↑] or [Numpad 8] key will read the current line;
- (d) The [↓] or [Numpad 9] key will read the next line;
- (e) The [NVDA + ↓] will read all text from current position;
- (f) The [T] key will navigate to the next table; and
- (g) The [Ctrl + Alt + directional arrow] keys will select the cell to the left, right, below, or above in a table

## Feedback

The City of Toronto recognizes that accessibility *best practices* continue to evolve and change over time with the expectation that these guidelines exist as 'living document' and as such encourages all users of this guideline to provide feedback, as well as to request changes to be considered for any additions, deletions or corrections by completing the Change Request Form included in Appendix A.

# Defined Terms

Contents in Section

**Defined Terms**

## Defined Terms

The following definitions are provided for clarification. The defined terms are indicated throughout the document in *italic* font.

**A.F.F.:** “Above Finished Floor”, measured from the finished floor surface vertically to the center line of the *operable portion or control* of the measured item.

**Access Aisle:** Refers to a demarcated zone used for *passenger pick-up and drop-off* of persons from a vehicle. *Access aisles* include pavement markings for easy identification and are often shared between *accessible parking spaces*. See *Accessible Parking Space*.

**Accessible:** Refers to products, devices, information, services, facilities or public spaces that provide independent, equitable and dignified access for persons with disabilities, including but not limited to those with visual, auditory, cognitive and mobility related disabilities.

**Accessible Facility:** A large space, such as a recreation centre or office building, that meets the requirements in this guideline. See *Specialized Spaces* and *Amenity* definitions for more information.

**Accessible Parking Space:** A designated vehicle parking space with a displayed *accessible* parking permit. See *Access Aisle*, *Type A Parking Space*, and *Type B Parking Space*.

**Accessible Path of Travel:** A continuous, unobstructed route providing exterior and interior access to elements and spaces. Interior *accessible paths of travel* include aisles, corridors, hallways, unobstructed passing areas, *ramps*, elevators and platform lifts. Exterior *accessible paths of travel* include *sidewalks*, *trails*, pathways, boardwalks, *beach access routes*, pedestrian overpasses and underpasses, exterior paths of travel to *entrances* and exits, *ramps*, *pedestrian crossings*, traffic islands, *curb ramps*, *depressed curbs* and *access aisles*. An *accessible path of travel* should be safe, unobstructed and the most direct route. See *Pedestrian Clearway* and *Sidewalk*.

**Accessible Pedestrian Signal:** A device that communicates information, through sound and vibro-*tactile* indications, that advises pedestrians who are blind, have low vision or are deaf-blind when they have the right of way to cross at a signalized *pedestrian crossing* and in which direction they may cross the intersection.

**Accessible Water Closet Stall and Enclosure:** A stall and enclosure within a multi-stall washroom that has a *water closet*, the maneuvering space for a person using a smaller *mobility device* and the required grab bars. An *accessible water closet stall and enclosure* is also known as a barrier-free *water closet* stall and enclosure and is a different space from a *universal washroom*. See *Universal Washroom*.



**Adaptable Seating:** A seat designed to facilitate a side transfer from a *mobility device*. A common example of *adaptable seating* is a removable arm rest to allow for an individual to transfer onto the seat. Alternatively, the seat can be removed and provide required *clear floor space* for a person using a *mobility device*.

**Adaptive Bicycle:** Are bikes that are modified to fit the needs of an individual rider. Adaptive bicycles may include hand-cycles, tandem bikes, four-wheeled dual recumbent, three-wheeled recumbent, recumbent foot cycle, recumbent hand-cycle, etc.

**Adult Change Table:** A raised platform located in a washroom or change room designed for use by an adult during measures of care, independently or with the assistance of others.

**Ambulatory:** Refers to a person with limited mobility who may use assistive devices such as canes, crutches and/or walkers.

**Amenity:** Item or items which provide *accessible* conveniences or services for use by the public. Examples include benches and seats, waste receptacles and recycling bins, bicycle racks, storage and lock-up areas, exterior news, post, and mailboxes, water bottle filling stations and drinking fountains, and washrooms.

**Areas of Rescue Assistance:** Is a space where persons can safely wait for rescue assistance during an evacuation. The space is indicated on the Fire Safety Plan, has a fire-rated enclosure, is equipped with separate ventilation, has direct access to an exit, and has two-way communication equipment.

**Assistive Listening Device:** There are three types of assistive listening technology: radio frequency (RF), infrared (IR), and induction loop, also known as hearing loop. Each of these uses different technology to transmit wireless sound to a personal receiver or directly to a compatible hearing aid. Assistive listening systems deliver the desired sound directly to the individual's ear without ambient background noise.

**Audible Signal:** Refers to signals which emit a distinctive sound, communication or alert to provide a warning or indicate readiness to respond.

**Barrier:** Anything that prevents a person with a disability from fully participating in all aspects of society because of their disability. Typical examples include a physical or architectural *barrier*, an information or communication *barrier*, an attitudinal *barrier*, a technological *barrier* and/or a policy or a practice *barrier*.

**Basic Renovation:** When existing interior walls, ceilings, floor or roof assemblies are maintained during construction by the reuse, relocation or extension of the same or similar materials or components of the building.

**Beach Access Route:** Refers to routes that create *accessible* connection to the water, typically by seasonal mats over sand to connect *trails* to water.

**Best Practice:** Recognized standards that exceed the minimum accessibility requirements in current legislation and *regulation* such as the Ontario Building Code and the AODA's Design of Public Spaces Standards. Examples of current *best practice* standards include: CAN/CSA B651, Accessible Design for the Built Environment, AODA Accessible Built Environment (ABES) [2010], or this document.

**Bevel:** A small slope between adjacent, non-continuous surfaces that creates a maneuverable transition at an elevation change. An elevation change up to 13 mm can be accommodated by a *bevel* at a maximum slope of 1 in 2.

**Braille:** Is a system of raised dots that persons who are blind can read with their fingers. The basis of the *braille* system is the *braille* cell. A full *braille* cell is comprised of six dots, arranged in two parallel rows of three dots. Each dot, or combination of dots, represents a letter of the alphabet, a number, or punctuation mark. Together, they can be used to express words, sentences, equations, musical notation and more. Grade 1 *Braille* is where every letter in a word is expressed in *braille* and is also known as elementary *braille*. Grade 2 *Braille* is a shorthand version of *braille* that saves space and allows for faster reading and writing.

**Cane Detectable:** An object that can be identified by a person using a long *white cane* for *wayfinding*. This can be achieved by having an object's bottom edge be mounted at or below 680 mm A.F.F. *Tactile Walking Surface Indicator* would be detectable by a person using a *white cane* for *wayfinding*. See *Tactile Walking Surface Indicator*.

**Clear Floor Space:** The minimum unobstructed level, floor or ground space required to fit a person using a *mobility device*. The *clear floor space* should be considered as a volume and should be centered on a control or an operated object. See Section: Space and Reach Range Requirements.

**Clear Ground Space:** See *Clear Floor Space*.

**Collector Roads:** Defined in the City of Toronto's Road Classification System, *collector roads* provide access to property and traffic movement, 2,500 to 8,000 vehicles per day, less than 1,500 bus (or streetcar) passenger per day, signalized intersections at arterial roads, truck restrictions permitted, cyclists – special facilities as required, *sidewalks* on both sides of the road, and medium priority for winter *maintenance*.

**Colour/Brightness Contrast:** The degree of difference between one colour and another on the colour wheel. The more visually different the colours are the greater the contrast. Brightness contrast is the difference between one object or surface and another. The greater the difference in brightness levels, the greater the contrast. *Colour/brightness contrast* assists in identifying key elements in the built environment and aids in wayfinding. *Colour/brightness contrast* of key elements in the built environment should be at least 50 percent, whereas the *colour/brightness contrast* on signs and pictograms should be at least 70 percent. *Colour/brightness contrast* is measured through light reflectance values (LRV) and comparing the adjacent colours' LRV.

- $Colour/brightness\ contrast = [(B1-B2) \times 100] / B1$
- B1: Colour One
- B2: Colour Two

**Cross Slope:** The slope measured perpendicularly to the direction of travel (opposite of *running slope*). See *Running Slope*.

**Crosswalk:** A designated portion of a roadway commonly found at an intersection or at a designated location along the road, marked by crossing signs and/or roadway surface markings such as black and white “zebra markings”. The *crosswalk* is intended for use by pedestrians to cross the roadway.

**Curb Ramp:** A *ramp* that is cut through a curb or that is built up to a curb.

**Depressed Curb:** A seamless gradual slope at transitions between *sidewalk* or walkways and roadways, and is usually found at intersections or at pick up and drop off zones.

**Dropped Curb:** The section of curb within a *curb ramp* or *depressed curb* that is level with a roadway to allow access between the roadway and *sidewalk*.

**Elevated Platform:** *Elevated platforms* include, but are not limited to, stage areas, speaker podiums, daises and other raised areas.

**Entrance:** Any access point into a building or facility used for the purposes of entering. An *entrance* includes the approach walkway, the vertical access leading to the *entrance* platform, the *entrance* platform itself, vestibules (if provided), the entry door(s) or gate(s), and the hardware of the entry door(s) or gate(s).

**Extensive Renovation:** Defined in the Ontario Building Code as when existing interior walls, ceilings, floor or roof assemblies are substantially removed and new interior walls, ceilings, floor or roof assemblies are installed.

**Exterior Public Spaces and Elements:** Are open and *accessible* to persons. They include spaces and elements such as roads, laneways, *pedestrian clearways*, paved or unpaved *trails* and paths, public squares, parks, campgrounds, play areas, and beaches. They shall comply with these guidelines as follows:

- All newly built *exterior public spaces and elements* described in Section 1 shall comply with the requirements of the Toronto Accessibility Design Guidelines.
- All existing built *exterior public spaces and elements* being altered, upgraded or replaced shall comply with the requirements of the Toronto Accessibility Design Guidelines to provide the highest level of accessibility possible, having regard for physical *barriers* and technical constraints.

**Glare:** Is a visual sensation caused by excessive light and uncontrolled brightness. Light can be from a direct source or be reflected from a surface, creating a range of responses from visual annoyance, discomfort, to visual loss.

**Gradual Transition:** Is a sloped surface that allows for better control and ease of movement for persons using *mobility devices*.

**Haptic Technology:** Is a broad term describing technologies that a user experiences through their sense of touch. See *Vibro-Tactile*.

**High-Capacity Trails:** As identified in the Toronto Multi-Use Trail Design Guidelines, *high-capacity trails* may perform any or all of the functions of primary and/or *secondary trails*, collect traffic from primary and *secondary trails*, and are *trails* that may be a destination or attraction itself.

**High-Use Area:** Refers to the pedestrian volume in an area. These areas are paths of travel that have a frequent flow of persons and are wide enough to allow at least 2 persons using *mobility devices* to pass each other. Examples include the main circulation space in a building or the path of travel to a washroom. See *Low-Use Area*.

**Lavatory:** A sink or washbasin.

**Lay-By:** An area at the side of a roadway where vehicles may pull off the road and stop.

**Local Roads:** Defined in the City of Toronto's Road Classification System, *local roads* typically provide access to property, less than 2500 vehicles per day, generally no bus routes, *sidewalks* on at least one side of road, and truck restrictions preferred.

**Low-Use Area:** Refers to the pedestrian volume of an area. These areas are paths of travel that have an occasional flow of persons and are wide enough to allow at least 1 person using a *mobility device* to easily pass. Examples include aisles in offices or the path between fixed elements or furniture pieces. See *High-Use Area*.

**Maintenance:** Activities that are intended to keep existing spaces and elements in good working order and usable.

**Major Arterial Roads:** Defined in the City of Toronto's Road Classification System, *major arterial roads* typically provide traffic movement as a primary function, subject to access controls, greater than 20,000 vehicles per day, greater than 5,000 transit passengers per day, and *sidewalks* on both sides.

**Minor Arterial Roads:** Defined in the City of Toronto's Road Classification System, *minor arterial roads* typically provide traffic movement as a primary function, some property access control, 8,000 to 20,000 vehicles per day, 1500 to 5000 transit passenger per day, no truck restrictions, and *sidewalks* on both sides.

**Mobility Device:** Refers to a range of assistive equipment used by persons with disabilities to assist with mobility. Examples include crutches, canes, manual or powered wheelchairs, scooters and walkers.

**Multi-Use Trail:** An extensive network of formal and established paths within a parkland or ravine which can be paved or have a granular surface. See *Trails*.

**Naturalized Trail:** An extensive network of informal paths within a parkland or ravine which is typically made up of a dirt surface. See *Trails*.

**Off-Street Parking:** Includes open area parking lots and structures intended for the temporary parking of vehicles by the public, whether or not the payment of a fee is charged and includes visitor parking spaces in parking facilities. See *On-Street Parking*.

**On-Street Parking:** Designated vehicle spaces located on a roadway, within the City's right-of-way. *On-street parking* is intended for the temporary parking of vehicles by the public. See *Off-Street Parking*.

**Operable Portion or Control:** A part used to insert or withdraw objects, or to activate, deactivate, or adjust the equipment or appliance (for example coin slot, push button, handle).

**Passenger Loading Zone:** See *Passenger Pick-Up and Drop-Off (PPUDO)*.

**Passive Play:** *Passive play* provides a sensory or non-interactive play experience at play spaces. For example, a passive lawn area located away from the activity zone for rest and quiet play should be provided at play spaces.

**Pedestrian Clearway:** The zone on the *sidewalk* that is dedicated for pedestrian travel. The *pedestrian clearway* should be clear, straight and unobstructed. The *pedestrian clearway* is the most important zone on a *sidewalk*. See *Sidewalk*.

***Pedestrian Crossing:*** The area across a roadway where it is intended for pedestrians to cross. A *pedestrian crossing* can be a controlled crossing, where pedestrians have the right-of-way, or an uncontrolled crossing, where pedestrians do not have the right-of-way and must wait for a sufficient gap in traffic in order to cross.

***Passenger Pick-Up and Drop-Off (PPUDO):*** Areas of a roadway or driveway that is a designated area and sometimes signed areas for a vehicle to safely stop for a limited amount of time and allow persons to board and disembark from the vehicle. This area allows for ease of access into the building and is designed with a *dropped curb* to allow persons using a *mobility device* to access the path of travel.

***Pool Lift:*** A device, fixed or non-fixed, that includes a seat where a person may sit and be lifted into the pool. A transfer space must be provided.

***Power Door Operator (PDO):*** A mechanism consisting of wireless push plate actuator switch which controls a surface-applied electromechanical operator that allows the door be opened mechanically rather than by a person pushing or pulling the door.

***Primary Trails:*** As identified in the Toronto Multi-Use Trail Design Guidelines, *primary trails* are local connections and feeder or tributary routes.

***Public Pool:*** Defined in the Ontario Building Code as a structure, basin, chamber or tank containing or intended to contain an artificial body of water for swimming, water sport, water recreation or entertainment, but does not include *wading pools*, hydro-massage pools or pools that serve only as receiving basins for persons at the bottom of water slides. See *Wading Pools*.

***Public Spa:*** Defined in the Ontario Building Code as a hydro-massage pool, commonly referred to as a “hot tub”, that contains an artificial body of water, that is intended primarily for therapeutic or recreation use, that is not drained, cleaned or refilled before use by each individual and that utilizes hydro-jet circulation, air induction bubbles, current flow or a combination of them over the majority of the pool area, but does not include *wading pools*. See *Wading Pools*.

***Queuing Area:*** A waiting line for a sequence of persons or vehicles awaiting their turn to be attended to or to proceed.

***Ramp:*** A sloped surface or inclined plane that provides an *accessible* connection between changes in ground elevation. The *ramp* includes all elements and features necessary to provide an *accessible path of travel* as described in this guideline.

***Recreational Trail:*** See *Trails*.

***Regulation:*** A directive, rule or law made and maintained by an authority, such as a government conduct.

***Replacement:*** Construction, modification or material alteration of a building element.

**Rest Area:** A dedicated level and clear area that is intended to allow persons to stop or sit along an exterior or interior *accessible path of travel*. This area may include a bench or seating that must not impede into the minimum required space. In an exterior setting, such as a *trail*, a *rest area* can also be applied as a 'Viewing Area'.

**Running Slope:** A slope that is parallel to the direction of travel. See *Cross Slope*.

**Secondary Trails:** As identified in the Toronto Multi-Use Trail Design Guidelines, *secondary trails* connect different parts of the city, collect traffic from *secondary trails*, and connect with other *primary trails*.

**Service Animal:** A *service animal* may be a guide dog, signal dog or other animal individually trained to provide assistance to an individual with a disability. Animals may be considered *service animals* regardless of whether they have been licensed or certified by a school or training facility. Guide dogs are one type of *service animal* (covered by Ontario Service Dog Act, Blind Persons Rights Act), used by some persons who are blind or have low vision. There are *service animals* that assist persons with other kinds of disabilities in their day-to-day activities. Some examples include alerting persons who are hard of hearing to sounds; pulling wheelchairs or carrying and picking up things for persons with limited mobility; assisting persons with limited mobility with balance; and detecting and alerting persons of oncoming seizures.

**Service Room:** Defined in the Ontario Building Code as a space provided in a building to contain equipment associated with building services.

**Service Space:** Defined in the Ontario Building Code as a space provided in a building to facilitate or conceal the installation of building service facilities such as chutes, ducts, pipes, shafts or wires.

**Sidewalk:** Refers to the paved area, typically constructed parallel to roadways, that allows for pedestrian travel. In an urban context, *sidewalks* also provide space for café patios, street trees, *street furniture* and other items. The portion dedicated to pedestrian travel is referred to as the *Pedestrian Clearway*. See *Pedestrian Clearway*.

**Signage:** Is one component of *wayfinding* and is a means of communicating information about the built environment and can include printed and raised text, *braille* and pictograms. Where overhead *signage* is used, raised text and *Braille* are typically not used. Digital *signage* or electronic *signage* use technologies to display digital information.

**Site Constraint:** An existing major physical element prohibiting the necessary modification or addition of elements, spaces or features for compliance with the Toronto Accessibility Design Guidelines.

**Splash Pad:** A water play area typically located in parks, parkettes and play spaces. They often include engaging water features for children such as shower heads and spray jets.

**Street Furniture:** A variety of elements and *amenities* installed in the public right-of-way for use by and convenience of the public. Examples include, but are not limited to, transit shelters, benches, litter / recycling receptacles, bicycle parking, publication structures, information / *wayfinding* pillars, and poster kiosks.

**Tactile:** Describes an object or element that can be perceived using the sense of touch.

**Tactile Attention Indicator:** Shaped as truncated domes, which communicate an upcoming hazard or decision making point.

**Tactile Direction Indicator:** Parallel flat-top elongated bars, which communicate a suggested path of travel and act as a tool to help with wayfinding.

**Tactile Walking Surface Indicators (TWSI):** A standardized floor or ground surface feature built into or applied to walking surfaces that can be detected by a long *white cane* used by persons with low or no vision with *wayfinding* in the built environment. There are two types of *TWSI* that are recognized by ISO 23599; they are *tactile attention indicator*, and *tactile direction indicator*.

**Technically Infeasible:** Refers to the renovation or *replacement* of a building element that cannot meet the requirements of the City of Toronto Accessibility Design Guidelines (TADG), and where a suitable Renovation Compliance Alternative, noted in Appendix B, cannot be applied based on existing structural conditions that would require altering parts of the structural frame, such as a load-bearing member; and/or other existing major physical or *site constraint* prohibiting the necessary modification or addition of elements, spaces or features for compliance with TADG.

**Textural Nosing Strip:** A distinct surface located at the edge of a stair tread or at the nosing, that is textured and colour contrasted from the stair tread, intended to visually identify the edge of each stair tread.

**Text Telephone (TTY):** Machinery or equipment that uses text-based communication through the transmission of coded signals across the standard telephone network. *Text telephones* can include, for example, devices known as TDD's (telecommunication devices for persons who are deaf, deafened or hard of hearing) or computers with special modems. *Text telephones* are also called *TTY*, an abbreviation for teletypewriter.

**Trail:** A path found within a more natural area, parkland or ravine system that is not a *sidewalk* or *pedestrian clearway*. These are often considered *recreational trails* can be divided into two types.

**Transfer Wall:** Provides an *accessible* means of entry into and egress from a *public spa* (hot tub). The wall allows a person using a *mobility device* to make a horizontal transfer from their seat to the top surface of the *transfer wall* and directly access the water on the other side of the wall.



**TTY:** Teletypewriter. See *Text Telephone*.

**Type A Parking Space:** A wider parking space and *signage* that identifies the space as “Van Accessible”. See *Accessible Parking Space*.

**Type B Parking Space:** A standard *accessible parking space*. See *Accessible Parking Space*.

**Universal Change Rooms:** Combine the function of *universal washrooms* and *accessible showers* into a single room to provide additional privacy and space when compared to *accessible change room facilities*.

**Universal Design:** Is the design of products and environments to be usable by all persons, to the greatest extent possible, without the need for adaptation or specialized design.

**Universal Washroom:** A single occupancy washroom that is all gender and provides the space for a person using a larger *mobility device*, an *adult change table* and an attendant to assist a user when required, and an emergency call system. See *Accessible Water Closet Stall and Enclosure*.

**Vibro-Tactile:** Also known as *haptic technology*, kinaesthetic communication or 3D touch, referring to any technology that can create an experience of touch by applying forces, vibrations, or motions to the user. Haptic devices incorporate *tactile* sensors that measure forces exerted by the user on the interface. See *Haptic Technology*.

**Wading Pool:** A shallow pool that contains an artificial body of water, that is intended primarily for children to paddle in. See *Public Pools and Public Spas*.

**Water Closet:** A toilet. See *Accessible Water Closet Stall and Enclosure*, and *Universal Washroom*.

**Wayfinding:** Uses cognitive and perceptual information to reach a destination. A spatial problem-solving process based upon consistent use and organization of definite sensory cues in the environment that persons use to understand where they are, know where their desired location is, and know how to get to that destination from their present location.

**White Cane:** *White cane*, or long *white cane*, is a device that helps persons with low or no vision stay safe and feel more comfortable when *wayfinding* independently.



# Space and Reach Ranges

Contents in Section

**Space and Reach Range Dimensions**

## Space and Reach Range Dimensions

The following dimensions and diagrams represent general dimensions to assist in the planning stages of construction projects.

### Clear Turning Space

A clear turning space that is 2500 mm minimum in diameter is recognized as the dimension that would accommodate 95% of *mobility devices* used in North America. For clear turning space requirements specific to the various building elements, refer to the appropriate part in the ‘Design Guidelines’ section, [Figure 1 - Clear Turning Space](#).

### Clear Floor Spaces

A *clear floor space* that is 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach is recognized as the universal *mobility device* size that would accommodate 95% of *mobility devices* utilized in North America. Unless otherwise specified, a *clear floor space* must be provided in areas that require access to wall-mounted controls, *power door operators*, *tactile signage*, service counters, workstations, or under any table tops, and under *lavatories*, sinks or drinking fountains. For *clear floor space* requirements specific to the various building elements, refer to the appropriate part in the ‘Design Guidelines’ section, [Figure 2 - Clear Floor Space](#).

### Reach Range

A general reach range requires an object to be mounted between 460 mm to 1050 mm *A.F.F.* For requirements specific to various building elements, refer to the appropriate part in the ‘Design Guidelines’ section, [Figure 2 - Clear Floor Space](#).

### Clear Floor Space for a Front Approach

A front approach is typically favoured over a side approach. In instances where a front approach is provided at a counter, up to 500 mm can be located under the counter, [Figure 4 - Clear Floor Space for a Front Approach](#).

### Reach Range to Touch

A reach range to an object or item should be between 460 mm and 1050 mm *A.F.F.* Where there is an obstruction, such as the top surface of an object or item, that is between 860 mm to 1050 mm, a reach range to touch of 600 mm maximum deep should be provided to allow for a front and side approach, [Figure 5 - Reach Range to Touch](#).

### Clear Floor Space for a Side Approach

A side approach enables a *mobility device* to be positioned parallel to an object or an item and should provide a *clear floor space* of 900 mm by 2200 mm, [Figure 6 - Clear Floor Space for a Side Approach](#).

### Reach Range to Grasp

A reach range to an object or item should be between 460 mm and 1050 mm *A.F.F.* Where there is an obstruction, such as the top surface of an object or item, that is between 860 mm to 1050 mm, a reach range to grasp of 500 mm maximum deep should be provided to allow for a front and side approach, [Figure 7 - Reach Range to Grasp](#).

### Knee and Toe Space for a Front Approach

Knee and toe space for a front approach should be provided at service counters, workstations, or under any table tops, etc. that is 735 mm minimum high *A.F.F.* at the front edge, 500 mm minimum deep, and 900 mm minimum wide, [Figure 8 - Knee and Toe Space for a Front Approach](#).

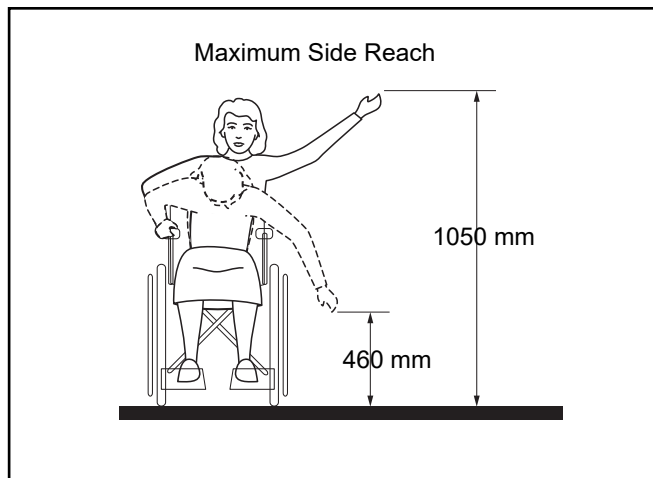


Figure 3 - Reach Range

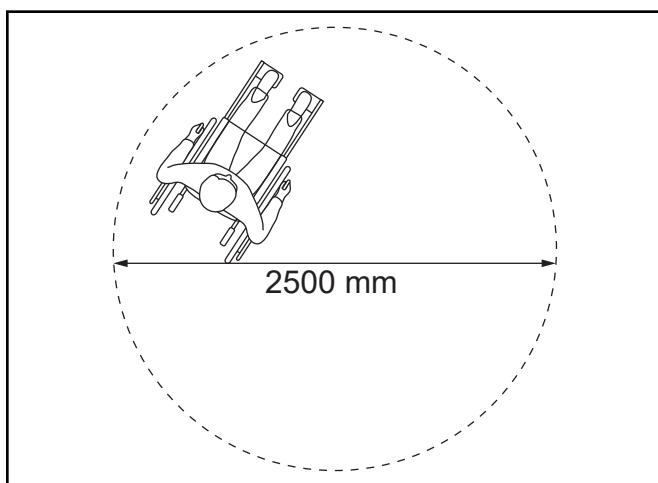


Figure 1 - Clear Turning Space

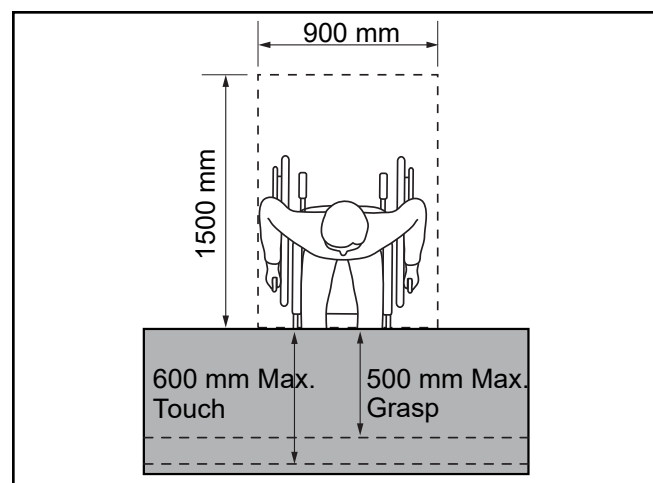


Figure 4 - Clear Floor Space for a Front Approach

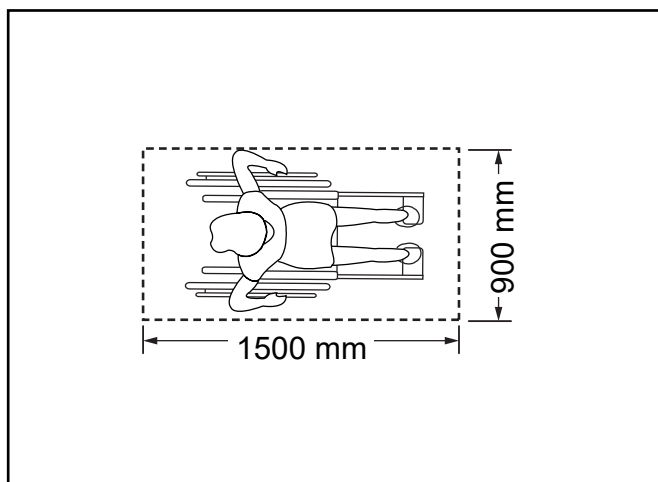


Figure 2 - Clear Floor Space

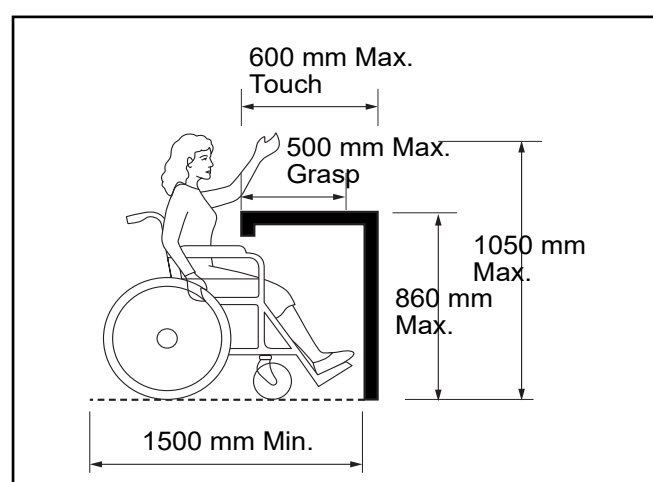


Figure 5 - Reach Range to Touch

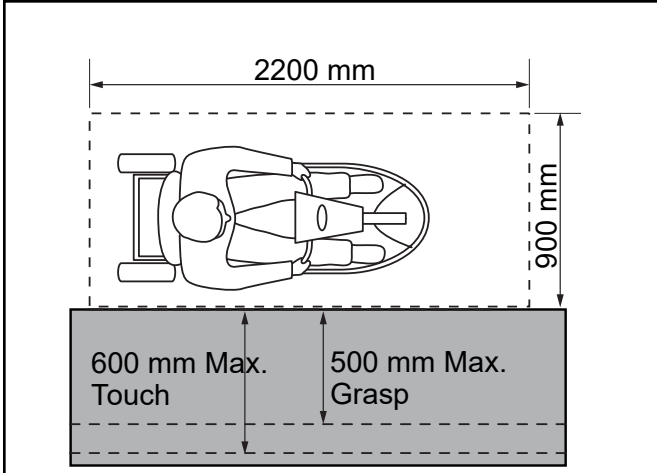


Figure 6 - Clear Floor Space for a Side Approach

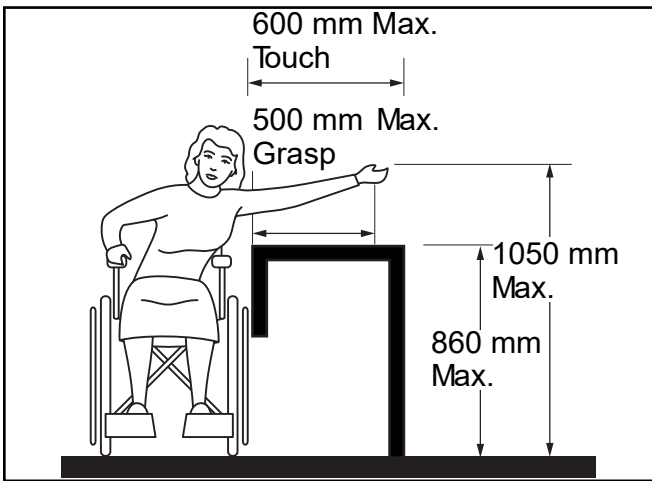


Figure 7 - Reach Range to Grasp

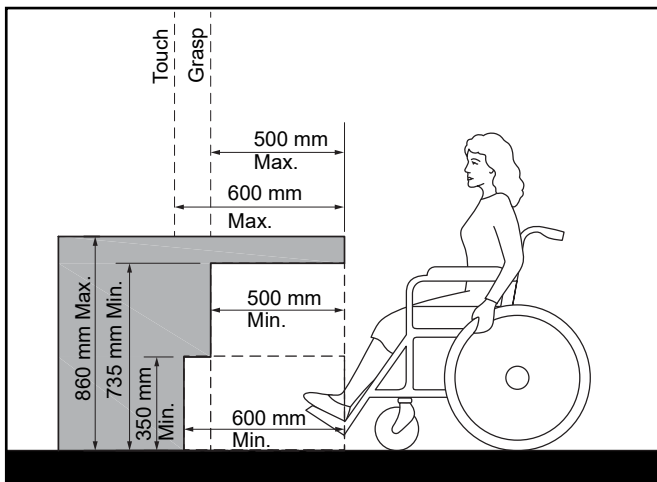


Figure 8 - Knee and Toe Space for a Front Approach

# Exterior

# 1





# 1.1. Exterior Paths of Travel

## Section Summary

This section reviews the *accessible* design requirements for exterior paths of travel intended for use by the public and City staff. Within an urban context, a *pedestrian clearway*, the portion of a *sidewalk* dedicated to pedestrian travel, exterior paths of travel to *entrances* and exits, and *ramps* should provide exterior *accessible paths of travel*. Outside of the urban context, exterior *accessible paths of travel* should be provided on *trails*, pathways, boardwalks, *beach access routes*, and bridges with underpasses.

## Contents in Section

- 1.1.1. Exterior Accessible Paths of Travel**
- 1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes**
- 1.1.3. Pedestrian Overpasses and Underpasses**
- 1.1.4. Exterior Paths of Travel to Entrances and Exits**
- 1.1.5. Rest Areas**
- 1.1.6. Grade and Elevation Changes**
- 1.1.7. Handrails**
- 1.1.8. Guards**
- 1.1.9. Exterior Ramps**
- 1.1.10. Exterior Stairs**
- 1.1.11. Obstructions, Protrusions and Overhead Objects**
- 1.1.12. Safety and Security**

## 1.1.1. Exterior Accessible Paths of Travel

### Rationale

Exterior *accessible paths of travel* should provide a continuous, unobstructed route providing exterior access to elements and spaces. It is important to assess the intended users of a space in order to implement adequate space to ensure the highest level of access is provided.

### Application

The scope of this section applies to *pedestrian clearways*, including *sidewalks*.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”

### Related References

- [Accessible Streets](#)
- [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#)
- [Complete Streets Guidelines](#)
- [Construction Specifications and Drawings for Road Works](#)
- [Pavement Design and Rehabilitation Guidelines](#)
- [Streetscape Manual](#)
- [T-310.010-10 Pedestrian Clearway Widths on Sidewalks](#)
- [Toronto Multi-Use Trail Design Guidelines](#)

### Key Considerations

#### Clear Widths

The clear width of exterior *accessible paths of travel* should be free from obstacles such as temporary or permanent obstructions, protrusions and overhead objects. *High-use*, exterior *accessible paths of travel* should at minimum provide clear widths to allow for the simultaneous passage of two persons using *mobility devices*. *Low-use*, exterior *accessible paths of travel* should at minimum provide clear widths to allow for the passage of one person using a *mobility device*.

#### Slopes

Where slopes are provided at *pedestrian clearways*, they should be designed to have a *gradual transition* as they allow for better control and ease of movement for persons using *mobility devices*.

## Surfaces

A level and smooth ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling. Where gratings and grilles are provided, the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

## Requirements

### (1) Clear Widths:

Exterior *accessible paths of travel* should provide a clear width, “Figure 1.1.1-A Clear Widths”, that:

- (a) Is 2100 mm minimum, for *local roads*, “[R-1.1.1. (1)(a)]”, but can be reduced to 1800 mm minimum on roads with low pedestrian volumes and low vehicle speeds and volumes;
- (b) Is 2100 mm minimum for *collector roads, minor arterial roads and major arterial roads*, “[R-1.1.1. (1)(b)]”; and
- (c) Is clear from obstructions, protrusions and overhead objects that meet the criteria in section “1.1.11. Obstructions, Protrusions and Overhead Objects”.

### (2) Slopes:

Where slopes are provided at exterior *accessible paths of travel*, “Figure 1.1.1-B Slopes” and “Figure 1.1.1-D Maximum Cross Slope Gradient”, they should have:

- (a) A 1:20 (5%) maximum *running slope*:
  - (i) Where the exterior path of travel is a *sidewalk*, it can have a *slope* of greater than 1:20 (5%), but it cannot be steeper than the *slope* of the adjacent roadway; and
- (b) A 1:50 (2%) typical *cross slope*:
  - (i) Where a typical *cross slope* of 1:50 (2%) cannot be achieved due to limiting site specific physical constraints, a *cross slope* of no greater than 1:25 (4%) is permitted, provided the extent for which this occurs is minimized as much as possible along the path of travel.

### (3) Surfaces:

Exterior *accessible paths of travel* should provide surfaces, “Figure 1.1.1-C Maximum Opening at Grates”, that:

- (a) Are level, firm, stable, slip-resistant and smooth; and
- (b) Have openings that:
  - (i) Are located outside of an *accessible path of travel*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and
  - (iv) Do not allow passage of an object that has a diameter greater than 13 mm.

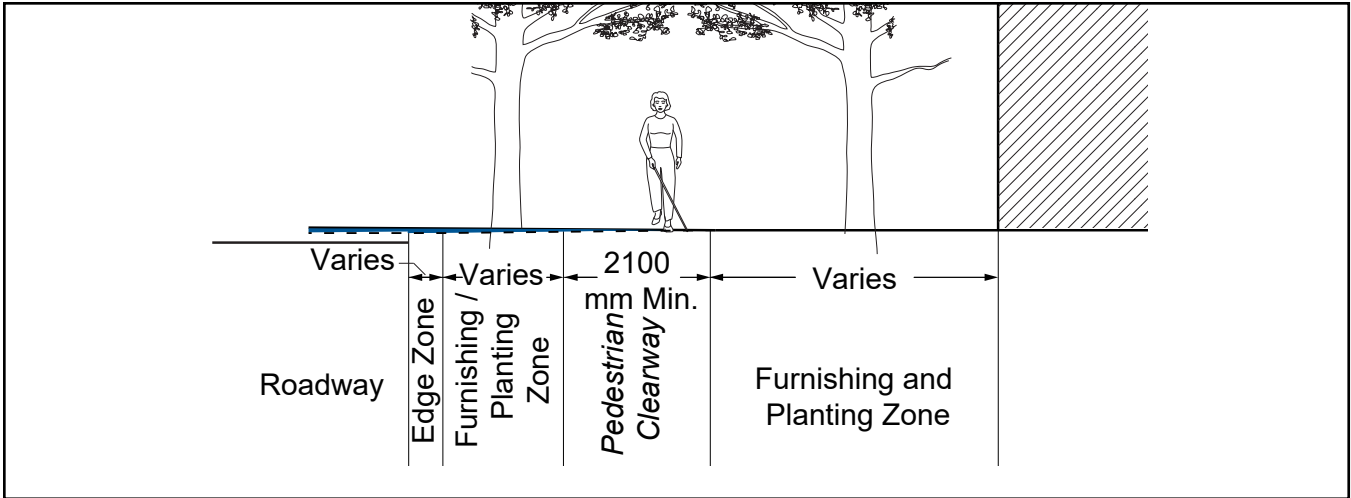


Figure 1.1.1-A Clear Widths

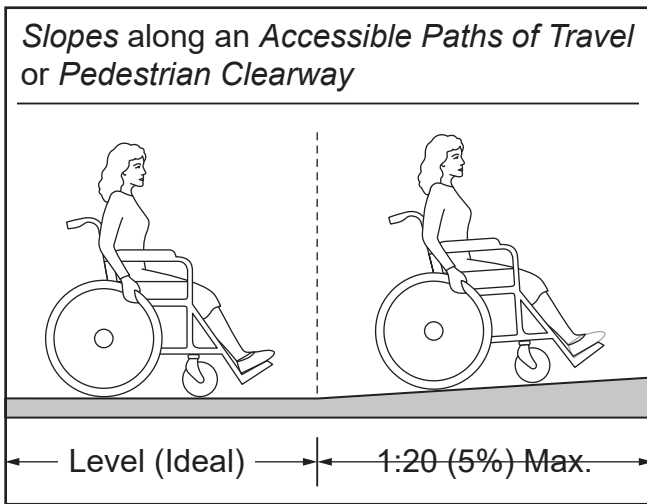


Figure 1.1.1-B Slopes

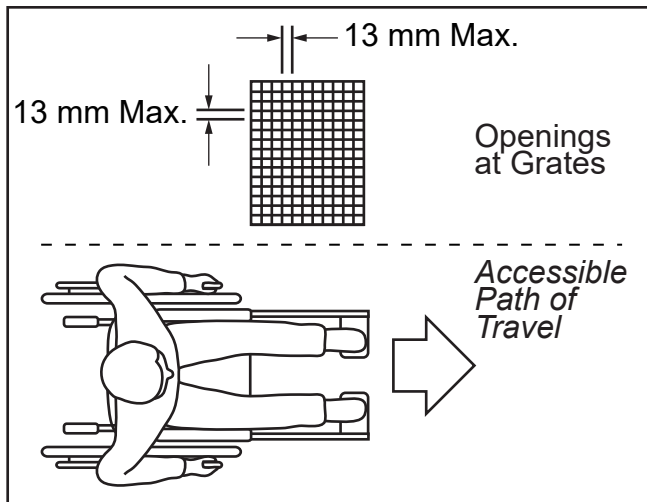


Figure 1.1.1-C Maximum Opening at Grates

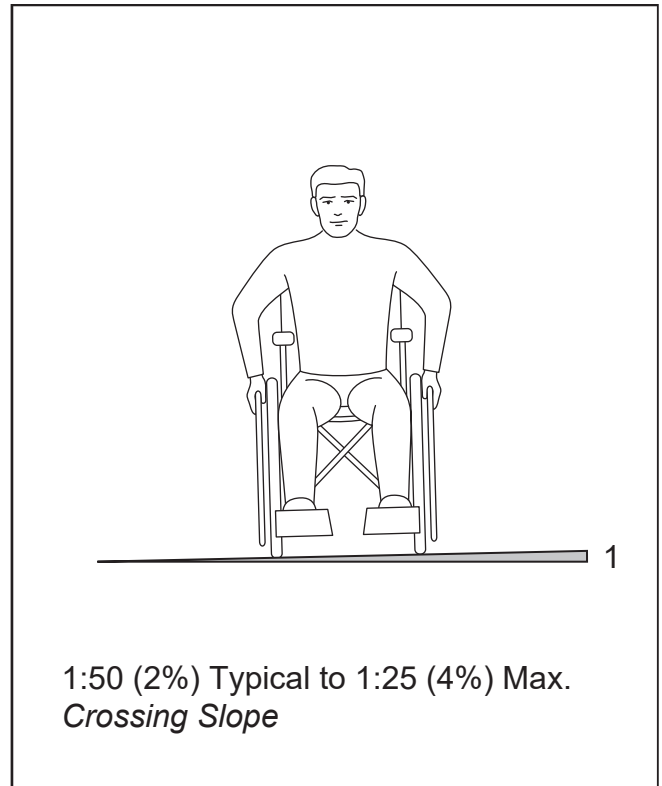


Figure 1.1.1-D Maximum Cross Slope Gradient

## 1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes

### Rationale

*Trails*, pathways, boardwalks, and *beach access routes* are an extension of exterior paths of travel and should provide an exterior *accessible path of travel*. *Trails* and pathways are the routes provided in a naturalized built environment.

Boardwalks are raised structures to provide a dry path for individuals in areas where water or wet soil are typical. *Beach access routes* provide an ease of movement to the water typically in the form of seasonal mats over sand.

### Application

The scope of this section applies to areas such as *multi-use trails*, including *primary*, *secondary*, and *high-capacity trails*, as well as park pathways, boardwalks and *beach access routes*. This section does not apply to areas designated and protected under Heritage and Cultural Acts; where the requirements would adversely affect the natural environment; and where physical conditions or *site constraints* prohibit redevelopment to achieve the requirements of this section where noted.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.5. Rest Areas”
- “1.1.6. Grade and Elevation Changes”
- “1.1.7. Handrails”
- “1.1.8. Guards”
- “1.6.3. Tactile Direction Indicators”
- “3.2.1. Signage and Wayfinding Systems”

### Related References

- [A Guide to the Integrated Accessibility Standards Regulation](#)
- [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#)
- [Complete Streets Guidelines](#)
- [Natural Environment Trail Strategy](#)
- [Ontario Trails Strategy](#)
- [Streetscape Manual](#)
- [Toronto Multi-Use Trail Design Guidelines](#)

### Key Considerations

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at *trails*, pathways, boardwalks and *beach access routes* to allow for a continuous, unobstructed route providing exterior access to elements and spaces. Designers should consider the criteria in the Toronto Multi-Use Trail Design Guidelines when designing *primary*, *secondary*, and *high-capacity trails*, and provide the highest level of accessibility.

### Slopes

Where slopes are provided at *trails*, pathways, boardwalks, and *beach access routes*, they should be designed to have a *gradual transition* as they allow for better control and ease of movement for persons using *mobility devices*.

### Surfaces

A level and smooth ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling. Where gratings and grilles are provided, the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

### Edge Protection

Edge protection should be provided at *trails*, pathways, boardwalks, and *beach access routes* when adjacent to water or a drop-off to prevent individuals, including persons using *mobility devices*, from slipping or rolling over the edge of an exterior path of travel. Edge protection can provide a means of *wayfinding* for persons with low or no vision using a *white cane*. In some naturalized built environments, edge protection can create *barriers* or allow water to pool, so each condition should be carefully assessed.

### Signage

*Signage* should be provided at all points of entry to *trails*, pathways, boardwalks, and *beach access routes*. *Signage* allows the public to decide whether the conditions are appropriate for their use and to familiarize themselves with expected features along an exterior path of travel.

### Consultation

Consultation on *recreational trails* and *beach access routes* with the public, including persons with disabilities, and the municipal Accessibility Advisory Committee (AAC) should be provided where an organization is required to have one under the Design of Public Spaces Standards.

### Requirements

#### (1) Accessible Path of Travel:

*Trails*, pathways, boardwalks, and *beach access routes* should provide an exterior *accessible path of travel* that:

- (a) Has a clear width, “[R-1.1.2. (1)(a)]”, “Figure 1.1.2-A Clear Width and Use at Natural Trails”, that:
  - (i) Is 3000 mm minimum at *primary trails*;
  - (ii) Is 2700 mm minimum at *secondary trails*;
  - (iii) Is 3600 mm minimum at *high-capacity trails*; and
  - (iv) Meets the criteria in “Table 1.1.2-A Clear Width and Use”;
- (b) Has an overhead clearance that is 3000 mm minimum; and
- (c) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”.

Table 1.1.2-A Clear Width and Use

Clear Width Dimension	Anticipated Use
2100 mm minimum	Only Pedestrians
3000 mm minimum	Pedestrians and Cyclists
3600 mm minimum	Pedestrians, Cyclists and <i>Maintenance Vehicles</i>

**(2) Slopes:**

Where slopes are provided at *trails*, pathways, boardwalks, and *beach access routes*, they should have:

- (a) A 1:20 (5%) maximum *running slope*; and
- (b) A 1:50 (2%) typical *cross slope*:
  - (i) Where a typical *cross slope* of 1:50 (2%) cannot be achieved due to limiting site specific physical constraints, a *cross slope* of no greater than 1:25 (4%) is permitted, provided the extent for which this occurs is minimized as much as possible along the path of travel.

**(3) Surfaces:**

*Trails*, pathways, boardwalks, and *beach access routes* should provide surfaces that:

- (a) Are level, firm, stable and slip-resistant;
- (b) Have openings that:
  - (i) Are located outside of an *accessible path of travel*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and

- (iv) Do not allow passage of an object that has a diameter of 13 mm maximum; and

- (c) Have *colour/brightness contrast* at:
  - (i) Transition points immediately before a footbridge; and
  - (ii) Intersections between *primary and secondary trails*, except for at natural or granular surface *trails* where there may be adverse effects on the natural environment.

**(4) Edge Protection:**

*Trails*, pathways, boardwalks, and *beach access routes* should provide edge protection that:

- (a) Has a 75 mm minimum curb, without impeding drainage; and
- (b) Has *colour/brightness contrast*.

**(5) Signage:**

*Trails*, pathways, boardwalks, and *beach access routes* should provide *signage*, “Figure 1.1.2-B Path at Signage”, that:

- (a) Is located periodically along an exterior path of travel;
- (b) Has a minimum of one *tactile* map located at the beginning of the *trail* head, that communicates:
  - (i) The length of the *trail*/route;
  - (ii) The type of surface material(s);
  - (iii) The average and the minimum clear width;
  - (iv) The average and maximum *running slope* and *cross slope*;
  - (v) The location of *amenities*; and
  - (vi) Safety and security information;

## 1.1. Exterior Paths of Travel

### 1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes

- (c) Is *cane detectable*, or where *tactile direction indicators* are provided, meet the criteria in section “[1.6.3. Tactile Direction Indicators](#)”; and
- (d) Meets the criteria in section “[3.2.1. Signage and Wayfinding Systems](#)”.

#### **(6) Consultation:**

Consultation on *recreational trails* and *beach access routes* should:

- (a) Be provided for:
  - (i) The slope of the *trail*;
  - (ii) The need for, and location of, *ramps* on the *trail*; and
  - (iii) The need for, location and design of *rest areas*; passing areas; *viewing areas*; *amenities* on the *trail*; and any other pertinent feature; and
- (b) Meet the requirements in the [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#).



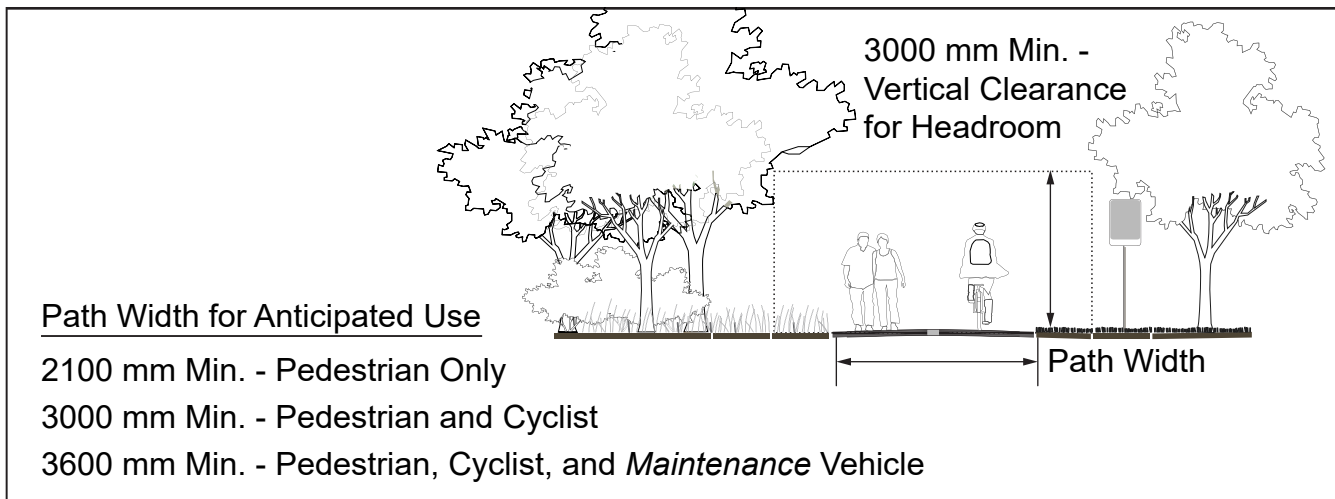


Figure 1.1.2-A Clear Width and Use at Natural Trails

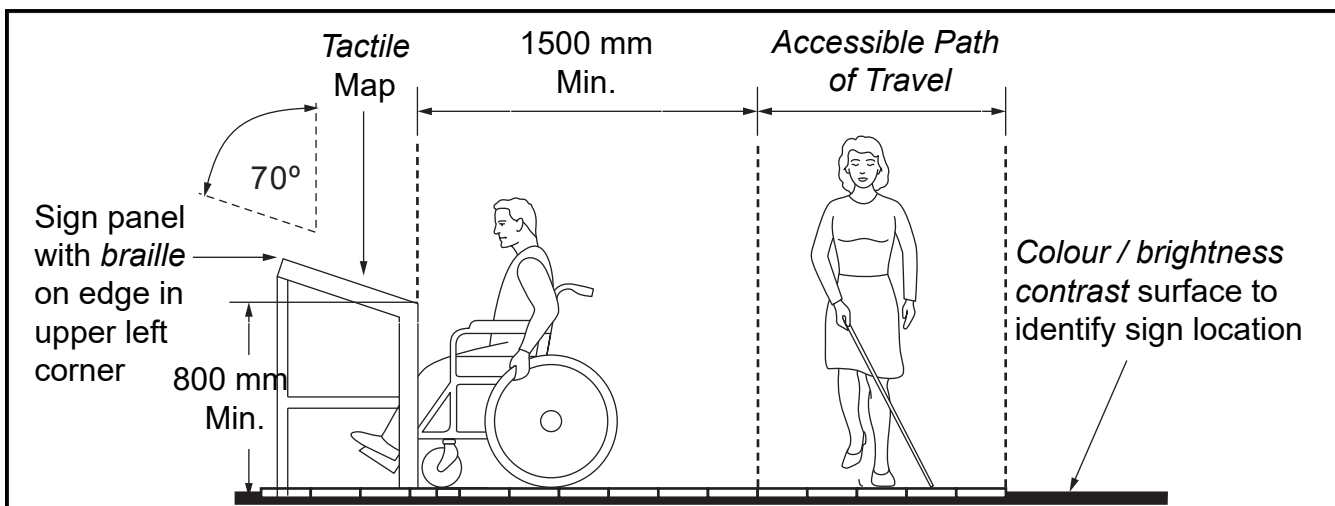


Figure 1.1.2-B Path at Signage

## 1.1.3. Pedestrian Overpasses and Underpasses

### Rationale

Pedestrian overpasses and underpasses are an extension of exterior paths of travel and are intended to provide a dedicated *accessible path of travel* above or below vehicle traffic.

### Application

The scope of this section applies to pedestrian overpasses and underpasses that allow for a continuous, unobstructed route for pedestrians that is separate from vehicle traffic.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.6. Grade and Elevation Changes”
- “1.1.7. Handrails”
- “1.1.8. Guards”

### Related References

- [Construction Specifications and Drawings for Road Works](#)
- [T-900.200 Pedestrian Bridge](#)
- [Toronto Multi-Use Trail Design Guidelines](#)

### Key Considerations

#### Design

Pedestrian overpasses and underpasses should be designed to provide an exterior *accessible path of travel* to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

### Requirements

#### (1) Design:

Pedestrian overpasses and underpasses should be designed to:

- Have *ramp running slopes* that are 1:15 (6.67%) maximum / 1:20 (5%) default;
- Have landings that have *cross slopes* that are 1:50 (2%) maximum;
- Have switch-back landings turning-radii that are 2350 mm minimum;
- Have bridge deck clearway width as per [City of Toronto Multi-Use Trail Guidelines](#):

- (i) *Ramps* unobstructed clearway that is 3000 mm minimum (between handrails); and
  - (ii) *Ramps/deck* overhead clearway that is 2700 mm minimum;
- (e) Have walking surfaces that are firm and slip-resistant (and preferred surface is bare concrete); and
- (f) Meet the criteria in [T-900.200 Pedestrian Bridge](#).

## 1.1.4. Exterior Paths of Travel to Entrances and Exits

### Rationale

Exterior paths of travel to *entrances* and exits should provide an exterior *accessible path of travel*. In the event of an emergency, the public including persons using *mobility devices* should be provided with independent, equitable and dignified entry and egress opportunities.

### Application

The scope of this section applies to the area within a building's property line, such as pedestrian walkways and promenades leading to the building from the public right of way.



### Related Sections

- "1.1.1. Exterior Accessible Paths of Travel"
- "1.1.5. Rest Areas"

### Related References

- [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)

### Key Considerations

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at exterior paths of travel to *entrances* and exits to allow for a continuous, unobstructed route providing exterior access to elements and spaces, such as the area within a building's property line and into the building.

#### Slopes

Where slopes are provided at exterior paths of travel to *entrances* and exits, they should be designed to have a *gradual transition* as they allow for better control and ease of movement for persons using *mobility devices*.

#### Surfaces

A level and smooth ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling.

Where gratings and grilles are provided, the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

### Rest Areas

*Rest areas* should be provided along exterior paths of travel to *entrances* and exits to create space for the public to safely rest or wait, enjoy their surrounding environment or regain their strength to continue moving along an exterior path of travel.

### Requirements

#### (1) Accessible Paths of Travel:

Exterior paths of travel to *entrances* and exits should provide an exterior *accessible path of travel* that:

- (a) Has a clear width that is 2100 mm minimum; and
- (b) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”.

#### (2) Slopes:

Where slopes are provided at exterior paths of travel to *entrances* and exits, they should have:

- (a) A 1:20 (5%) maximum *running slope*, “[R-1.1.4. (2)(a)]”; and
- (b) A 1:50 (2%) typical *cross slope*:
  - (i) Where a typical *cross slope* of 1:50 (2%) cannot be achieved due to limiting site specific physical constraints, a *cross slope* of no greater than 1:25 (4%) is permitted, provided the extent for which this occurs is minimized as much as possible along the path of travel.

#### (3) Surfaces:

Exterior paths of travel to *entrances* and exits should provide surfaces that:

- (a) Are level, firm, stable and slip-resistant; and
- (b) Have openings that:
  - (i) Are located outside of an exterior *accessible path of travel*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and
  - (iv) Do not allow passage of an object that has a diameter of 13 mm maximum.

#### (4) Rest Areas:

Exterior paths of travel to *entrances* and exits should provide *rest areas* that:

- (a) Are located at 30 metre intervals, where the exterior path of travel to *entrances* and exits is greater than 30 meters; and
- (b) Meet the criteria in section “1.1.5. Rest Areas”.

## 1.1.5. Rest Areas

### Rationale

*Rest areas (and/or viewing areas)* create space for the public to safely rest or wait, enjoy their surrounding environment or regain their strength to continue moving along an exterior path of travel. *Rest areas* should be connected to an exterior *accessible path of travel* and be placed consistently to ensure that the public, especially persons using *mobility devices* and persons with low stamina, can feel safe and reassured that a *rest area* is approaching.



### Related Section

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes”
- “1.1.4. Exterior Paths of Travel to Entrances and Exits”
- “1.5.1. Benches and Seats”

### Related References

- [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#)
- [Toronto Multi-Use Trail Design Guidelines](#)

### Key Considerations

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at *rest areas* to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

#### Design

The design of *rest areas* should provide a dedicated level and clear area that includes a *clear ground space* and a bench or seat.

#### Consultation

Consultation on *rest areas* with the public, including persons with disabilities, and the municipal Accessibility Advisory Committee (AAC) should be provided where an organization is required to have one under the Design of Public Spaces Standards.

## Requirements

### (1) Accessible Path of Travel:

*Rest areas* should provide an exterior *accessible path of travel* that:

- (a) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”.

### (2) Design:

*Rest areas*, “Figure 1.1.5-A Rest Areas” and “Figure 1.1.5-B Accessible Paths of Travel and Rest Area”, should be designed to have:

- (a) A dedicated level and clear space that is 1800 mm by 1800 mm minimum that includes:
  - (i) A *clear ground space*, adjacent to the bench, that is 900 mm by 1500 mm for front approach; and
  - (ii) A minimum of one bench or seat that meets the criteria in section “1.5.1. Benches and Seats”;
- (b) Clear sight lines to the exterior path of travel and the surrounding environment;
- (c) *Colour/brightness contrast* from the exterior path of travel and the surrounding environment; and
- (d) Where provided, shelters for weather protection that:
  - (i) Have an overhead clearance that is 3000 mm minimum; and
  - (ii) Are located above benches and seats.

### (3) Consultation:

Consultation on the design and placement of *rest areas* along the exterior path of travel should be provided that:

- (a) Meets the requirements in the [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#).

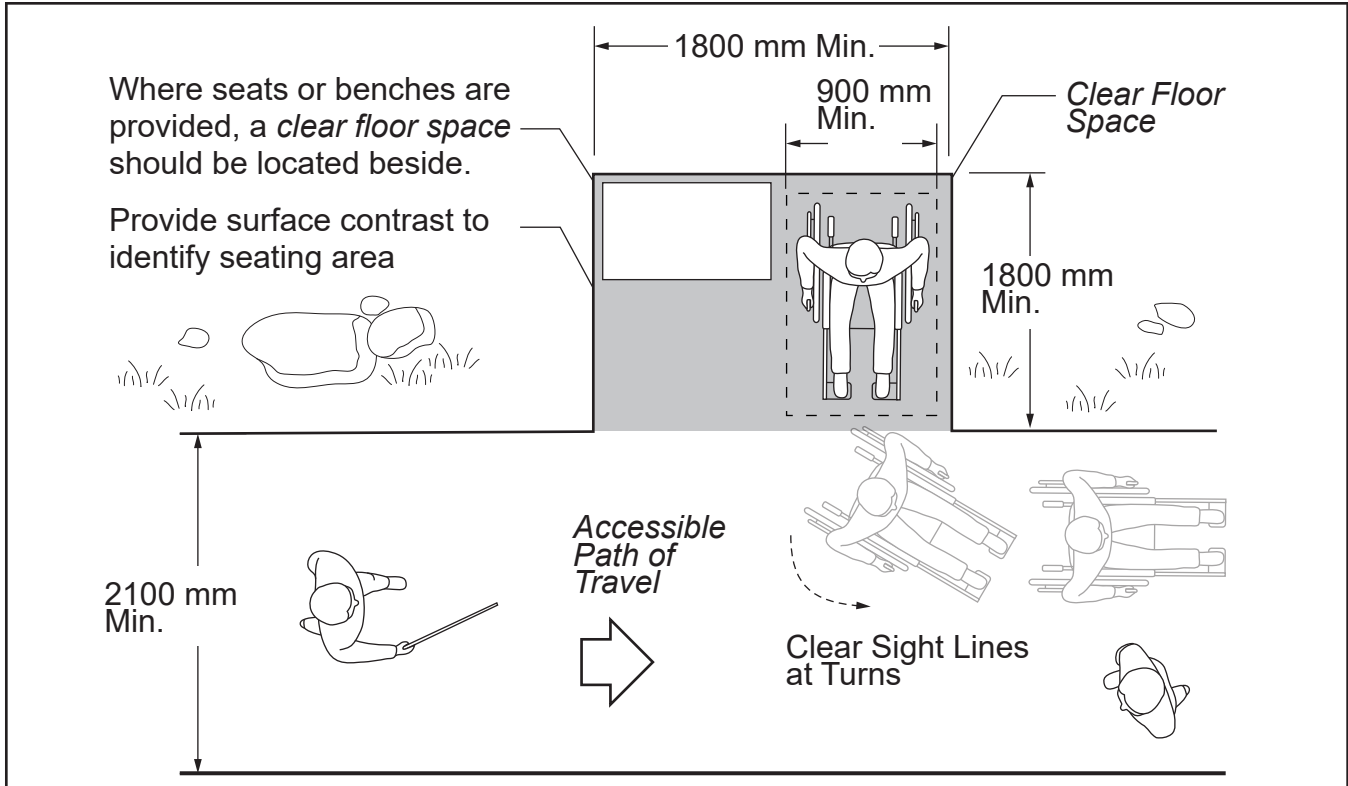


Figure 1.1.5-A Rest Areas

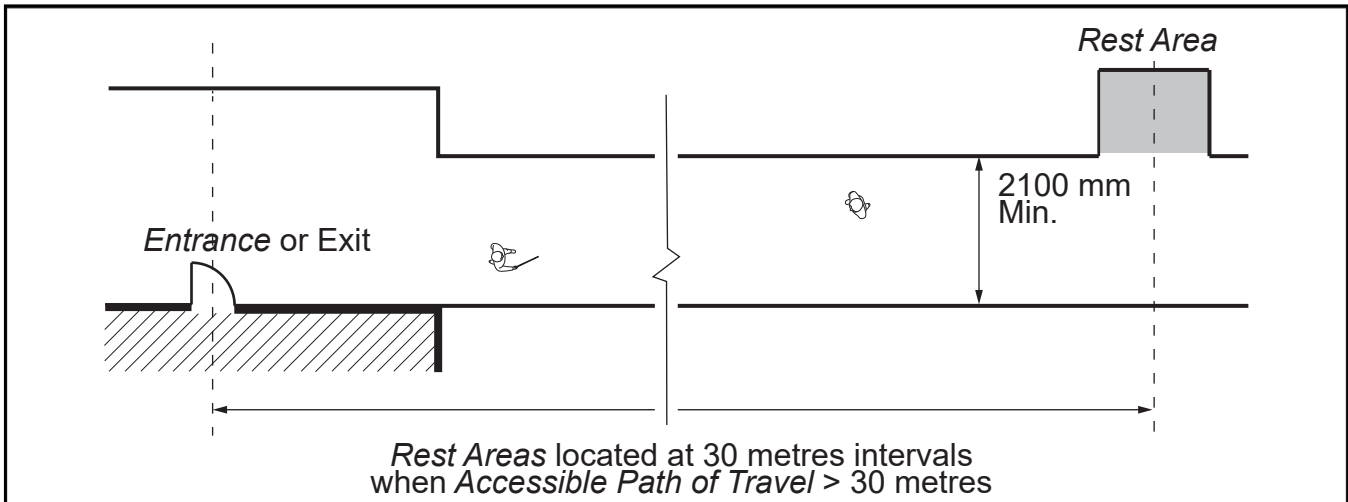


Figure 1.1.5-B Accessible Paths of Travel and Rest Area



## 1.1.6. Grade and Elevation Changes

### Rationale

Where grade and elevation changes are provided along exterior paths of travel, they should integrate *accessible* elements and provide an exterior *accessible path of travel* to enhance their safety and access for all individuals especially for persons with low or no vision, persons with limited mobility, and persons using *mobility devices*.

### Application

The scope of this section does not apply to areas:

- Designated and protected by Heritage and Cultural Acts;
- Where the requirements would adversely affect the natural environment; and
- Where physical conditions or *site constraints* prohibit redevelopment to achieve the requirements of this Section.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.7. Handrails”
- “1.1.8. Guards”
- “1.1.9. Exterior Ramps”
- “1.1.10. Exterior Stairs”

### Related References

- [Construction Specifications and Drawings for Road Works](#)
- [Toronto Multi-Use Trail Design Guidelines](#)

### Key Considerations

#### Slopes

Where slopes are provided at grade and elevation changes, they should be designed to have a *gradual transition* as they allow for better control and ease of movement for persons using *mobility devices*.

#### Edge Protection

Edge protection should be provided at grade and elevation changes when adjacent to water or a drop-off to prevent individuals, including persons using *mobility devices*, from slipping or rolling over the edge of an exterior path of travel. It can provide a means of *wayfinding* for persons with low or no vision using a *white cane*. In some naturalized built environments, edge protection can create *barriers* or pooling water, so each condition should be carefully assessed. Where handrails and guards are provided at grade and elevation changes, they should be designed to create safety and support for the public moving along an exterior path of travel.

## Requirements

### (1) Slopes:

Where slopes, “Figure 1.1.6-A Permitted Slope at Elevation Change”, “Figure 1.1.6-B Maximum Running Slope Gradient”, and “Figure 1.1.6-D Maximum Cross Slope Gradient”, are provided at grade and elevation changes, they should be/have:

- (a) A 1:20 (5%) maximum *running slope*;
- (b) A 1:50 (2%) typical *cross slope*:
  - (i) Where a typical *cross slope* of 1:50 (2%) cannot be achieved due to limiting site specific physical constraints, a *cross slope* of no greater than 1:25 (4%) is permitted, provided the extent for which this occurs is minimized as much as possible along the path of travel; and
- (c) Meet the criteria in “Table 1.1.6-A Slopes at Grade and Elevation Slopes”.

### (2) Edge Protection:

Grade and elevation changes should provide edge protection, “Figure 1.1.6-C Edge Protection at Elevation Change”, that:

- (a) Has a curb that:
  - (i) Is 75 mm minimum, without impeding drainage;
  - (ii) Has *colour/brightness contrast*; and
  - (iii) Is provided at locations where the adjacent slope is steeper than 1:3 (33%), or there is an adjacent drop-off less than 600 mm; or
- (b) Has handrails and/or guards that:
  - (i) Are located adjacent to a drop-off at or greater than 600 mm;
  - (ii) Meet the criteria in section “1.1.7. Handrails”; and

(iii) Meet the criteria in section “1.1.8. Guards”; and

- (c) Meets the criteria in “Table 1.1.6-B Edge Protection at Grade and Elevation Changes”.

Table 1.1.6-A Slopes at Grade and Elevation Slopes

Grade and Elevation Changes	Permitted <i>Running Slope</i>
6 mm to 13 mm	<i>Beveled slope</i> 1:2 (50%)
Greater than 13 mm and less than 75 mm	1:8 (12.5%) maximum or <i>Depressed curb/curb ramp</i>
75 mm or greater and 200 mm or less	1:10 (10%) maximum or <i>Depressed curb/curb ramp</i>
Greater than 200 mm	Provide a <i>ramp</i>

Table 1.1.6-B Edge Protection at Grade and Elevation Changes

Level Change at Grade	Permitted Edge Protection
Less than 600 mm	Curb
At or greater than 600 mm	Handrails and Guards

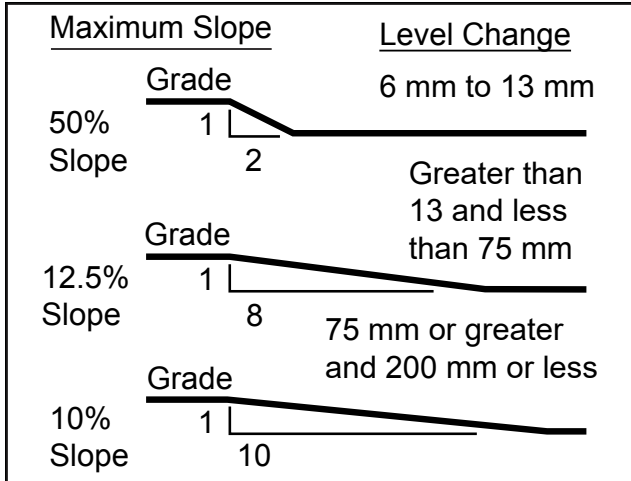


Figure 1.1.6-A Permitted Slope at Elevation Change

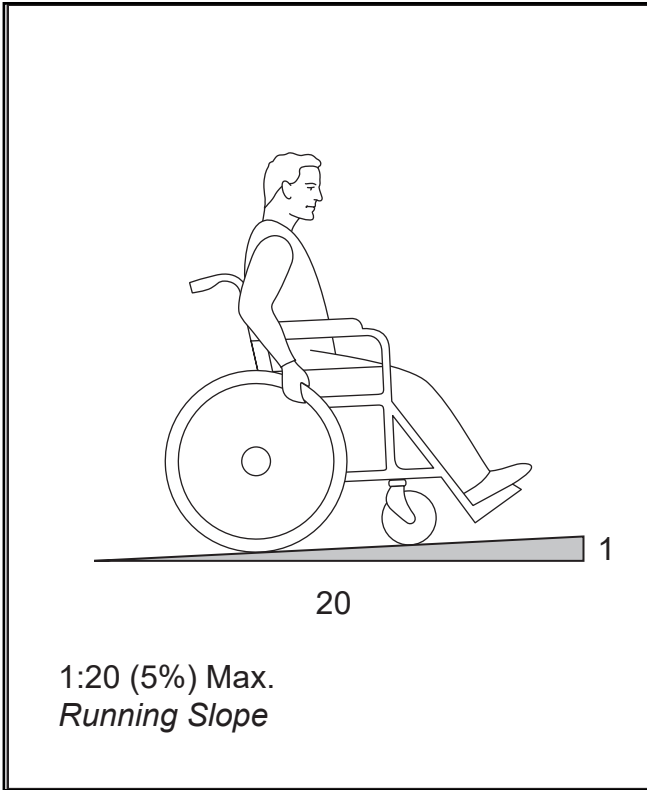


Figure 1.1.6-B Maximum Running Slope Gradient

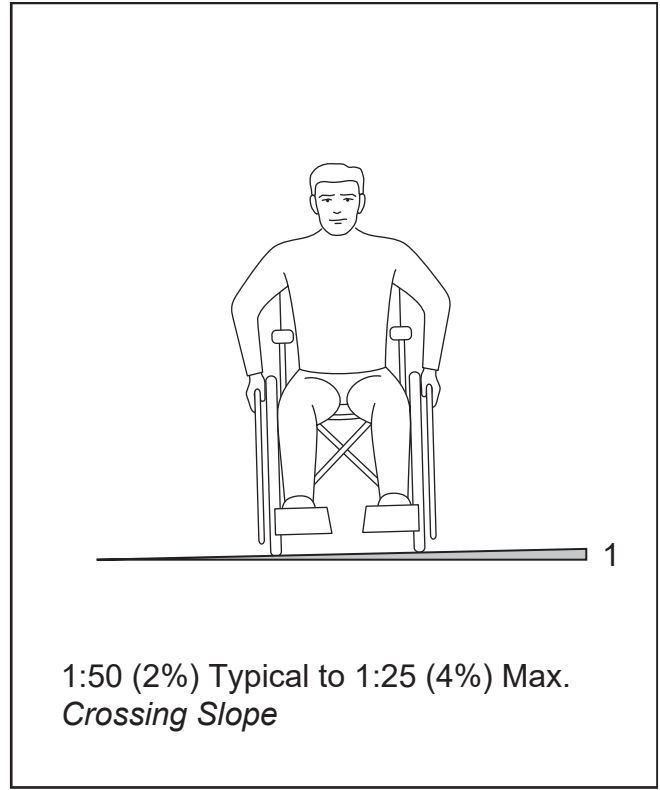


Figure 1.1.6-D Maximum Cross Slope Gradient

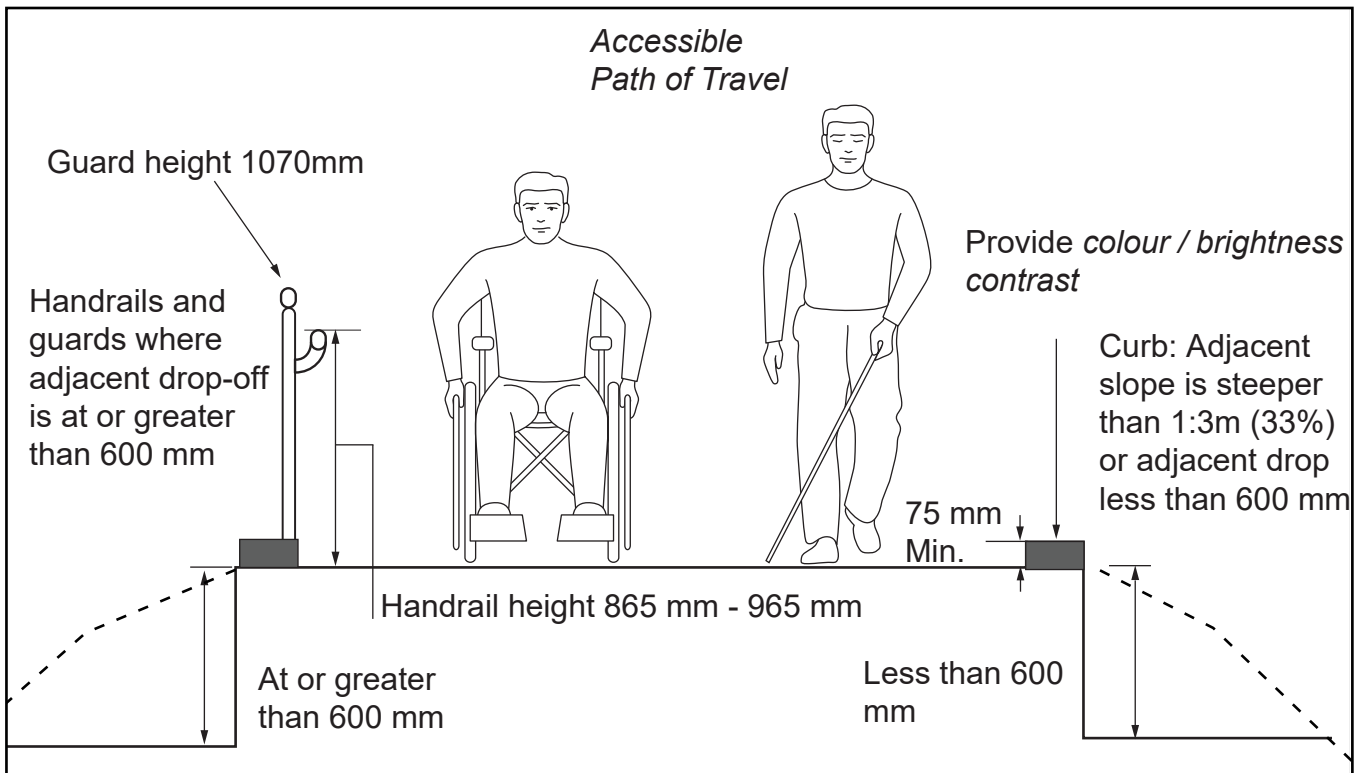


Figure 1.1.6-C Edge Protection at Elevation Change

## 1.1.7. Handrails

### Rationale

Handrails should be designed to provide safety and support for the public moving along an exterior path of travel. They should create a sense of navigation and *wayfinding* for persons with low or no vision.

### Application

The scope of this section applies to handrails provided at grade and elevation changes including *ramps*, stairs and landings.



### Related Sections

- “1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes”
- “1.1.3. Pedestrian Overpasses and Underpasses”
- “1.1.6. Grade and Elevation Changes”
- “1.1.9. Exterior Ramps”
- “1.1.10. Exterior Stairs”
- “3.2.1. Signage and Wayfinding Systems”

### Related References

- [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#)
- [Toronto Multi-Use Trail Design Guidelines](#)

### Key Considerations

#### Location

Handrails should be located at grade and elevation changes, including on both sides of *ramps* and stairs and continue around landings.

#### Installation

Handrails should be installed with consideration for the reach ranges of the intended individuals and should not impede the sight lines of individuals including persons using *mobility devices*. In built environments where individuals include children and/or persons of short stature, secondary handrails should be mounted at a lowered height. Additionally, intermediate handrails should be installed on *ramps* and stairs that are too wide for a person to reach both sides.

### Components

Handrail components, such as their supports, should be designed to withstand the loading value of a non-concurrent and a uniform concentrated load applied at any point and in any direction to the handrail so that all individuals can grasp the handrail and safely support themselves. Clearance should be provided for the individual's hand between the wall or guard to which the handrail components are attached to ensure a continuous grasp, except where interrupted by a door at a landing. Handrail component openings should not facilitate climbing or present the risk of a person or child getting their head stuck through the opening.

### Horizontal Extensions

Horizontal extensions should be provided on handrails at the top and bottom of *ramps*, stairs and landings. They should terminate without obstructing the *accessible path of travel* or creating a hazard, and be *cane detectable*. *Tactile* characters and/or *Braille* should be provided on horizontal extensions to communicate navigation and *wayfinding* to individuals, such as at the start and end points on a handrail.

*Service animals* such as guide dogs are certified and have training to perform specific tasks such as guiding persons with low or no vision to hazard strips, or bumble bee strips provided on horizontal extensions.

### Requirements

#### (1) Location:

Handrails, "Figure 1.1.7-A Handrail Location", should be located:

- (a) On both sides of:
  - (i) *Ramps* that meet the criteria in section "1.1.9. Exterior Ramps"; and

- (ii) Stairs that meet the criteria in section "1.1.10. Exterior Stairs";
- (b) Continuously around landings, except where interrupted by a door;
- (c) Where three or more steps are located; and
- (d) At 600 mm or greater elevation changes that meet the criteria in section "1.1.6. Grade and Elevation Changes".

#### (2) Installation:

Handrails should be installed to have:

- (a) A primary handrail mounted at 865 mm to 965 mm;
- (b) A secondary handrail mounted at 600 mm,
- (c) An intermediate handrail, "Figure 1.1.7-B Handrail and Intermediate Handrail", that:
  - (i) Where *ramps* are more than 2200 mm in width, have one or more intermediate handrails that are continuous between landings that are provided and located so that there is 1650 mm maximum between handrails; and
  - (ii) Where stairs are more than 2200 mm in width, have one or more intermediate handrails that are continuous between landings that are provided and located so that there is 1650 mm maximum between handrails.

**(3) Components:**

Handrails should provide components, "Figure 1.1.7-C Handrail Diameter and Clearances", that:

- (a) Have a circular diameter between 30 mm to 40 mm;
- (b) Are able to withstand:
  - (i) A 0.7 kN non-concurrent load applied at any point in any direction; and
  - (ii) A 0.9 kN uniform concentrated load applied at any point in any direction; and
- (c) Have clearances that:
  - (i) Are 50 mm minimum away from the smooth wall;
  - (ii) Are 64 mm minimum away from a rough wall; and
  - (iii) Are 450 mm minimum from the top of the handrail to the bottom edge of the wall when the handrail is recessed into a wall.

**(4) Horizontal Extensions:**

Handrails should provide horizontal extensions, "Figure 1.1.7-D Handrail Extension", that:

- (a) Are 300 mm minimum:
  - (i) Beyond the top and the bottom of the *ramp* measured from the edge of the incline level;
- (b) Are 300 mm minimum:
  - (i) Beyond the top riser of the stair or step; and
  - (ii) Beyond the bottom riser that continues to slope for one tread depth.
- (c) Are *cane detectable* returning to the post, wall or floor;

- (d) Have a high visibility identifier, or bumble bee strips that:
  - (i) Are 200 mm wide on center of the extension; and
  - (ii) Have high *colour/brightness contrast*, such as black and yellow; and
- (e) Where provided at interior stairs, have *tactile* characters and *Braille*, "Figure 1.1.7-E Bumble Bee Strips, Tactile Characters and Braille", that:
  - (i) Are located on center and on the top of the extension;
  - (ii) Indicate the floor level, or the direction of travel and change in floor level; and
  - (iii) Meet the criteria in section "3.2.1. Signage and Wayfinding Systems".

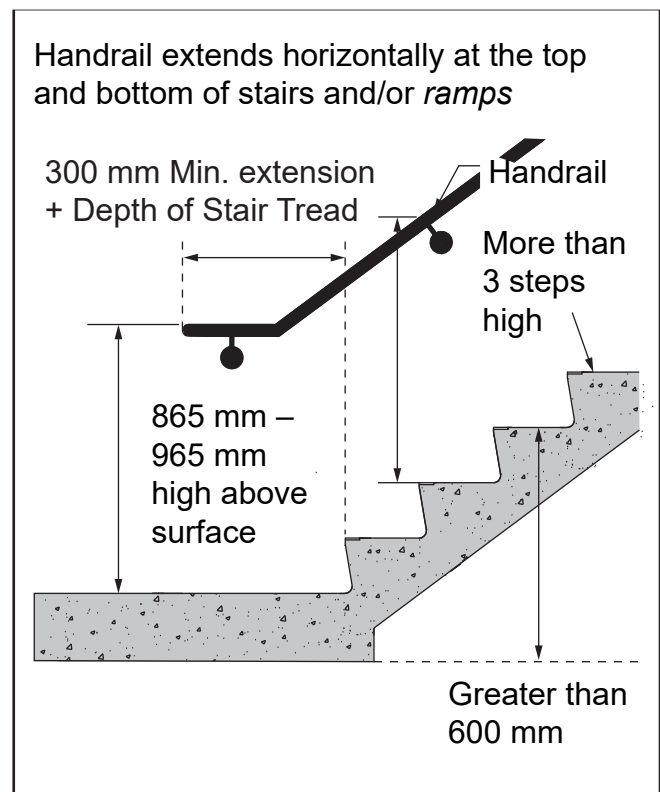


Figure 1.1.7-A Handrail Location

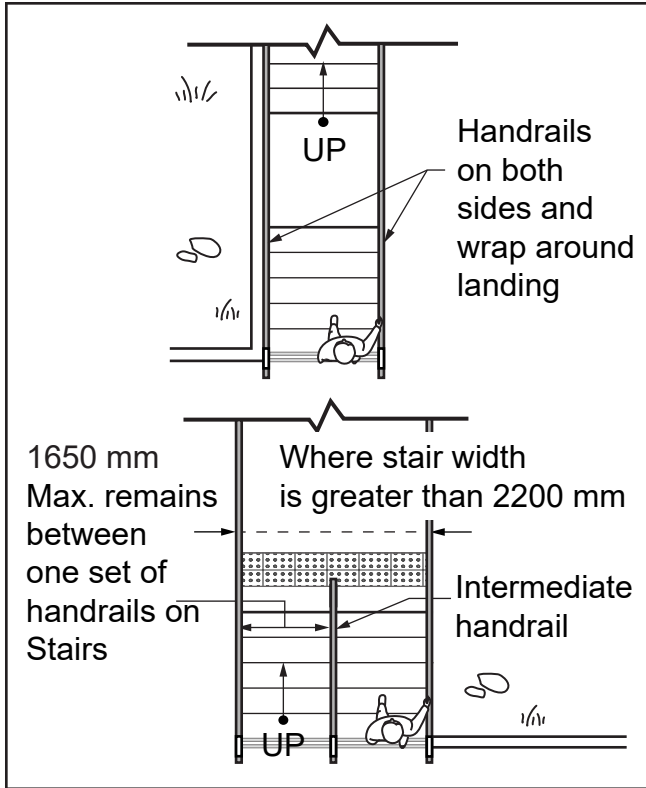


Figure 1.1.7-B Handrail and Intermediate Handrail

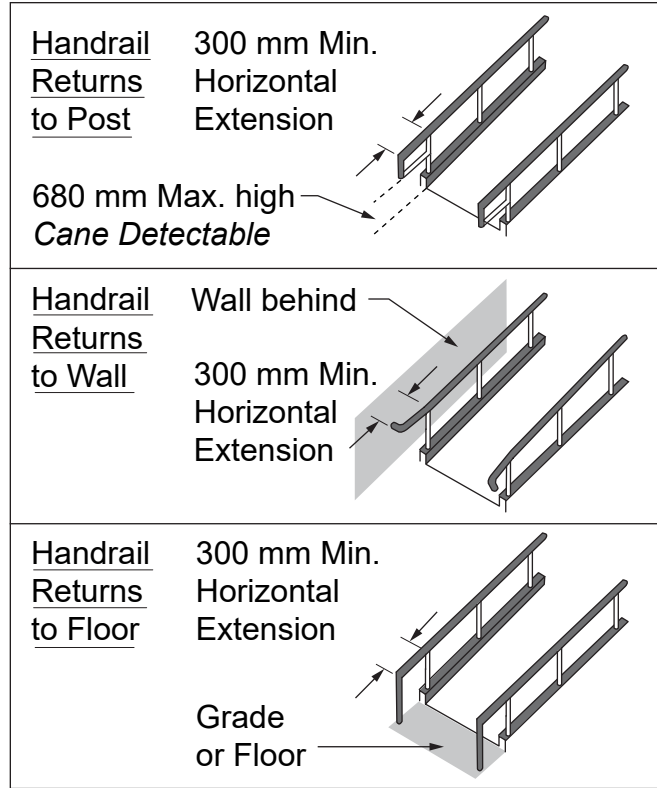


Figure 1.1.7-D Handrail Extension

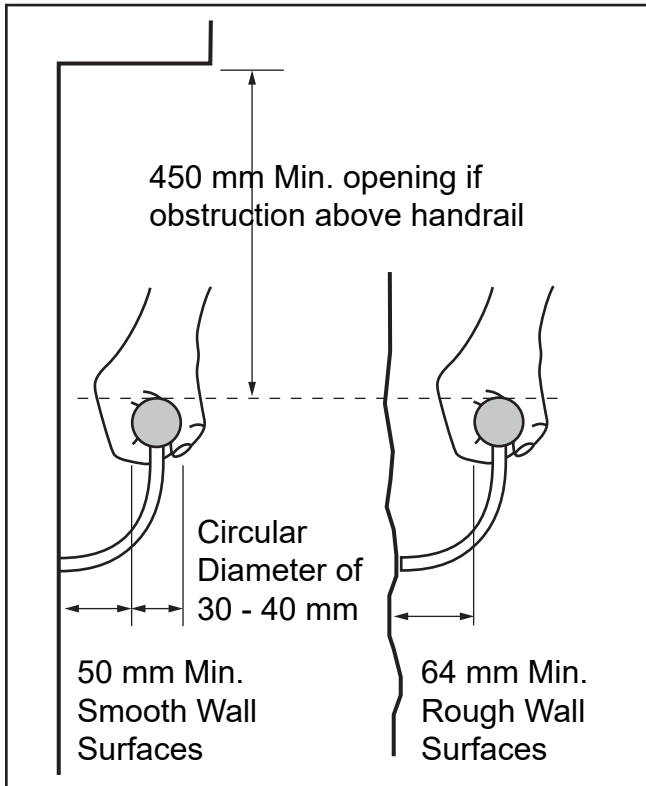


Figure 1.1.7-C Handrail Diameter and Clearances

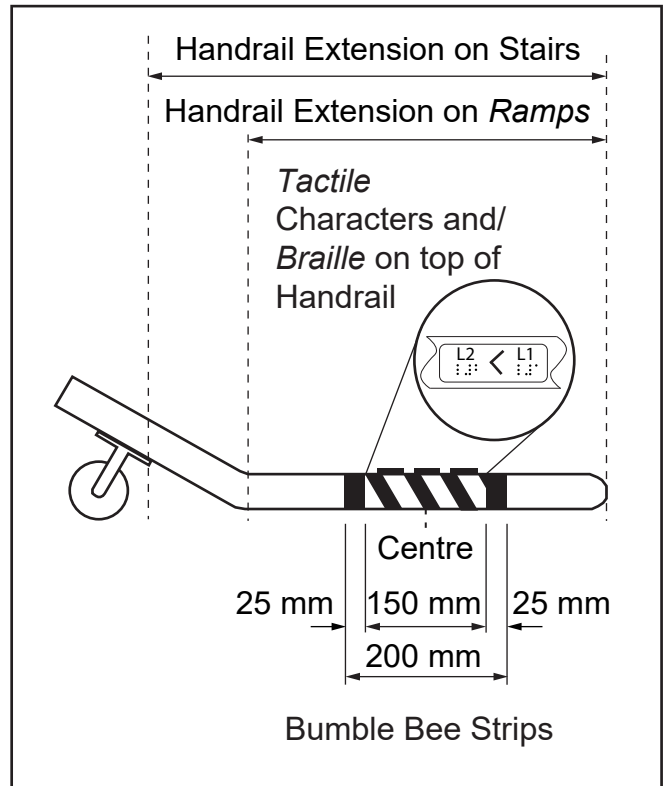


Figure 1.1.7-E Bumble Bee Strips, Tactile Characters and Braille



## 1.1.8. Guards

### Rationale

Guards, or solid enclosures, should be designed to provide safety and support for the public moving along an exterior path of travel.

### Application

This section applies to guards provided at grade and elevation changes including *ramps*, stairs and landings where there is no wall.



### Related Sections

- “1.1.6. Grade and Elevation Changes”
- “1.1.9. Exterior Ramps”
- “1.1.10. Exterior Stairs”

### Related References

- [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#)
- [Toronto Multi-Use Trail Design Guidelines](#)

### Key Considerations

#### Location

Guards should be located at grade and elevation changes, including on both sides of *ramps* and stairs and continue around landings.

#### Installation

Guards should be installed at a height that is higher than an average person’s center of gravity to reduce the risk of a person falling off the elevated area. Where a secondary handrail is provided for persons of shorter stature or children, a taller guard height should be provided. Guards should be designed so that when mounted, they do not impede the view of persons seated and using *mobility devices*.

#### Components

Components, such as balusters or vertical supports, provided at guards should not facilitate climbing or present the risk of a person or child getting their head stuck through the opening.

## Requirements

### (1) Location:

Guards should be located:

- (a) On both sides of:
  - (i) *Ramps* that meet the criteria in section "1.1.9. Exterior Ramps"; and
  - (ii) Stairs that meet the criteria in section "1.1.10. Exterior Stairs";
- (b) Continuously around landings, except where interrupted by a door; and
- (c) Where three or more steps are located; or
- (d) Where adjacent to a drop-off at or greater than 600 mm that meets the criteria in section "1.1.6. Grade and Elevation Changes".

### (2) Installation:

Guards should be installed, "Figure 1.1.8-A Guards and Handrails":

- (a) At 920 mm minimum measured vertically to the top of the guard from a line drawn through the outside edges of the stair nosings;
- (b) At 1070 mm minimum measured vertically to the top of guard from the *ramp* surface, and around landings and is required on each side of a stairway where the difference in elevation between ground level and the top of the stair is more than 600 mm, except where there is a wall, a guard is not required on that side; and
- (c) Where a secondary handrail is provided at 600 mm, the height of guards should increase by at least 600 mm measured from the top of the first handrail at 920 mm and meet the loading requirements that meet the criteria in the [Ontario Building Code](#).

### (3) Components:

Guards should provide components (member, attachment or opening), "Figure 1.1.8-B Openings at Guards", that:

- (a) Where located between 140 mm to 900 mm, will not facilitate climbing;
- (b) Are greater than 100 mm between balusters or vertical supports; and
- (c) Have clear sight lines, or transparency, that are between 1070 mm to 1200 mm.

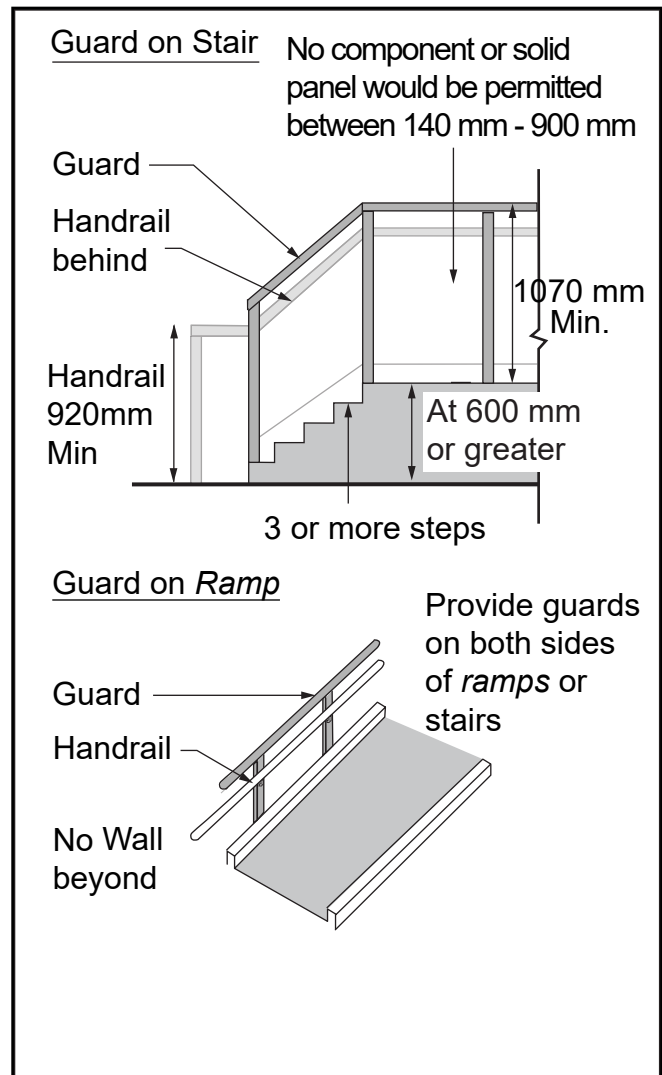


Figure 1.1.8-A Guards and Handrails

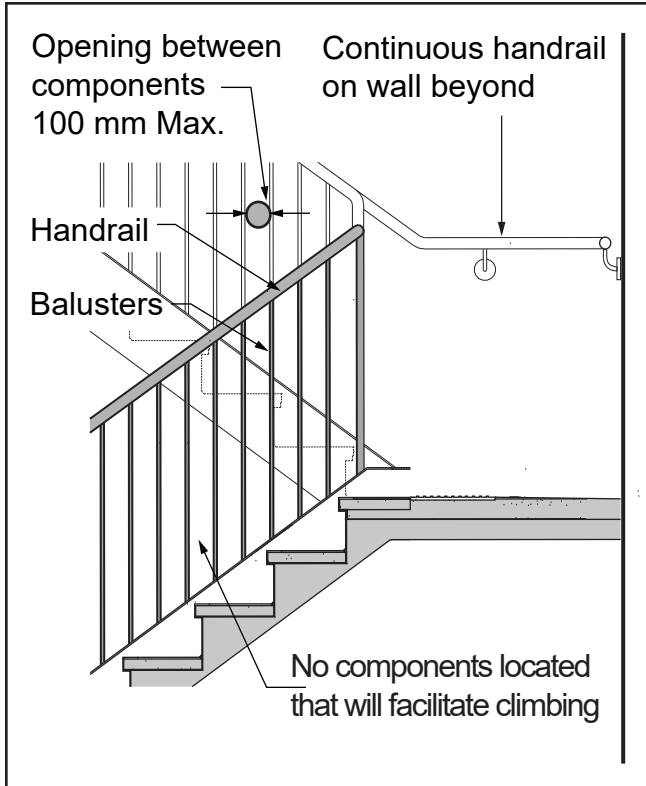


Figure 1.1.8-B Openings at Guards

## 1.1.9. Exterior Ramps

### Rationale

*Ramps* provide an exterior *accessible path of travel* to overcome grade and elevation changes. Their slopes should have a *gradual transition* as they allow for better control and ease of movement for persons using *mobility devices*.

### Application

The scope of this section applies to exterior and interior *ramps* provided at grade and elevation changes.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.6. Grade and Elevation Changes”
- “1.1.7. Handrails”
- “1.1.8. Guards”
- “1.1.10. Exterior Stairs”
- “1.6.2. Tactile Attention Indicators”

### Related Sections

- [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#)
- [Toronto Multi-Use Trail Design Guidelines](#)

### Key Considerations

#### Location

*Ramps* should be at grade and elevation changes and, where provided, adjacent to stairs.

#### Accessible Path of Travel

*Ramps* allow for a continuous, unobstructed route providing exterior access to elements and spaces. *Ramps* should provide landings at the top and bottom of *slopes*, where there is an abrupt change in direction of travel, and at horizontal intervals. A clear sight line and view for the user should be provided between the beginning and the end of a *ramp*, and where multiple landings are provided.

#### Slopes

The *slope* of *ramps* should be designed to provide a *gradual transition* as they allow for better control and ease of movement for persons using *mobility devices*.

*Slope* or steepness is typically expressed as a ratio, such as 1:20 (5%), where for every 1 unit in rise or height change there are 20 units that extend horizontally or in length. For example, a change in elevation that is 200 mm with a 1:20 *slope* would require a *ramp* length of 4000 mm (200 mm multiplied by 20).

### Surfaces

*Ramps* should have surfaces that reduce the risk of tripping hazards and the potential discomfort, experienced by persons using *mobility devices* or a *white cane*, caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling. *Tactile attention indicators* should be provided where a door swing opens into a *ramp* landing. Additional features may be provided to the surface to maintain and address seasonal weather conditions.

### Edge Protection

Edge protection should be provided at *ramps* where there are no walls, or solid enclosures to prevent individuals, including persons using *mobility devices*, from slipping or rolling over the edge of the exterior path of travel. Edge protection can provide a means of *wayfinding* for persons with low or no vision who use a *white cane*. In some naturalized built environments, edge protection can create *barriers*, so each condition should be carefully assessed.

### Handrails and Guards

Handrails and guards (or walls) should be provided at *ramps* and be designed to provide safety and support for persons moving along the exterior path of travel.

## Requirements

### (1) Location:

*Ramps* should be located at:

- (a) Grade and elevation changes that:
  - (i) Are greater than 1:20 (5%) *running slope*; and
  - (ii) Are greater than 200 mm.

### (2) Accessible Path of Travel:

*Ramps* should provide exterior *accessible paths of travel* that:

- (a) Have a *ramp* width, “[R-1.1.9. (2)(a)]”, that is 1800 mm minimum;
- (b) Have a 2100 mm overhead clearance;
- (c) Have level landings, “[R-1.1.9. (2)(c)]”, “[Figure 1.1.9-A Protection on Ramps](#)” and “[Figure 1.1.9-B Ramp Grates and Textural Strip](#)”, that:
  - (i) Have a clear sight line and view for the user between the beginning and the end of a *ramp*, and where multiple landings are provided;
  - (ii) Are located at intervals no greater than nine (9) meters apart;
  - (iii) Are 2500 mm by 2500 mm minimum at straight run *ramps*;
  - (iv) Are 2500 mm by 2500 mm minimum at 90 degree turn locations; and
  - (v) Are 2500 mm by the path width at 180 degree turn locations;
  - (vi) Where a door is located at the level landing in a *ramp*, have a *clear ground space* that is 1670 mm by 1670 mm, “[Figure 1.1.9-C Ramp Configuration Plan Views](#)”; and
- (d) Meet the criteria in section “1.1.1. Exterior Accessible Paths of Travel”.

**(3) Slopes:**

Ramps should provide slopes, "Figure 1.1.9-D Perspective Ramp Configurations", that have:

- (a) A 1:15 (6.7%) to 1:20 (5%) *running slope* [R-1.1.9.(3)(a)]; and
- (b) A 1:50 (2%) maximum *cross slope* (exterior only).

**(4) Surfaces:**

Ramps should provide surfaces that:

- (a) Are firm, stable and slip-resistant;
- (b) Have openings that:
  - (i) Are located outside of an *accessible path of travel*;
  - (ii) Allow for drainage (in exterior conditions);
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and
  - (iv) Do not allow passage of an object that has a diameter of 13 mm maximum;
- (c) Have textural strips, "Figure 1.1.9-E Ramp Running and Cross Slope", that:
  - (i) Are located at the start and end of the *ramp slope*, or at the start and end of a level surface such as the landing;
  - (ii) Extend across the full clear width of the *ramp slope*;
  - (iii) Are 50 mm wide; and
  - (iv) Have *colour/brightness contrast*.

**(5) Edge Protection:**

Ramps should provide edge protection, "Figure 1.1.9-G Protection on Ramps", that:

- (a) Is located on both sides of the *ramp*;

- (b) Has a 75 mm minimum curb, without impeding drainage, or 50 mm where the bottom member of a handrail or guard is used in lieu of a curb; and
- (c) Has *colour/brightness contrast*.

**(6) Handrails and Guards:**

Ramps should provide handrails, "Figure 1.1.9-F Ramp Width and Handrail", and guards that:

- (a) Meet the criteria in section "1.1.7. Handrails", and "1.1.8. Guards".

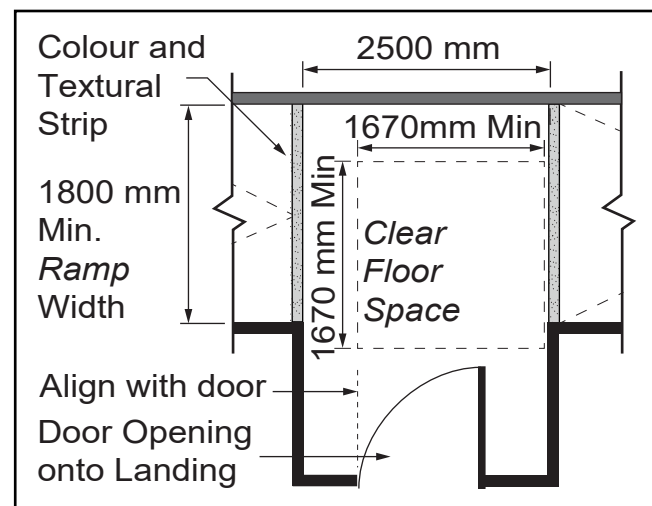


Figure 1.1.9-A Protection on Ramps

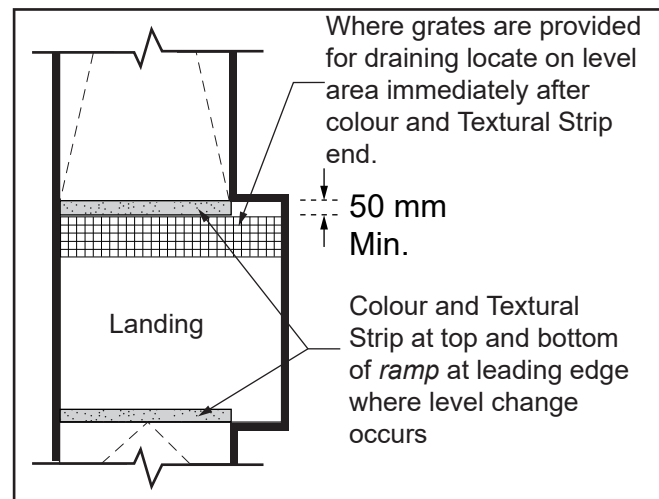


Figure 1.1.9-B Ramp Grates and Textural Strip

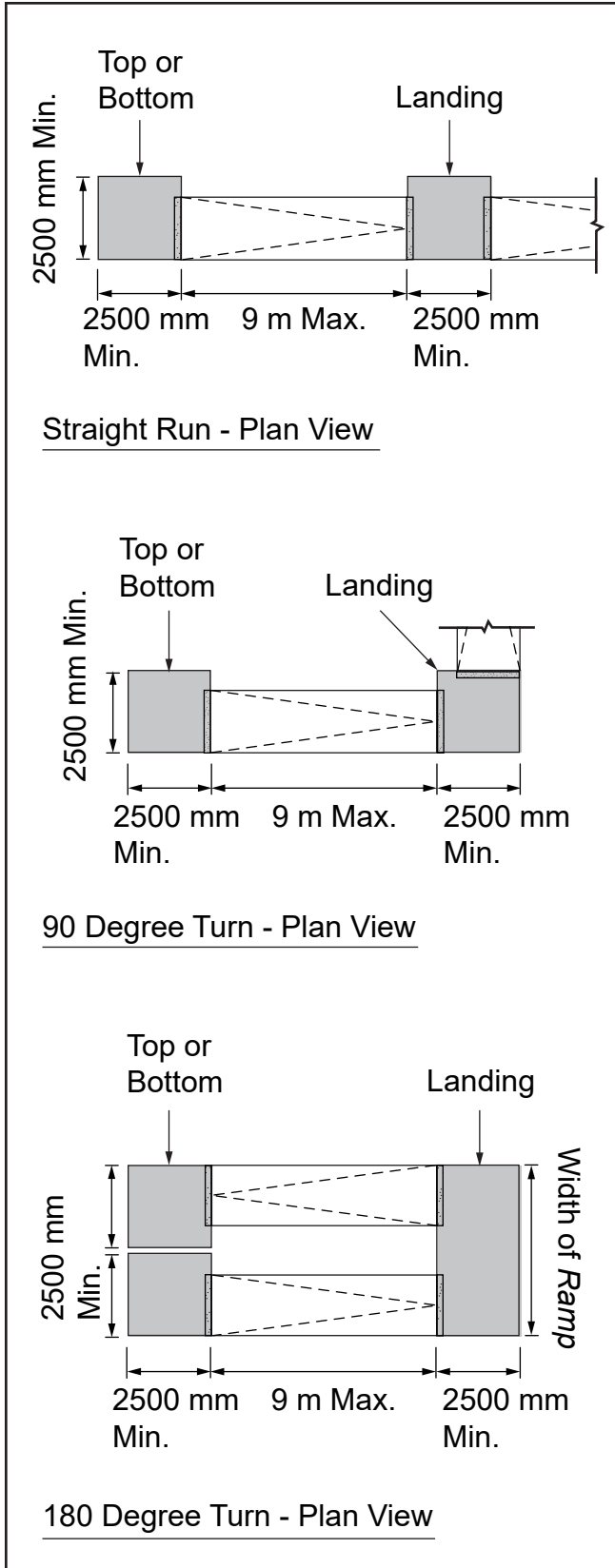


Figure 1.1.9-C Ramp Configuration Plan Views

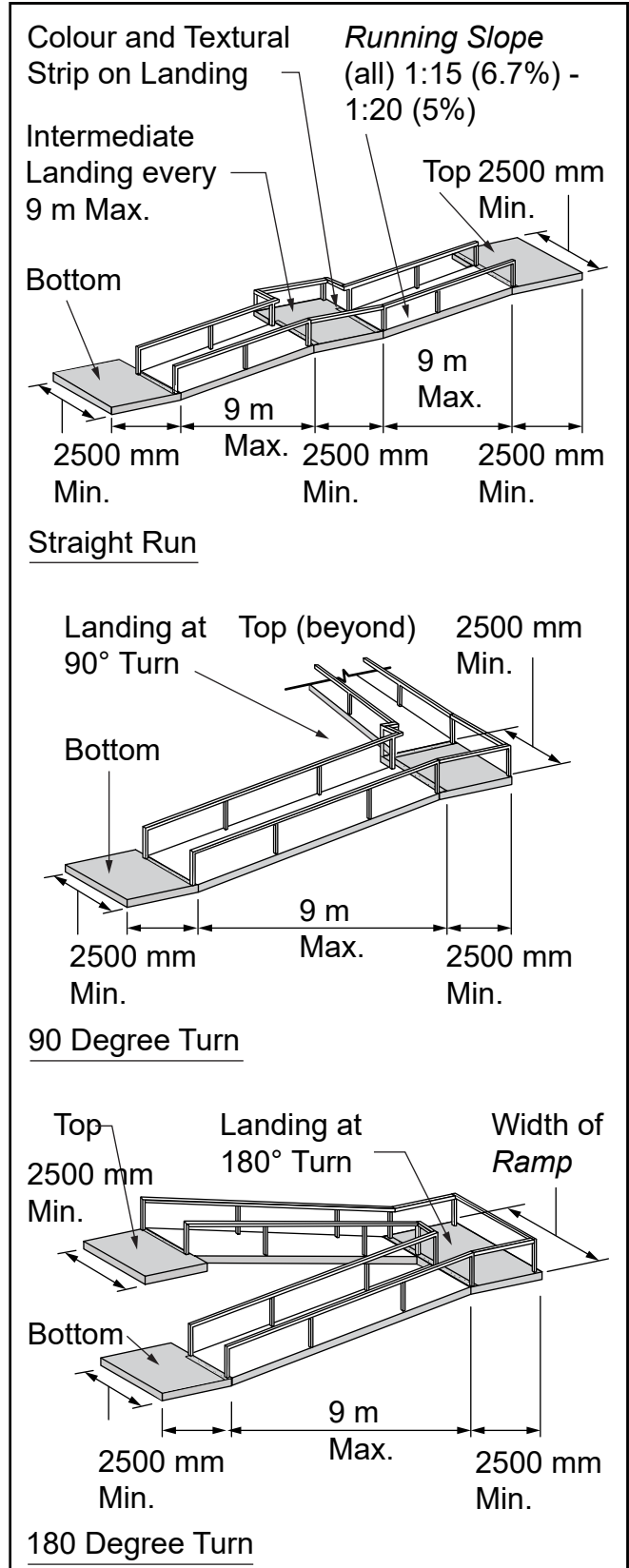


Figure 1.1.9-D Perspective Ramp Configurations

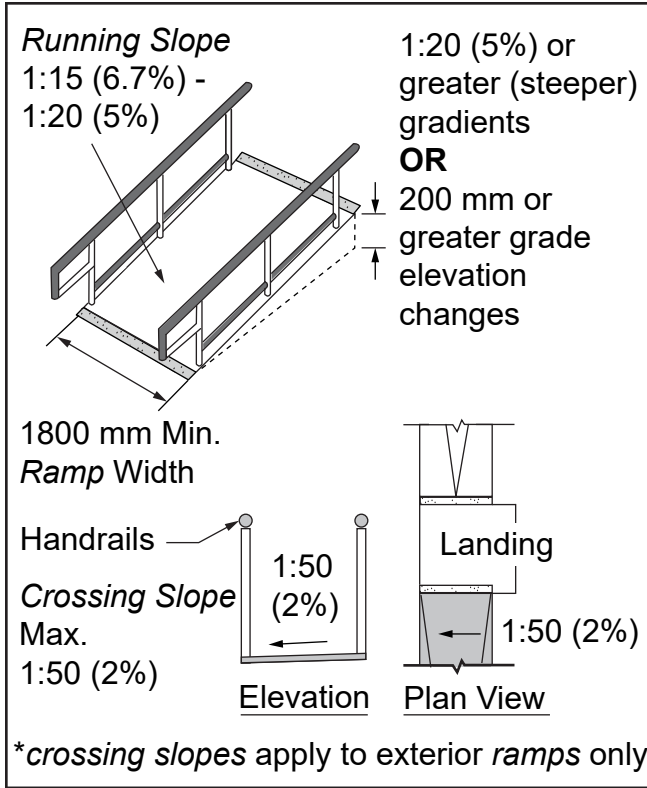


Figure 1.1.9-E Ramp Running and Cross Slope

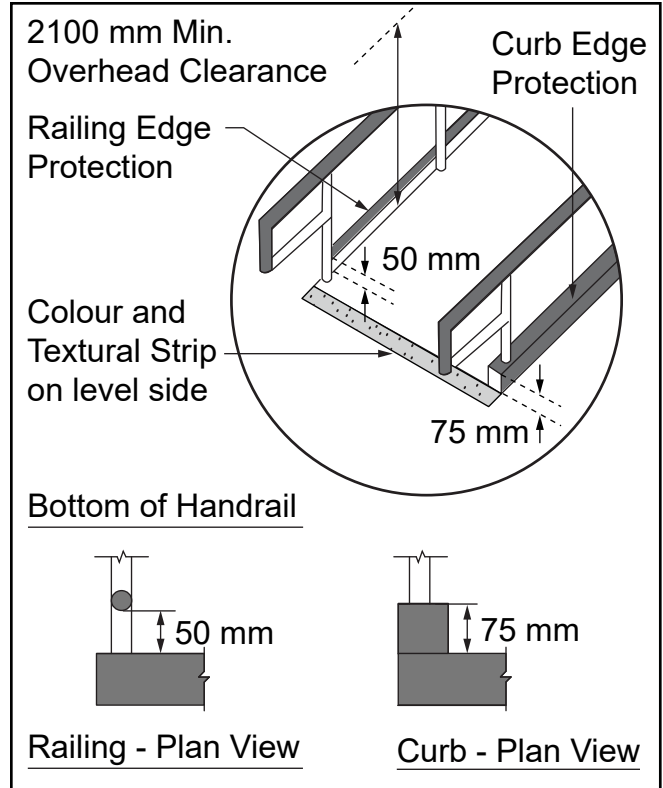


Figure 1.1.9-G Protection on Ramps

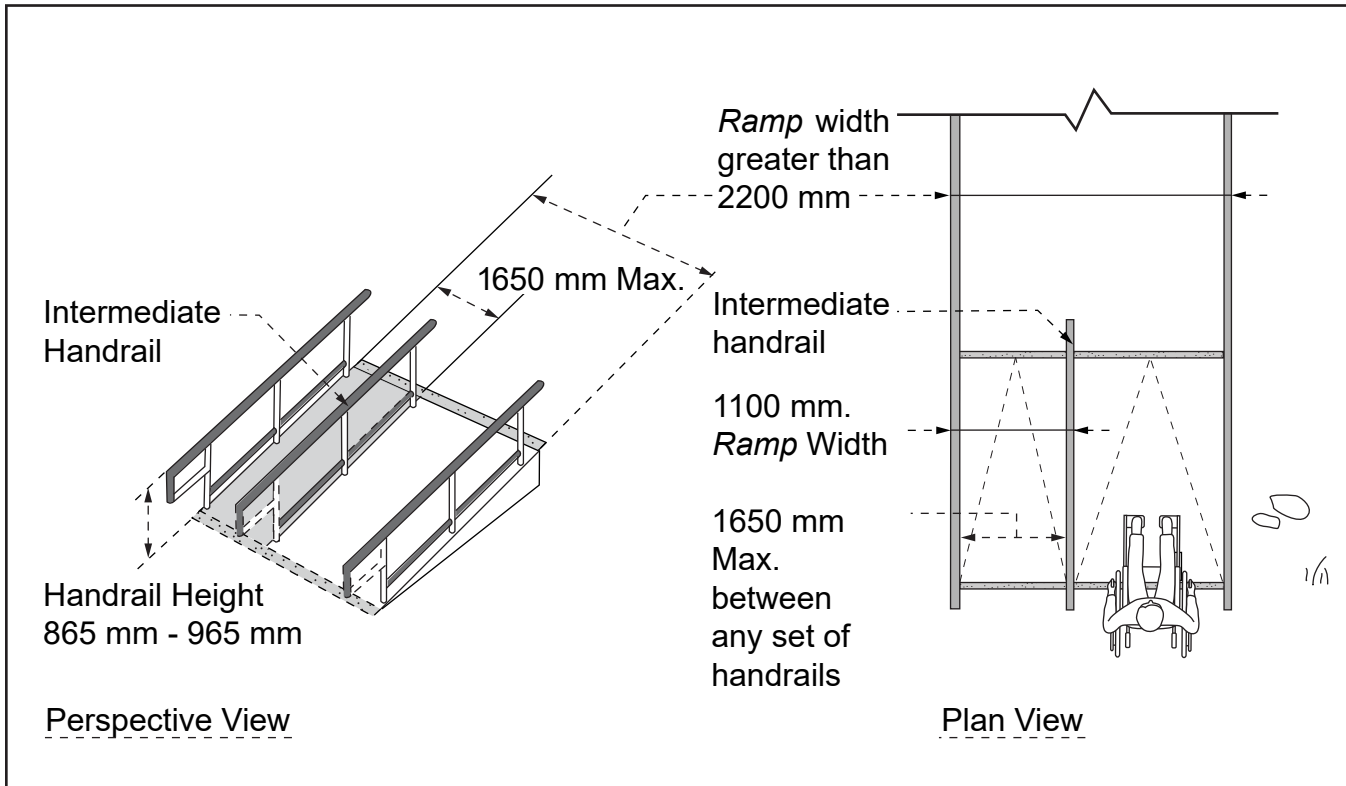


Figure 1.1.9-F Ramp Width and Handrail



## 1.1.10. Exterior Stairs

### Rationale

Where stairs are provided to overcome grade and elevation changes, they should be adjacent to an exterior *accessible path of travel* such as *ramps*. Stairs should integrate *accessible* elements to enhance their usability for all individuals especially for persons with low or no vision and persons with limited mobility.

### Application

The scope of this section applies to exterior and interior stairs and steps provided at grade and elevation changes.



### Related Sections

- “1.1.6. Grade and Elevation Changes”
- “1.1.7. Handrails”
- “1.1.8. Guards”
- “1.1.11. Obstructions, Protrusions and Overhead Objects”
- “1.6.2. Tactile Attention Indicators”

### Related References

- [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#)
- [Toronto Multi-Use Trail Design Guidelines](#)

### Key Considerations

#### Location

Where stairs are provided at grade and elevation changes, they should be adjacent to an *accessible path of travel* such as a *ramp*.

#### Overhead Clearances

Overhead clearance should be provided at stairs from the ground to any overhead objects, such as trees or *signage*.

#### Surfaces

Surfaces should be provided at stairs that reduce the risk of tripping hazards. *Tactile attention indicators* should be provided on stair landings. Additional features may be provided to the surface to maintain and address seasonal weather conditions.

#### Handrails and Guards

Handrails and guards (or walls) should be provided at stairs and be designed to create safety and support for persons moving along the exterior path of travel.

### Risers and Treads

Risers (rise) which are the vertical surface or the height of the step, and treads (run) which are the horizontal surface of the step should provide uniform dimensions at stairs to reduce the risk of tripping hazards. Stairs should be designed to provide shorter rises and longer runs, within the prescribed limits, to create less steep staircases that are easier to use. Closed risers should be provided to improve the recognition and visibility of each stair tread. Spiral and curved stairs should be discouraged as the non-uniform tread depth can be difficult to use.

### Nosings

Nosings should be provided at stairs and be designed without any abrupt undersides to reduce the risk of tripping hazards.

## Requirements

### (1) Location:

Stairs should be located:

- (a) Adjacent to an *accessible path of travel* that:
  - (i) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”;
  - (ii) Meets the criteria in section “1.1.9. Exterior Ramps”;
  - (iii) Meets the criteria in section “2.1.1. Interior Accessible Paths of Travel”;
  - (iv) Meets the criteria in section “2.1.3. Interior Ramps”;
  - (v) Meets the criteria in section “2.1.5. Elevators”; or
  - (vi) Meets the criteria in section “2.1.6. Limited Use, Limited Application (LULA) Lifts”.

### (2) Overhead Clearances:

Stairs should provide overhead clearances, “Figure 1.1.10-A Clearances and Cane Detectability”, that:

- (a) Are 2100 mm minimum;
- (b) Are clear from obstructions, protrusions and overhead objects that meet the criteria in section “1.1.11. Obstructions, Protrusions and Overhead Objects”.

### (3) Surfaces:

Stairs should provide surfaces that:

- (a) Are firm, stable and slip-resistant;
- (b) Have two textural strips, “Figure 1.1.10-B Textured Surfaces at Stairs”, that:
  - (i) Are located at the bottom of the stairs, starting one tread depth back from the bottom riser;
  - (ii) Extend across the full clear width;
  - (iii) Are each 50 mm wide;
  - (iv) Are spaced 50 mm apart; and
  - (v) Have *colour/brightness contrast*; and
- (c) Have *tactile attention indicators*, “Figure 1.1.10-C Stair Landing Tactile Indicators”, that meet the criteria in section “1.6.2. Tactile Attention Indicators”.

### (4) Handrails and Guards:

Stairs should provide handrails and guards, “Figure 1.1.10-D Additional Stair Landing Designs”, that:

- (a) Meet the criteria in section “1.1.7. Handrails”; and
- (b) Meet the criteria in section “1.1.8. Guards”.

**(5) Risers and Treads:**

Stairs should provide:

- (a) Risers, “Figure 1.1.10-E Elevation of Stair Details”, that:
  - (i) Have a rise between successive treads be between 125 mm to 180 mm;
  - (ii) Have uniform dimensions for the entire rise surface;
  - (iii) Are closed; and
  - (iv) Have no less than three steps at interior stairs; and
- (b) Runners that:
  - (i) Have a run between successive steps be between 280 mm to 355 mm; and
  - (ii) Have no abrupt undersides.

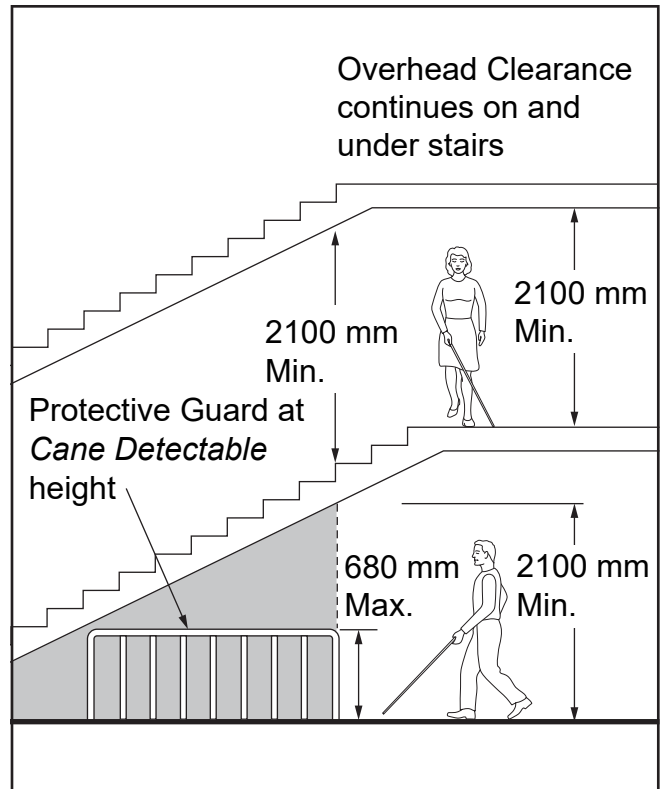


Figure 1.1.10-A Clearances and Cane Detectability

**(6) Nosings:**

Stairs should provide nosings that:

- (a) Have a 50 mm deep strip that:
  - (i) Is located at the edge of the stair;
  - (ii) Extends the full width of the tread;
  - (iii) Is, where possible, recessed flush with the tread surface; and
  - (iv) Has *colour/brightness contrast* that extends the full clear width;
- (b) Have a 38 mm (60 degrees) maximum projection; and
- (c) Have *bevelled* or rounded edges that do not reduce the tread depth by more than 13 mm.

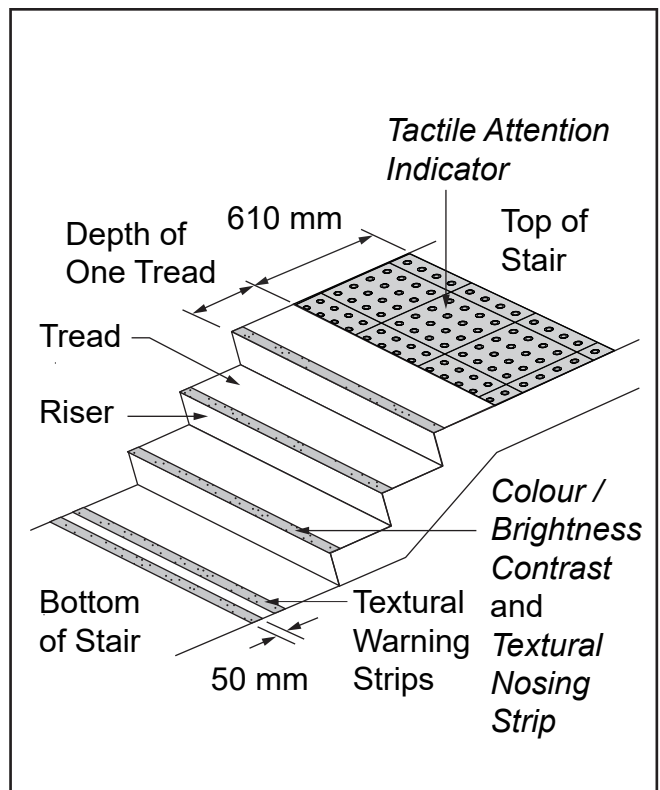


Figure 1.1.10-B Textured Surfaces at Stairs

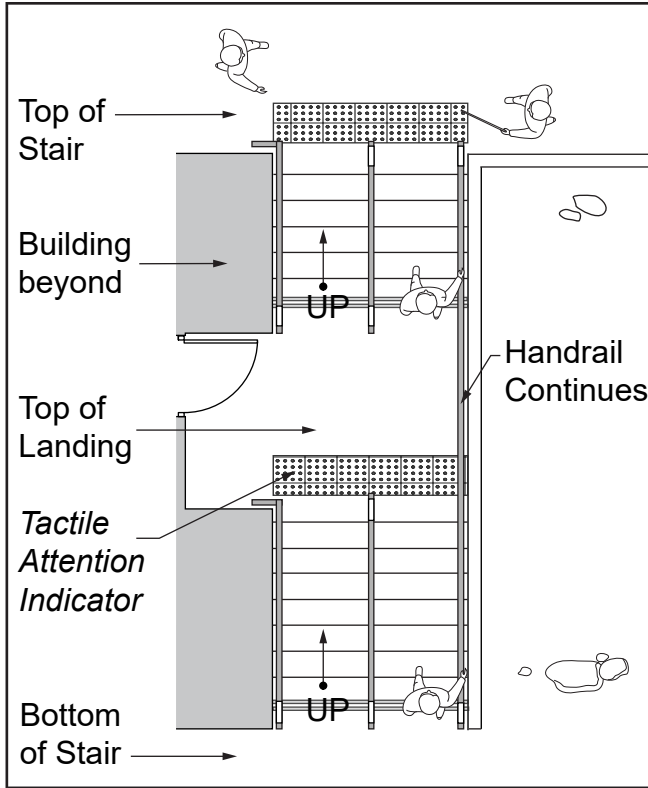


Figure 1.1.10-C Stair Landing Tactile Indicators

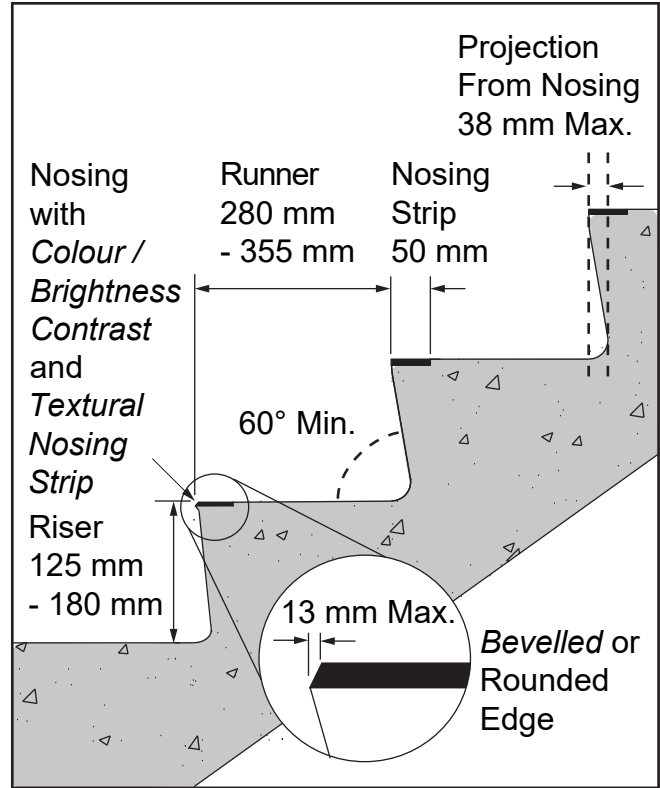


Figure 1.1.10-E Elevation of Stair Details

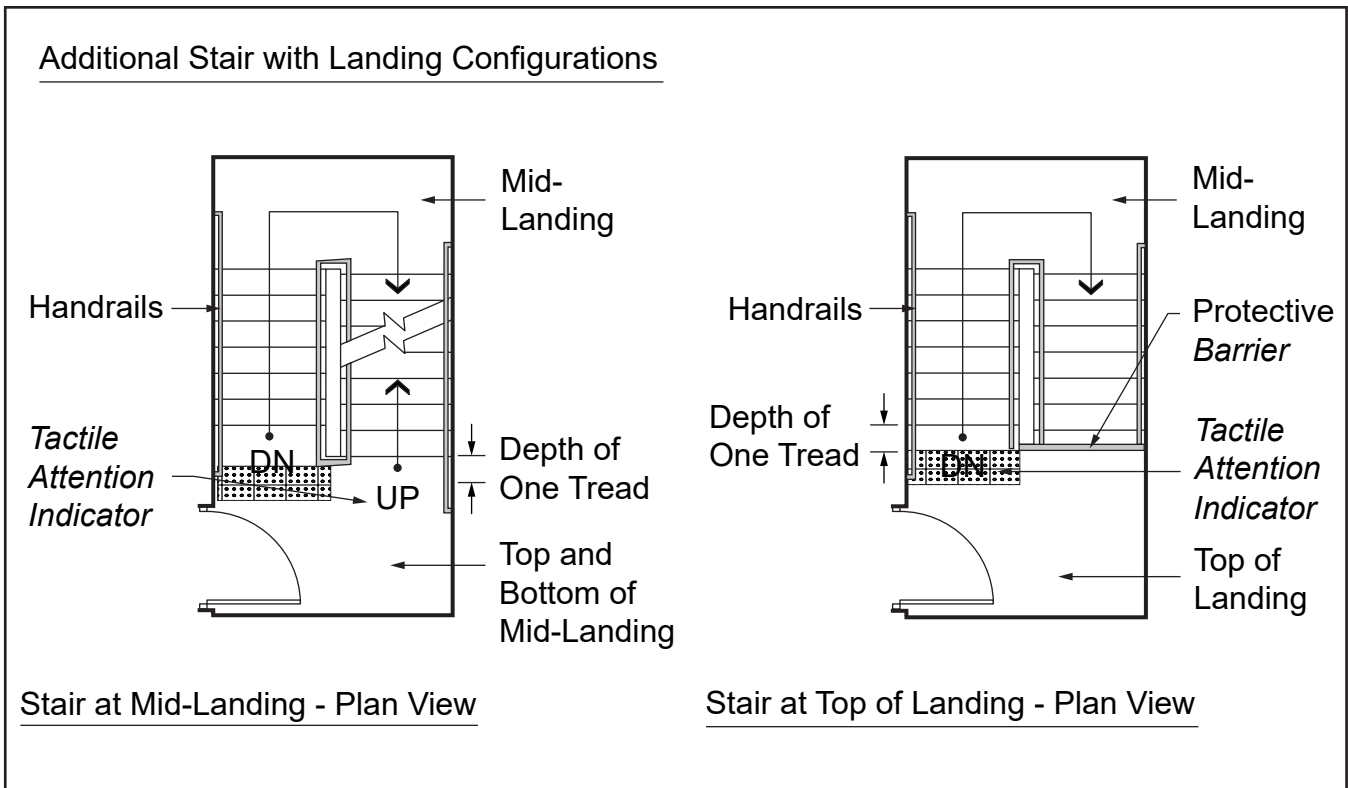


Figure 1.1.10-D Additional Stair Landing Designs

## 1.1.11. Obstructions, Protrusions and Overhead Objects

### Rationale

Obstructions, protrusions and overhead objects include both temporary and permanent objects. Where present, they should not impede an exterior *accessible path of travel* and should be located to reduce the risk of potential hazards.

### Application

The scope of this section applies to temporary or permanent exterior furnishings, equipment, street and building elements including vegetation and plantings, guy wires, other braces or supports for trees, drinking fountains, waste receptacles and recycling bins, *signage* and *wayfinding*, bollards, pylons, columns and pillars, bus shelters, queuing lines, sales booths, bollards, fire hydrants, light posts, vending machines, etc.



### Related Sections

- [Reserved]

### Related References

- [Complete Streets Guidelines](#)
- [Toronto Multi-Use Trail Design Guidelines](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)

### Key Considerations

#### Overhead Clearances

Where provided, obstructions, protrusions and overhead objects should have clearances from the ground to the object to reduce the risk of potential hazards.

#### Cane Detectability

Where provided, obstructions, protrusions and overhead objects should be designed to be *cane detectable* so that they can be identified by a persons using a *white cane* for navigation and *wayfinding*.

### Requirements

#### (1) Overhead Clearances:

Where present, obstructions, protrusions and overhead objects should have overhead clearances, “[Figure 1.1.11-A Protrusions and Clearances](#)”, that:

- (a) Are 2100 mm minimum.

#### (2) Cane Detectability:

Where present, obstructions, protrusions and overhead objects should:

- (a) Be *cane detectable*;
- (b) Have the bottom edge of the object be mounted at or below 680 mm; and

1.1. Exterior Paths of Travel

1.1.11. Obstructions, Protrusions and Overhead Objects

- (c) Project no more than 100 mm into an exterior *accessible path of travel*, "Figure 1.1.11-B Cane Detectable Obstructions".

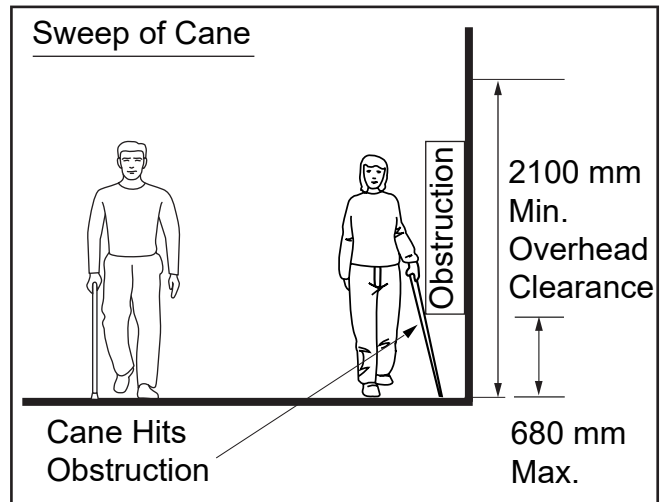


Figure 1.1.11-B Cane Detectable Obstructions

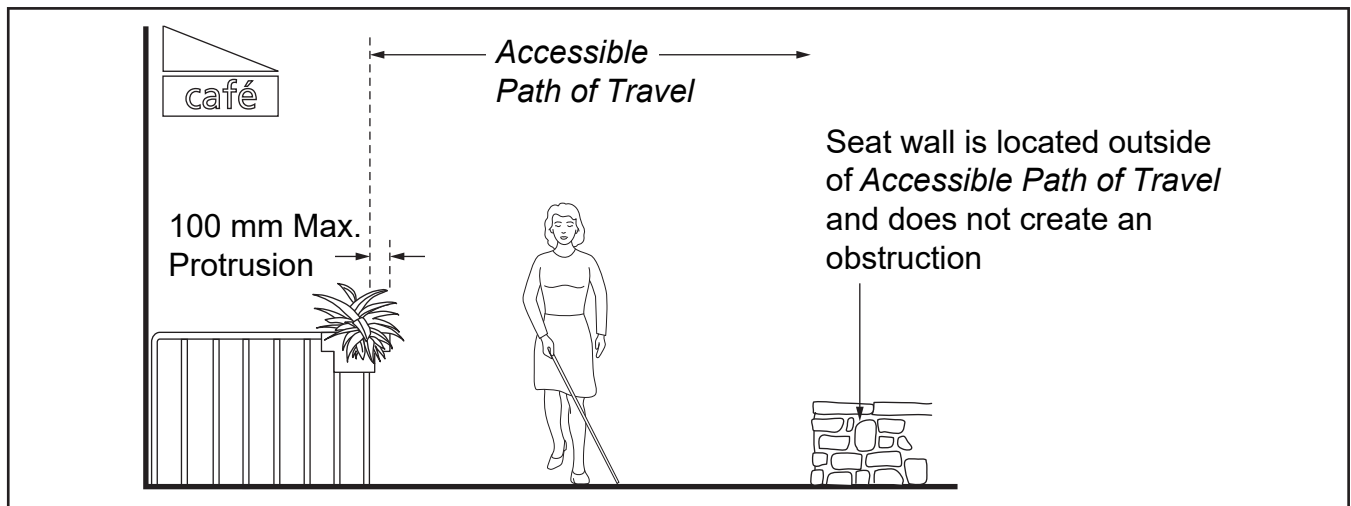


Figure 1.1.11-A Protrusions and Clearances

## 1.1.12. Safety and Security

### Rationale

Features such as lighting, communication and information systems, and emergency plans should be integrated to enhance the safety and security for all individuals.



### Related Sections

- “1.1.4. Exterior Paths of Travel to Entrances and Exits”
- “1.3.1. Off-Street Parking”
- “2.2.1. Entrances”
- “3.1.2. Exterior Lighting”
- “3.2.2. Two-Way Communication Systems”
- “3.2.4. Public Address Systems”
- “3.2.6. Accessible Public Telephones”
- “3.3.6. Fire and Life Safety”

### Related References

- [Complete Streets Guidelines](#)
- [Road Safety](#)
- [Tactile Walking Surface Indicators](#)
- [Toronto Green Standard](#)
- [Toronto Multi-Use Trail Design Guidelines](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)

### Key Considerations

#### Location

Safety and security should be provided along an exterior *accessible path of travel* and provided in areas including exterior paths of travel to *entrances* and exits, parking, vehicular and departure areas.

#### Lighting

Lighting should be provided to enhance safety and security.

#### Communication Devices

Communication devices should be provided to enhance safety and security so that all individuals can access assistance.

They should include two-way communication systems such as public telephones, intercoms and/or emergency call systems. All devices should be designed to coordinate with interior public address or security address systems.

### Emergency Plans

Emergency plans should be provided to enhance safety and security and be designed to consider the needs and provide appropriate assistance for all individuals. They should be integrated into the fire protection and life safety emergency plans.

### Requirements

#### (1) Location:

Safety and security features should be located, “[Figure 1.1.12-A Safe and Secure Areas](#)”, at:

- (a) Exterior paths of travel to *entrances* and exits that meet the criteria in section “[1.1.4. Exterior Paths of Travel to Entrances and Exits](#)”; and
- (b) *Off-street parking* that meets the criteria in section “[1.3.1. Off-Street Parking](#)”.

#### (2) Lighting:

Safety and security features should provide lighting that:

- (a) Has custom settings;
- (b) Is designed to minimize *glare*;
- (c) Meets the criteria in section “[3.1.2. Exterior Lighting](#)”; and
- (d) Meets the criteria in the [Toronto Green Standard](#) with regard to the dark night sky.

#### (3) Communication Devices:

Safety and security features should provide communication devices that include:

- (a) Two-way communication systems that:
  - (i) Are connected to a central monitoring station; and
  - (ii) Meet the criteria in section “[3.2.2. Two-Way Communication Systems](#)”;
- (b) Public Address Systems that:
  - (i) Amplify into the exterior site; and
  - (ii) Meet the criteria in section “[3.2.4. Public Address Systems](#)”;
- (c) Public telephones that:
  - (i) Are located at an *accessible entrance*; and
  - (ii) Meet the criteria in section “[3.2.6. Accessible Public Telephones](#)”; and
- (d) Personal alarm devices for persons who may reside on site or regular visitors.

#### (4) Emergency Plans:

Safety and security features should provide emergency plans that:

- (a) Meet the criteria in section “[3.3.6. Fire and Life Safety](#)”.



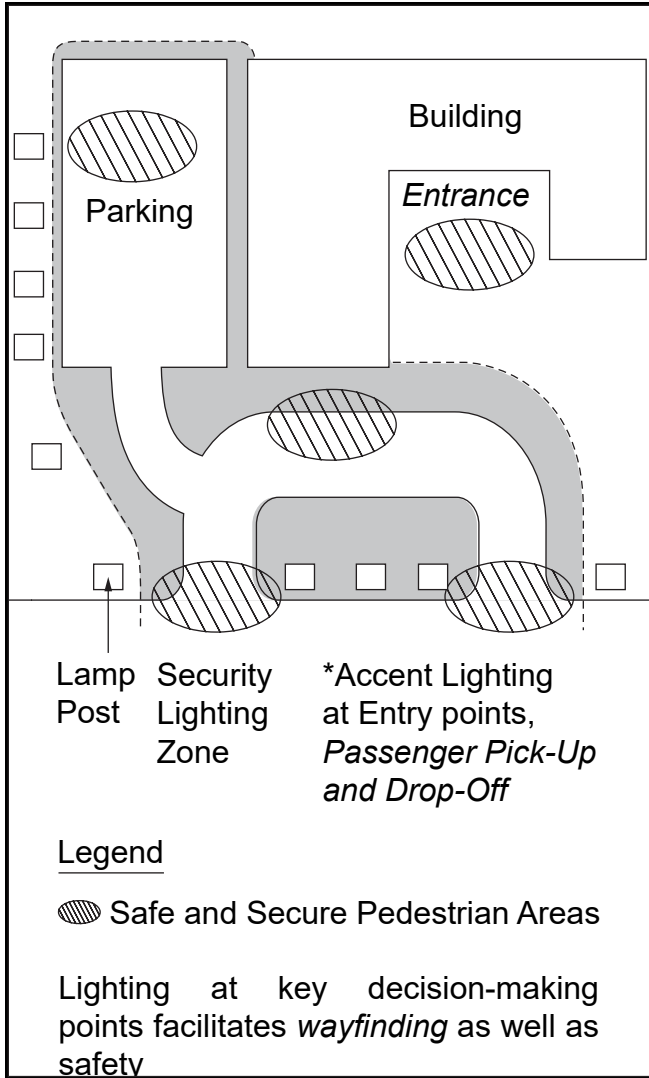


Figure 1.1.12-A Safe and Secure Areas



# 1.2. Pedestrian Crossings and Signals

## Section Summary

This section reviews the *accessible* design requirements for *pedestrian crossings* and control signals intended for use by the public and City staff. Elements such as *tactile attention indicators* and *accessible pedestrian signals* are features designed specifically to provide additional cues to persons with low or no vision about how to better navigate the *pedestrian crossings*. *Curb ramps* or *depressed curbs* are crucial to allow persons using *mobility devices* to transition between the exterior *accessible path of travel*, or *pedestrian clearway*, and the vehicular path.

## Contents in Section

- 1.2.1. Pedestrian Crossings**
- 1.2.2. Accessible Pedestrian Signals**
- 1.2.3. Traffic Islands**
- 1.2.4. Curb Ramps**
- 1.2.5. Depressed Curbs**

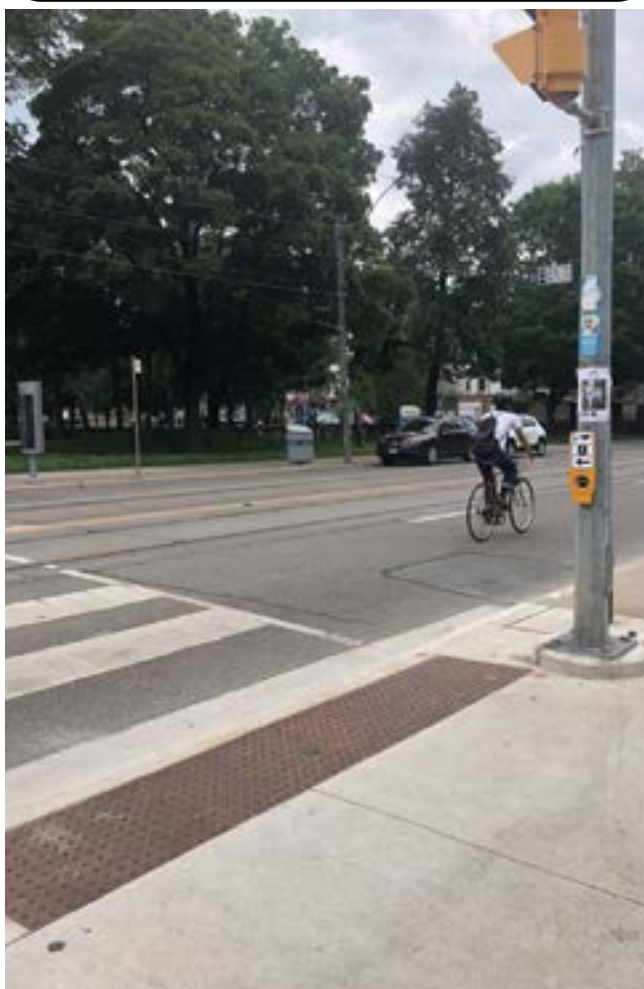
## 1.2.1. Pedestrian Crossings

### Rationale

*Pedestrian crossings* provide a designated area to allow pedestrians to cross the roadway. *Pedestrian crossings* should be free of all obstacles to ensure a clear path of travel. Features, such as *accessible pedestrian signals*, traffic islands on the public right of way, *curb ramps*, *depressed curbs* and pavement markings, all provide navigational cues that enhance safety for all individuals.

### Application

The scope of this section applies to *pedestrian crossings* at controlled and uncontrolled intersections.



### Related Sections

- “1.2.2. Accessible Pedestrian Signals”
- “1.2.3. Traffic Islands”
- “1.2.4. Curb Ramps”
- “1.2.5. Depressed Curbs”

### Related References

- [Accessible Pedestrian Signals](#)
- [Complete Streets Guidelines](#)
- [Construction Specifications and Drawings for Road Works](#)
- [Construction Specifications and Drawings for Traffic Control Devices](#)
- [Streetscape Manual](#)
- [T-310.030-5 Zebra Pavement Marking Detail At Signalized Intersections](#)
- [T-310.030-7 Signalized Intersection Configurations of Pedestrian Crossings](#)
- [T-310.030-8 Controlled Non Signalized Intersection Configuration of Pedestrian Crossings](#)
- [T-310.030-9 Location of Dropped Curbs at Controlled Intersections](#)
- [T-310.030-10 Tactile Walking Surface Indicator and Curb Ramp Detail](#)
- [T-310.030-11 Tactile Walking Surface Indicator and Depressed Curb Detail](#)
- [Tactile Walking Surface Indicators](#)

### Key Considerations

#### Design

*Pedestrian crossings* should be designed to meet the criteria in the City of Toronto’s [Construction Specifications and Drawings for Road Works](#).

## Requirements

### (1) Design:

*Pedestrian crossings* should be designed to:

- (a) Have pavement marking details at signalized intersections that meet the criteria in [T-310.030-5 Zebra Pavement Marking Detail At Signalized Intersections](#);
- (b) Have signalized intersection configurations of *pedestrian crossings* that meet the criteria in [T-310.030-7 Signalized Intersection Configurations of Pedestrian Crossings](#);
- (c) Have controlled non signalized intersection configurations of *pedestrian crossings* that meet the criteria in [T-310.030-8 Controlled Non Signalized Intersection Configuration of Pedestrian Crossings](#);
- (d) Have *accessible pedestrian signals* for signalized *pedestrian crossings* that meet the criteria in section “1.2.2. [Accessible Pedestrian Signals](#)”;
- (e) Where traffic islands are provided, they should meet the criteria in section “1.2.3. [Traffic Islands](#)”; and
- (f) Have *dropped curbs* that:
  - (i) Meet the criteria in section “1.2.4. [Curb Ramps](#)”; or
  - (ii) Meet the criteria in section “1.2.5. [Depressed Curbs](#)”.

## 1.2.2. Accessible Pedestrian Signals

### Rationale

*Accessible pedestrian signals* should provide audible and vibro-*tactile* cues to help persons with low or no vision know when they have the right-of-way to cross the roadway.

### Application

The scope of this section applies to control signals at signalized intersections and *pedestrian crossings*.



### Related Sections

- “1.2.1. Pedestrian Crossings”

### Related References

- [Accessible Pedestrian Signals](#)
- [Complete Streets Guidelines](#)
- [Construction Specifications and Drawings for Traffic Control Devices](#)
- [Highway Traffic Act](#)
- [Guidelines for Understanding, Use and Implementation of Accessible Pedestrian Signals](#)
- [Ontario Traffic Manuals](#)

### Key Considerations

#### Location

*Accessible pedestrian signals* should be located at all signalized *pedestrian crossings*, in order to guide pedestrians, especially persons with low or no vision, in crossing the roadway.

#### Controls

*Accessible pedestrian signals* should provide controls that have audible walk indicators and that are programmed to distinguish between *pedestrian crossing* directions, north to south, or east to west, using different audible tones in order to provide clear navigational cues to persons with low or no vision. Vibro-*tactile* walk indicators provide a *tactile* cue to help persons with low or no vision know when the walk indicator is on and that they have the right-of-way to cross the roadway. The crossing time at *pedestrian crossings* should consider the needs of anticipated individuals including persons with disabilities and persons using *mobility devices*, persons with limited mobility and/or stamina such as older adults.

Controls such as push buttons should be connected to an *accessible path of travel* or *pedestrian clearway*, should have a *clear ground space*, and be set back from the vehicular roadway to ensure that persons using *mobility devices* can activate the control safely.

## Requirements

### (1) Location:

*Accessible pedestrian signals*, should be located at:

- (a) *Pedestrian crossings* that meet the criteria in section "1.2.1. Pedestrian Crossings".

### (2) Controls:

*Accessible pedestrian signals* should:

- (a) Have audible walk indicators, such as chirping and cuckoos;
- (b) Have visual walk indicators, such as flashing lights;
- (c) Have controls that:
  - (i) Have *vibro-tactile* walk indicators to alert pedestrians when the walk indicator is on;
  - (ii) Have arrows that align with the direction of the *pedestrian crossing* to help pedestrians locate and align themselves with the crossing;
  - (iii) Are installed on a single post located within 1500 mm of the edge of the curb for each *pedestrian crossing*; and
  - (iv) Are mounted on a single post 1050 mm maximum measured vertically from the ground surface; or
- (v) Where two *accessible* pedestrian control signals are installed on the same corner, they should be a minimum 3000 mm apart;
- (vi) Where the criteria in (v) cannot be met because of *site constraints* or existing infrastructure, two *accessible* pedestrian control signal assemblies can be installed on a single post, and when this occurs, a verbal announcement should clearly state which crossing is active; and
- (vii) Have locator tones.

### 1.2.3. Traffic Islands

#### Rationale

Traffic islands are areas that allow persons to temporarily pause, wait or rest as they cross an intersection. These are especially important at lengthy crossings and large intersections. Traffic islands are a part of *pedestrian crossings* and are an extension of an exterior *accessible path of travel*. Features that make traffic islands *accessible* include clear path widths, and *tactile* and audible elements to allow pedestrians to safely navigate to and from the area. These should be built of materials and finishes that are easily distinguishable from the surrounding paving.

#### Application

The scope of this section applies to traffic islands on the public right of way at *pedestrian crossings*.



#### Related Sections

- “1.2.1. Pedestrian Crossings”

#### Related References

- [Complete Streets Guidelines](#)
- [Construction Specifications and Drawings for Road Works](#)
- [Construction Specifications and Drawings for Traffic Control Devices](#)
- [Streetscape Manual](#)
- [T-310.030-5 Zebra Pavement Marking Detail At Signalized Intersections](#)
- [T-310.030-7 Signalized Intersection Configurations of Pedestrian Crossings](#)
- [T-310.030-8 Controlled Non Signalized Intersection Configuration of Pedestrian Crossings](#)
- [T-310.030-9 Location of Dropped Curbs at Controlled Intersections](#)
- [T-310.030-10 Tactile Walking Surface Indicator and Curb Ramp Detail](#)

#### Key Considerations

##### Design

Traffic islands should be designed to meet the criteria in the City of Toronto’s [Construction Specifications and Drawings for Road Works](#).

#### Requirements

##### (1) Design:

Traffic islands should be designed to:

- Have a waiting area that has *colour/ brightness contrast* from the surrounding environment;



- (b) Have signalized intersection configurations of *pedestrian crossings* that meet the criteria in [T-310.030-7 Signalized Intersection Configurations of Pedestrian Crossings](#); and
- (c) Meet the criteria in section “1.2.1. Pedestrian Crossings”.

## 1.2.4. Curb Ramps

### Rationale

*Curb ramps* allow persons using *mobility devices* to overcome the transition between levels at grade and elevation changes between an exterior *accessible path of travel*, or *pedestrian clearway*, and the vehicular roadway.

### Application

The scope of this section applies to *curb ramps* provided at grade and elevation changes located at *pedestrian crossings*, *accessible parking* or *passenger pick-up and drop-off*. The use of *curb ramps* should be evaluated, based upon the location's use and level of pedestrian traffic, during the design phase in consultation with City of Toronto staff and end users.



### Related Sections

- “1.2.1. Pedestrian Crossings”
- “1.2.3. Traffic Islands”

### Related References

- [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#)
- [Complete Streets Guidelines](#)
- [Construction Specifications and Drawings for Road Works](#)
- [T-310.030-5 Zebra Pavement Marking Detail At Signalized Intersections](#)
- [T-310.030-7 Signalized Intersection Configurations of Pedestrian Crossings](#)
- [T-310.030-8 Controlled Non Signalized Intersection Configuration of Pedestrian Crossings](#)
- [T-310.030-9 Location of Dropped Curbs at Controlled Intersections](#)
- [T-310.030-10 Tactile Walking Surface Indicator and Curb Ramp Detail](#)

### Key Considerations

#### Design

*Curb ramps* should be designed to meet the criteria in the City of Toronto's [Construction Specifications and Drawings for Road Works](#)

## Requirements

### (1) Design:

*Curb ramps* should be designed to:

- (a) Have a clear width that:
  - (i) Is 3000 mm minimum for signalized intersections;
  - (ii) Is 2500 mm minimum for non-signalized intersections; or
  - (iii) Is 1500 mm minimum, exclusive of flared sides, for parking and loading zones;
- (b) Where a *curb ramp* is perpendicular to the path of travel, be connected to a *pedestrian clearway* that has a clear width from the start of the *curb ramp* to the back of the *sidewalk* that is 1200 mm minimum, 1500 mm preferred;
- (c) Have a *running slope* that is 1:20 (5%) typical, 1:10 (10%) maximum;
- (d) Have a *cross slope* that is 1:50 (2%) maximum;
- (e) Have *tactile attention indicators* that:
  - (i) Are located at the bottom of the *curb ramp* and behind the curb;
  - (ii) Are 200 mm set back from the face of the curb;
  - (iii) Are 610 mm depth;
  - (iv) Extend the full clear width of the *curb ramp*; and
  - (v) Have *colour/brightness contrast* from adjacent surfaces;
- (f) Align with the direction of travel; and
- (g) Have *tactile walking surface indicator* and *curb ramp* details that meet the criteria in [T-310.030-10 Tactile Walking Surface Indicator and Curb Ramp Detail](#).

## 1.2.5. Depressed Curbs

### Rationale

*Depressed curbs* allow persons using *mobility devices* to overcome the transition between levels at grade and elevation changes between the exterior *accessible path of travel*, or *pedestrian clearway*, and the vehicular roadway.

### Application

The scope of this section applies to *depressed curbs* provided at grade and elevation changes located at *pedestrian crossings*, *accessible parking* or *passenger pick-up and drop-offs*. The use of *depressed curbs* should be evaluated, based upon the location's use and level of pedestrian traffic, during the design phase in consultation with the City of Toronto staff and end users.



### Related Sections

- “1.2.1. Pedestrian Crossings”
- “1.2.3. Traffic Islands”

### Related References

- [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#)
- [Complete Streets Guidelines](#)
- [Construction Specifications and Drawings for Road Works](#)
- [T-310.030-5 Zebra Pavement Marking Detail At Signalized Intersections](#)
- [T-310.030-7 Signalized Intersection Configurations of Pedestrian Crossings](#)
- [T-310.030-8 Controlled Non Signalized Intersection Configuration of Pedestrian Crossings](#)
- [T-310.030-9 Location of Dropped Curbs at Controlled Intersections](#)
- [T-310.030-11 Tactile Walking Surface Indicator and Depressed Curb Detail](#)

### Key Considerations

#### Design

*Depressed curbs* should be designed to meet the criteria in the City of Toronto's [Construction Specifications and Drawings for Road Works](#).

## Requirements

### (1) Design:

*Depressed curbs* should be designed to:

- (a) Have a clear width that:
  - (i) Is 3000 mm minimum for signalized intersections; and
  - (ii) Is 2500 mm minimum for non signalized intersections;
- (b) Have a *running slope* that is 1:20 (5%); and
- (c) Have *tactile walking surface indicator* and *depressed curb* details that meet the criteria in [T-310.030-11 Tactile Walking Surface Indicator and Depressed Curb Detail](#).



# 1.3. Parking, Vehicular Arrival and Departure Areas

## Section Summary

This section reviews the *accessible* design requirements for *off-street parking, passenger pick-up and drop-off*, and public transit areas intended for use by the public and City staff.

## Contents in Section

### 1.3.1. Off-Street Parking

### 1.3.2. Passenger Pick-Up and Drop-Offs

### 1.3.3. Public Transit Areas

### 1.3.1. Off-Street Parking

#### Rationale

*Off-street parking* should provide *accessible* parking spaces. *Accessible* parking spaces should provide a series of elements that make it easier for drivers and passengers, including persons using *mobility devices*, to move from the vehicle to their desired destination.

#### Application

This section applies to *off-street parking* or parking lots including covered and uncovered surface, multi-storey or underground parking lots or structure, as well as existing parking structures and surface parking lots being re-surfaced, retrofitted or rehabilitated. This section does not apply to *on-street parking*.



#### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.4. Exterior Paths of Travel to Entrances and Exits”
- “1.2.4. Curb Ramps”
- “1.2.5. Depressed Curbs”
- “2.6.6. Self-Service Kiosks”
- “3.2.1. Signage and Wayfinding Systems”
- “3.3.3. Controls and Operating Mechanisms”

#### Related References

- [Accessible Parking Permits](#)
- [City of Toronto Zoning By-law 569-2013, as amended \(Office Consolidation\)](#)
- [Greening Surface Parking Lots](#)
- [Section 11, Regulation 581 of the Revised Regulations of Ontario, 1990 \(Accessible Parking for Persons with Disabilities\) made under the Highway Traffic Act. O. Reg 413/12, s. 6](#)
- [Toronto Green Standard](#)
- [Toronto Multi-Use Trail Design Guidelines](#)
- [Toronto Municipal Code Chapter 743, Streets and Sidewalks, Use of](#)
- [Toronto Parking Authority, Accessibility Policies and Multi-Year Accessibility Plan](#)

#### Key Considerations

##### Amount

*Accessible* parking spaces should be provided in proportion to the total amount of parking spaces available.



Additional *accessible* parking spaces should be provided in locations where a higher proportion of seniors, older adults, or persons using *mobility devices* are anticipated such as at parks, recreation, and community centres, and parking lots that serve health care facilities.

### Location

*Off-street parking* should be located within close proximity to an *accessible entrance* to ensure persons can access the building safely and efficiently.

### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at *off-street parking* to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

### Slopes

Where slopes are provided at *off-street parking* they should be designed to have a *gradual transition* as they allow for better control and ease of movement for persons using *mobility devices*.

### Surfaces

A level ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling. Where gratings and grilles are provided, the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

### Parking Spaces

*Accessible* parking spaces should be provided that permit larger-sized personal vehicles to park. Additional space should be provided when a vehicle is parked in a space beside a wall or obstruction, such as a fixed object, column, bollard, fence or service pipe. *Accessible* parking spaces should be perpendicular or parallel to the drive aisle.

### Curbs

*Curb ramps* or *depressed curbs* should be provided to allow persons using *mobility devices* to overcome the transition between levels at grade and elevation changes between an exterior *accessible path of travel* and the *access aisle*.

### Access Aisles

*Access aisles* should be provided to create a designated area where drivers and passengers, including persons using *mobility devices*, can safely move from their parked vehicle to their desired destination. They may be shared between two *accessible* parking spaces.

### Bollards

Bollards should be provided at *depressed curbs* to protect persons on an exterior *accessible path of travel*.

### Pavement Markings

Pavement markings should be provided for *accessible* parking spaces and *access aisles* to clearly identify the designated areas.

### Signage

*Signage* for *accessible* parking spaces should be provided that is designed to include the International Symbol of Access (ISA) and identify which are designated van *accessible*. *Signage* should be mounted at a height that is visible to the driver.

### Ticketing Dispensers

Ticketing dispensers should be provided that connect to an *accessible path of travel* and are in close proximity to *accessible* parking spaces. They should include *accessible* controls and operating mechanisms so that they can be used by persons using *mobility devices*, persons with limited dexterity and persons with low vision.

### Requirements

#### (1) Amount:

*Off-street parking* should provide *accessible* parking spaces that:

- (a) Meet the criteria in “Table 1.3.1-A Number of Accessible Parking Spaces Required”.

#### (2) Location:

*Off-street parking* should be located:

- (a) Within 30 metres from the main *accessible entrance* and/or any other *accessible entrances*; and
- (b) On at least one level of a multi-storey or underground parking area.

#### (3) Accessible Paths of Travel:

*Off-street parking* should provide an exterior *accessible path of travel* that:

- (a) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”.

#### (4) Slopes:

Where slopes, “Figure 1.3.3-B Accessible Transit Shelter”, are provided at *off-street parking*, they should have:

- (a) A 1:20 (5%) maximum *running slope*; and
- (b) A 1:50 (2%) maximum *cross slope*.

#### (5) Surfaces:

*Off-street parking* should provide surfaces that:

- (a) Are level, firm, stable, and slip-resistant; and
- (b) Have openings that:
  - (i) Are located outside of the *accessible* parking spaces and *access aisles*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and
  - (iv) Do not allow passage of an object that has a diameter of 13 mm maximum.

#### (6) Parking Spaces:

*Off-street parking* should provide *accessible* parking spaces, “Figure 1.3.1-C Accessible Parking Spaces - Configuration 1” and “Figure 1.3.1-E Accessible Parking Spaces - Configuration 2”, that:

- (a) Are 3400 mm minimum wide;
- (b) Are increased by 300 mm for each side of the parking space that is beside a wall or obstruction;
- (c) Are 5600 mm minimum long; and
- (d) Have an overhead clearance that is 2200 mm minimum, “[R-1.3.1. (6)(d)]”

#### (7) Curbs:

*Off-street parking* should provide curbs at *accessible* parking spaces that include:

- (a) *Curb ramps* that meet the criteria in section “1.2.4. Curb Ramps”; and
- (b) *Depressed curbs* that meet the criteria in section “1.2.5. Depressed Curbs”.

**(8) Parallel Parking Spaces:**

*Off-street parking* should provide *accessible* parallel parking spaces, “Figure 1.3.1-D Parallel Parking”, that:

- (a) Are 3400 mm minimum wide;
- (b) Are increased by 300 mm for each side of the parking space that is beside a wall or obstruction;
- (c) Are 7100 mm minimum long; and
- (d) Have an overhead clearance that is 2200 mm minimum, “[R-1.3.1. (8)(d)]”.

**(9) Access Aisles:**

*Off-street parking* should provide *access aisles*, “Figure 1.3.1-F Access Aisle Detail”, that:

- (a) Are located at each *accessible* parking space;
- (b) Are 1500 mm minimum wide;
- (c) Extend the full length for a forward approach, or full width for a parallel *accessible* parking space;
- (d) Have an overhead clearance that is 2200 mm minimum, “[R-1.3.1. (9)(d)]”
- (e) Are marked with high *colour/brightness contrast* diagonal lines; and
- (f) Connect to an exterior *accessible path of travel*.

**(10) Bollards:**

*Off-street parking* should provide bollards that:

- (a) Are provided at *depressed curbs*; and
- (b) Have a clear width that is 1500 mm minimum.

**(11) Pavement Markings:**

*Off-street parking* should provide pavement markings for *accessible* parking spaces, “Figure 1.3.1-A Pavement Markings”, that:

- (a) Are slip-resistant;
- (b) Have the International Symbol of Access that has:
  - (i) A 1400 mm by 1400 mm square inclusive of 100 mm thick white border;
  - (ii) A blue background;
  - (iii) A 880 mm wide by 1000 mm tall pictogram field centrally located; and
  - (iv) A 100 mm thick pictogram.
- (c) Have painted lines and/or distinctive paving surfaces that have:
  - (i) 150 mm thick lines; and
  - (ii) 400 mm of space between the center-line of diagonal lines for the *access aisles*.
- (d) Are exempt in locations where there is not a paved or poured surface, such as in parking lots found in the *trail* systems or parks.

**(12) Signage:**

*Off-street parking* should provide *signage*, “Figure 1.3.1-G Parking Signage”, for *accessible* parking spaces, that:

- (a) Has the International Symbol of Access;
- (b) Has “Van Accessible” provided on 50% of the spaces available; and
- (c) Is mounted 1500 mm to 2500 mm measured from the center line of the sign.

**(13) Ticketing Dispensers:**

Off-street parking should provide ticketing dispensers that:

- (a) Are connected to an exterior *accessible path of travel* that meets the criteria in section “1.1.4. Exterior Paths of Travel to Entrances and Exits”;
- (b) Have an adjacent *clear ground space* of 900 mm by 1500 mm;
- (c) Are located:
  - (i) In close proximity to the available *accessible* parking spaces; and
  - (ii) In well-lit areas for safety and legibility of the device; and
- (d) Have controls and operating mechanisms that:
  - (i) Are 1050 mm maximum;
  - (ii) Have *tactile* features;
  - (iii) Have *colour/brightness contrast*;
  - (iv) Meet the criteria in section “3.3.3. Controls and Operating Mechanisms”; and
  - (v) Meet the criteria in section “2.6.6. Self-Service Kiosks”.

Table 1.3.1-A Number of Accessible Parking Spaces Required

Total Parking Spaces	Number of Accessible Parking Spaces Required
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	6
151 to 200	7
201 to 250	8
251 to 300	9
301 to 350	10
351 to 400	11
401 to 450	12
451 to 500	13
501 to 550	14
551 to 600	15
601 to 650	16
651 to 700	17
701 to 750	18
751 to 800	19
801 to 850	20
851 to 900	21
901 to 950	22
951 to 100	23
1000 and over	11 spaces plus 1% of the total number of spaces (rounded up to the next whole number).

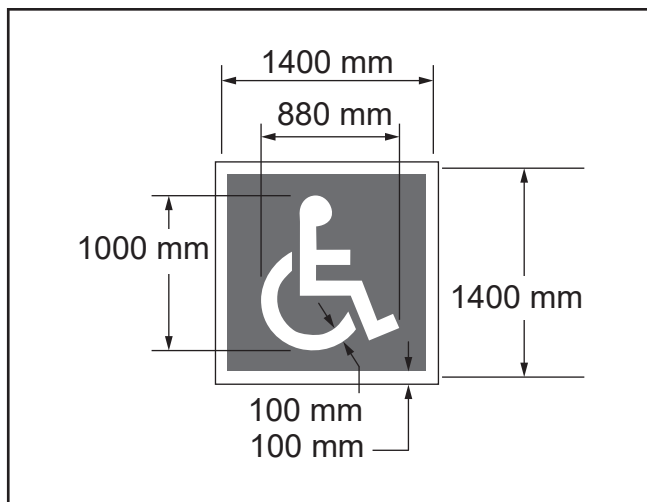


Figure 1.3.1-A Pavement Markings

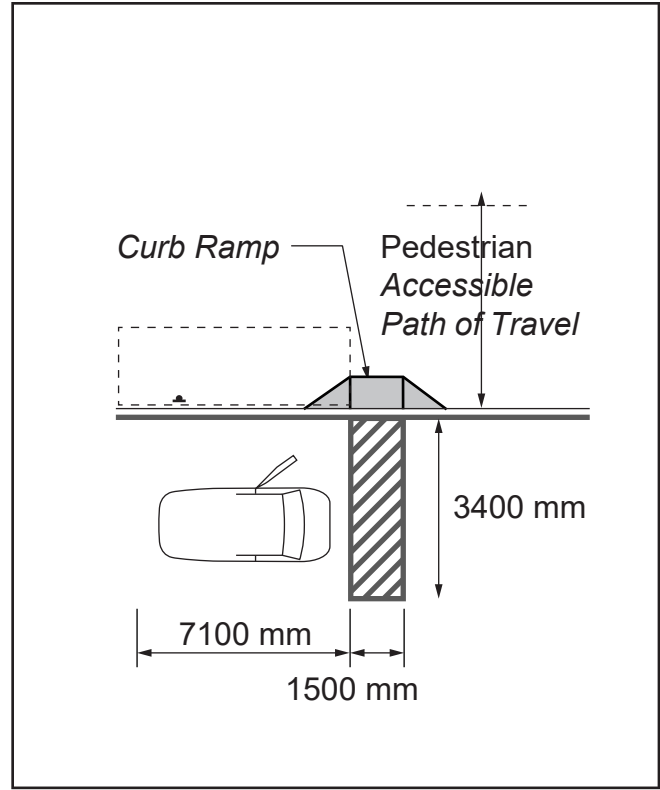
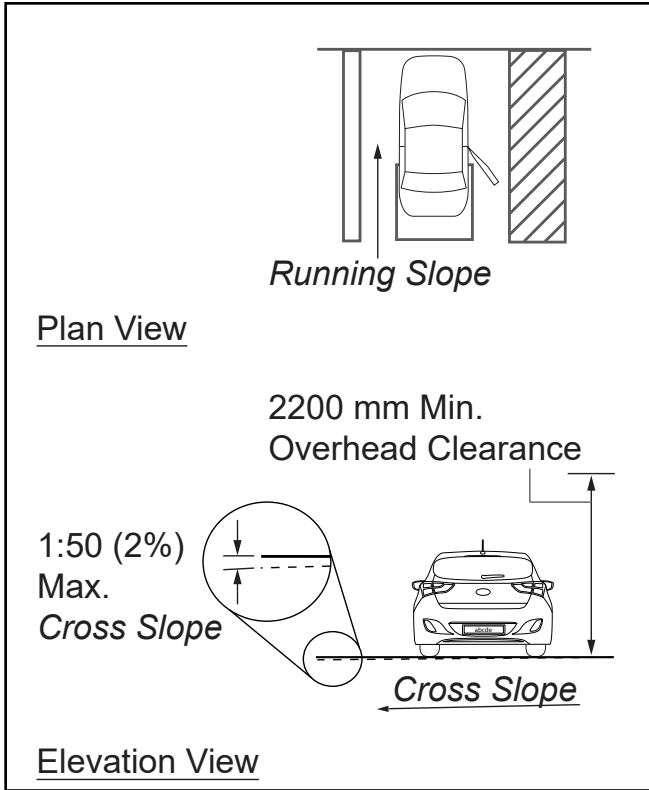


Figure 1.3.1-B Slopes at Accessible Parking

Figure 1.3.1-D Parallel Parking

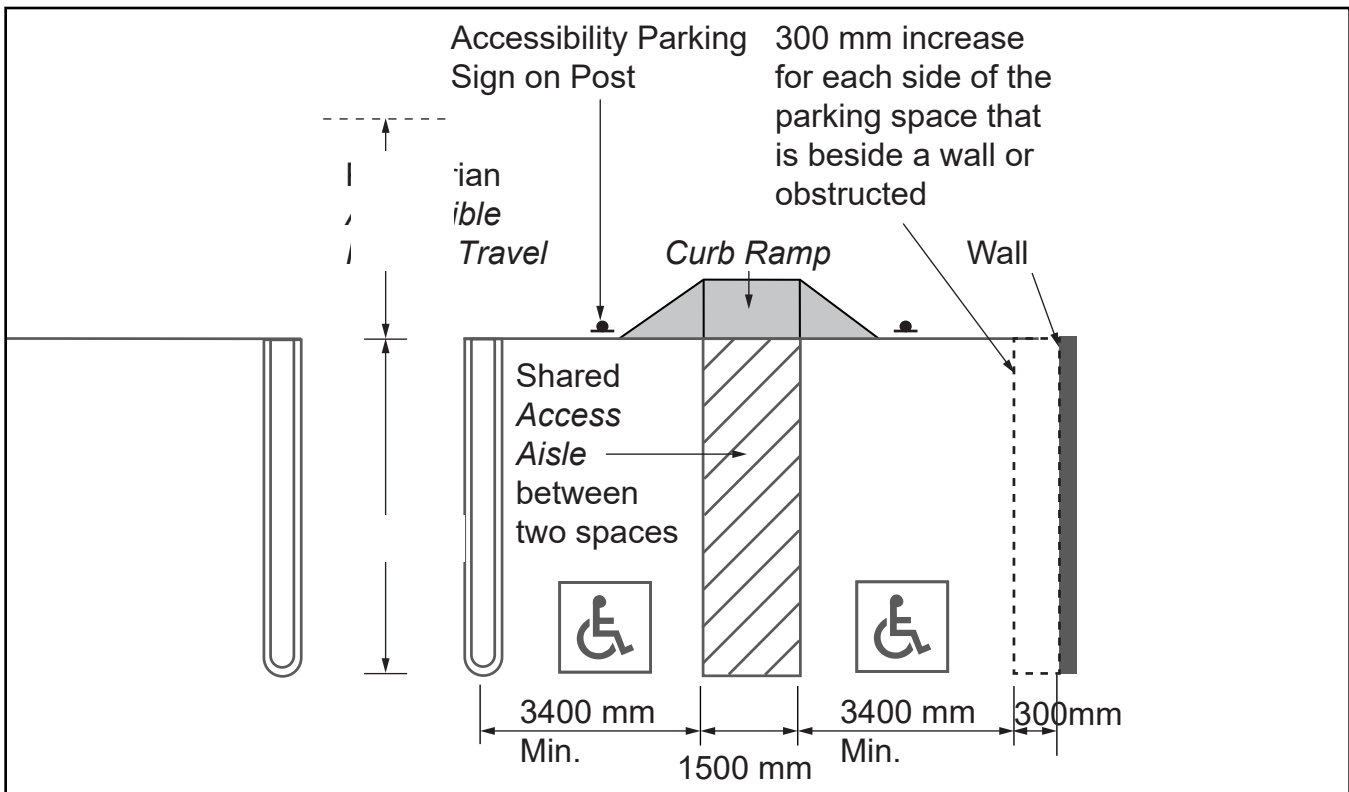


Figure 1.3.1-C Accessible Parking Spaces - Configuration 1

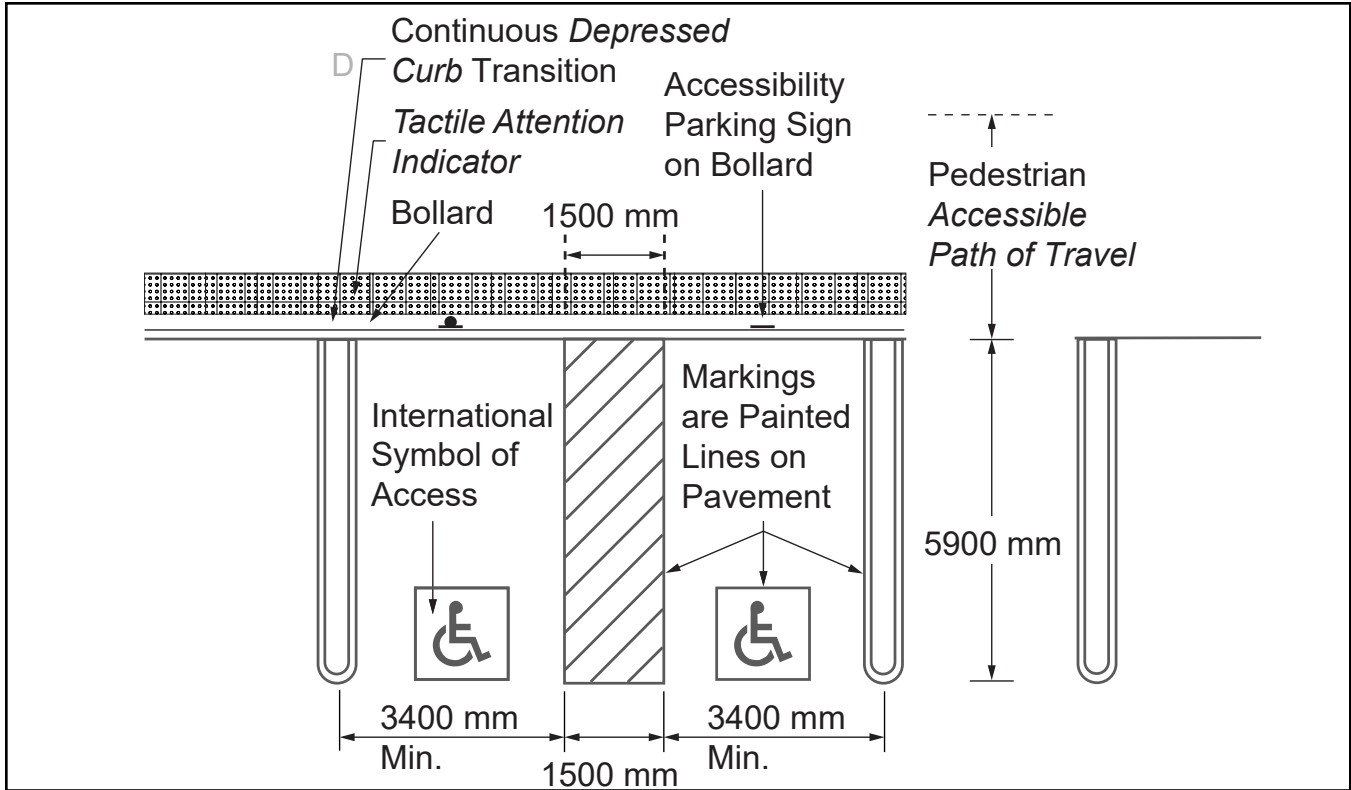


Figure 1.3.1-E Accessible Parking Spaces - Configuration 2

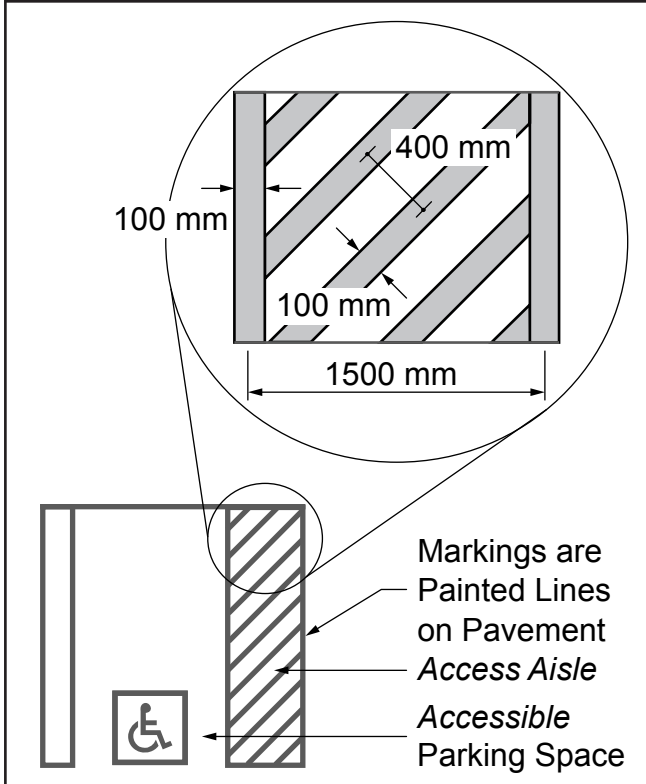


Figure 1.3.1-F Access Aisle Detail

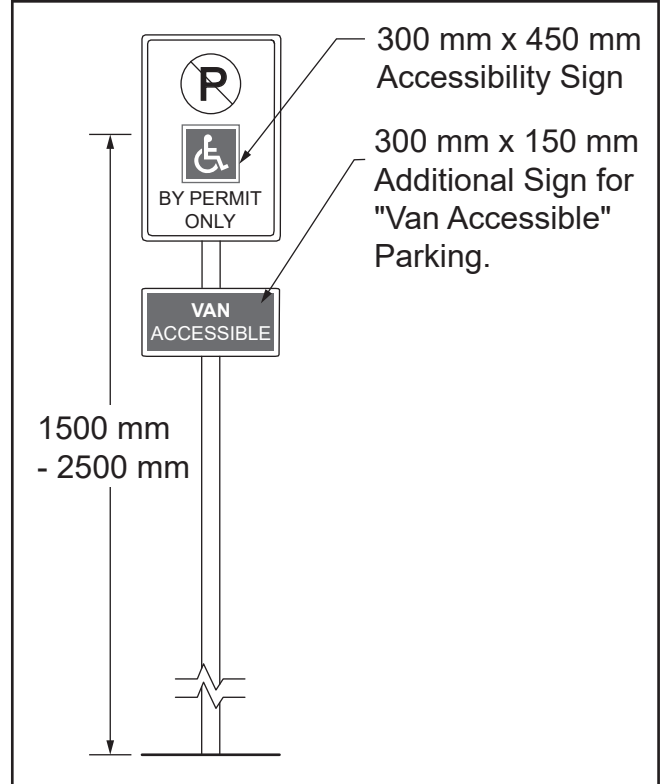


Figure 1.3.1-G Parking Signage

## 1.3.2. Passenger Pick-Up and Drop-Offs

### Rationale

*Passenger pick-up and drop-offs (PPUDO)*, provide designated areas for vehicles to safely stop for a limited amount of time and allow persons to board onto or disembark from the vehicle. They are typically designed with *curb ramps* or *depressed curbs* to allow persons using *mobility devices* to overcome the transition between levels at grade and elevation changes between the *access aisles* and the exterior *accessible path of travel*, or *pedestrian clearway*.

### Application

The scope of this section applies to *passenger pick-up and drop-offs (PPUDO)* provided for personal vehicles, public transit vehicles such as TTC Wheel-Trans bus, taxis or ride-shares, and valet or service parking.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.4. Exterior Paths of Travel to Entrances and Exits”
- “1.2.4. Curb Ramps”
- “1.2.5. Depressed Curbs”
- “3.2.1. Signage and Wayfinding Systems”

### Related References

- [Reserved]

### Key Considerations

#### Location

*PPUDO*'s should be located within close proximity to an *accessible entrance* to ensure persons can access the building safely and efficiently.

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at *PPUDO*'s to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

#### Slopes

Where slopes are provided at *PPUDO*'s, they should be designed to have a *gradual transition* as they allow for better control and ease of movement for persons using *mobility devices*.

#### Surfaces

A level ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*.

The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling. Where gratings and grilles are provided, the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

### Access Aisles

PPUDO's should provide an *access aisle* to allow for a designated area where a person using a *mobility device* can safely transfer from their parked vehicle.

### Pavement Markings

PPUDO's should provide pavement markings to identify the *access aisle* from the vehicle pull-up space.

### Dropped Curbs

PPUDO's should provide *curb ramps* or *depressed curbs* to allow persons using *mobility devices* to overcome the transition between levels at grade and elevation changes between an exterior *accessible path of travel* and the *access aisle*. Some *accessible* vehicles require curbs to have an area to deploy their *ramp*. Designers should consult their clients when designing a PPUDO to understand if a *curb ramp* or *depressed curb* should be provided.

### Bollards

Bollards should be provided at *depressed curbs* to protect persons on an exterior *accessible path of travel*.

### Signage

PPUDO's should provide *signage* that identifies the area as an area for vehicles to safely stop for a limited amount of time to allow persons to disembark from the vehicle. *Signage* should also identify emergency routes that are connected to the area.

### Emergency Routes

Where emergency routes designed for emergency vehicles are provided, they should not obstruct an exterior *accessible path of travel* to *accessible entrances*.

### Design

The design should provide space for larger vehicles such as a TTC Wheel-Trans bus, *accessible* taxi or van to access the *lay-by* space and include overhead clearance for all *accessible* vehicles from the ground to any overhead objects, such as trees, *signage* and/or canopies.

### Requirements

#### (1) Location:

PPUDO's should be located:

- (a) Within 30 metres from the main *accessible entrance* and/or any other *accessible entrances*; and
- (b) Within close proximity to a *ramp*, when a *ramp* is a part of the *entrance*.

#### (2) Accessible Path of Travel:

PPUDO's should provide an *accessible path of travel* that:

- (a) Meets the criteria in section "1.1.1. Exterior Accessible Paths of Travel".



**(3) Slopes:**

Where slopes are provided at *PPUDO*'s, they should have:

- (a) A 1:20 (5%) maximum *running slope*; and
- (b) A 1:50 (2%) maximum *cross slope*.

**(4) Surfaces:**

*PPUDO*'s should provide surfaces that:

- (a) Are level, firm, stable and slip-resistant; and
- (b) Have openings that:
  - (i) Are located outside of the *PPUDO* and *access aisles*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and
  - (iv) Do not allow passage of an object that has a diameter of 13 mm maximum.

**(5) Access Aisles:**

*PPUDO*'s should provide an *access aisle* that:

- (a) Is located adjacent and parallel to the vehicle pull-up space;
- (b) Connects to an exterior *accessible path of travel*;
- (c) Is 2440 mm wide minimum and extends the full length of the *PPUDO*;
- (d) Is marked with slip-resistant, high *colour/brightness contrast* diagonal lines; and
- (e) Has an overhead clearance that is 5000 mm minimum.

**(6) Pavement Markings:**

*PPUDO*'s should provide pavement markings that:

- (a) Have painted lines and/or distinctive paving surfaces that have:
  - (i) 150 mm thick lines; and
  - (ii) 400 mm of space between the center-line of diagonal lines for the *access aisles*; and
- (b) Are exempt in locations where there is not a paved or poured surface, such as in parking lots found in the *trail* systems or parks.

**(7) Dropped Curbs:**

*PPUDO*'s should provide *dropped curbs* with *tactile attention indicators*, "Figure 1.3.2-C Dropped Curbs", that include:

- (a) *Curb ramps* that meet the criteria in section "1.2.4. Curb Ramps"; and/or
- (b) *Depressed curbs* that meet the criteria in section "1.2.5. Depressed Curbs".

**(8) Bollards:**

*PPUDO*'s should provide bollards that:

- (a) Are provided at *depressed curbs*;
- (b) Have a clear width of 1500 mm minimum between bollards; and
- (c) Are removable for ongoing *maintenance* operations.

**(9) Signage:**

PPUDO's should provide *signage* that:

- (a) Identifies the PPUDO and that:
  - (i) Has the International Symbol of Access; and
  - (ii) Has text that states, "Passenger Pick-Up and Drop-Off Only, No Parking";
- (b) Identifies emergency routes; and
- (c) Meets the criteria in section "3.2.1. Signage and Wayfinding Systems".

**(10) Emergency Routes:**

Where emergency routes are connected to PPUDO's, they should:

- (a) Not obstruct an exterior *accessible path of travel* to accessible entrances.

**(11) Design:**

PPUDO's, "Figure 1.3.2-A PPUDO - Design" and "Figure 1.3.2-B Overhead Clearance", should be designed to have:

- (a) Overhead clearance that is 5000 mm minimum, "[R-1.3.2. (11)(a)]";
- (b) An *access aisle* that:
  - (i) Is 7925 mm long by 3400 mm wide minimum;
  - (ii) Is located adjacent and parallel to the vehicle pull-up space; and
  - (iii) Does not overlap the exterior *accessible path of travel* on the sidewalk; and
- (c) A vehicle pull-up space that:
  - (i) Is 7925 mm long by 3400 mm wide minimum; and
  - (ii) Is located adjacent and parallel to the *access aisle*.

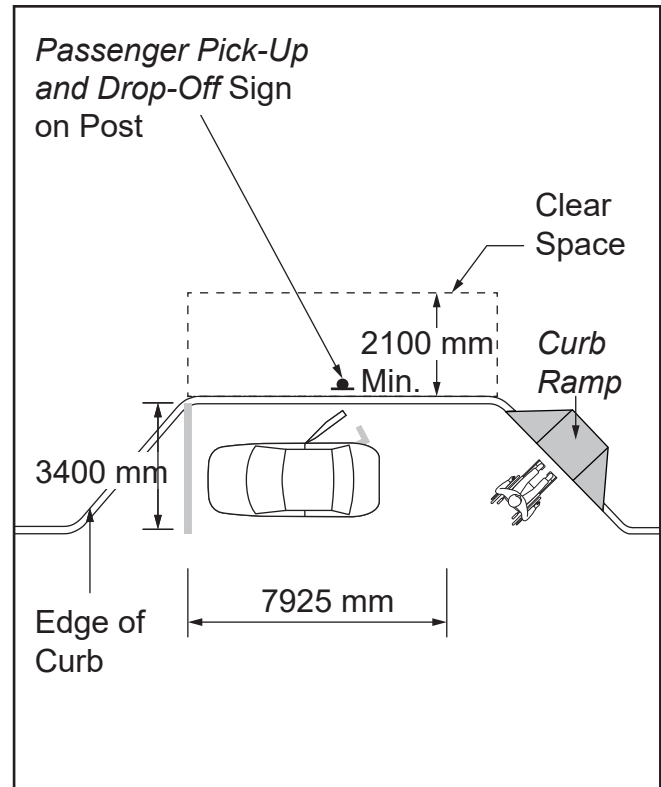


Figure 1.3.2-A PPUDO - Design

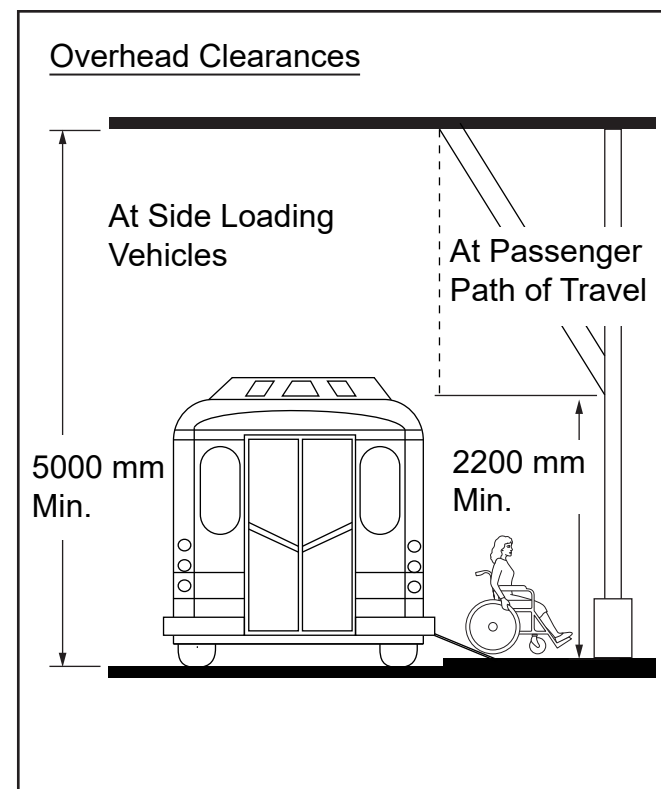


Figure 1.3.2-B Overhead Clearance

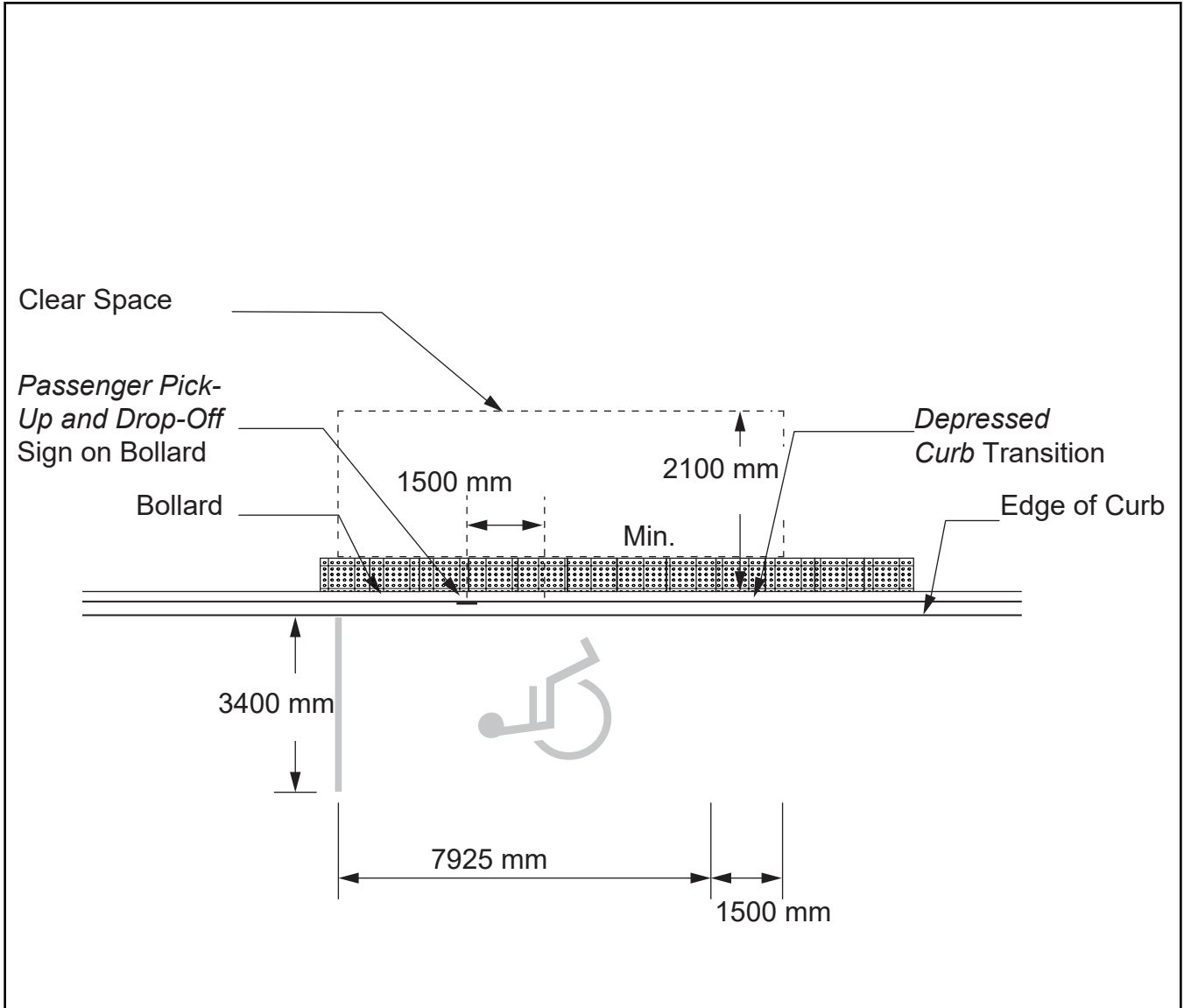


Figure 1.3.2-C Dropped Curbs

### 1.3.3. Public Transit Areas

#### Rationale

Public transit areas incorporate a system of subways, buses and streetcar routes such as those operated by the Toronto Transit Commission (TTC). Each public transportation route should include common *accessible* elements throughout stops, shelters and stations. The design of public transit areas should allow persons using *mobility devices* and persons with low or no vision to safely access and use the area.



#### Related Sections

- “1.1.9. Exterior Ramps”
- “1.1.10. Exterior Stairs”
- “1.3.1. Off-Street Parking”
- “1.5.1. Benches and Seats”
- “1.6.2. Tactile Attention Indicators”
- “1.6.3. Tactile Direction Indicators”
- “2.1.5. Elevators”
- “2.3.8. Universal Washrooms”
- “2.6.6. Self-Service Kiosks”
- “3.1.1. Interior Lighting”
- “3.2.1. Signage and Wayfinding Systems”
- “3.3.3. Controls and Operating Mechanisms”

#### Related References

- [CSA B651 Accessible Design for the Built Environment — Section 8.5.4 Transit Shelters](#)
- [TTC Bus Stop Configurations](#)
- [Vibrant Streets](#)

#### Key Considerations

##### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at public transit areas to allow for a continuous, unobstructed route providing exterior access to elements and spaces. *Clear ground spaces* for designated passenger waiting and boarding should also be connected to an *accessible path of travel*.

##### Surfaces

A level ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*.

The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling. Where gratings and grilles are provided, the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard. *Tactile attention indicators* should be provided at platforms or curb edges to communicate the transition between an exterior *accessible path of travel* into the vehicular roadway.

### Signage

*Signage* should be provided that identifies schedules, maps, general information, service details and designated waiting and boarding areas.

### Benches and Seats

Benches and seats should be provided and designed to have a variety of *accessible* options that include seating with and without back support and armrests. Where open ended benches are provided they should allow persons using *mobility devices* to side transfer. Where armrests are provided they should have rounded edges, be easily graspable and free from obstructions.

### Lighting

Lighting should be provided that enhances safety and security for passengers.

### Ticketing Dispensers

Ticketing dispensers should be provided that connect to an exterior *accessible path of travel*. They should include *accessible* controls and operating mechanisms so that they can be used by persons using *mobility devices*, persons with limited dexterity and persons with low vision.

### Stops, Shelters and Stations

Stops, shelters and stations should provide *accessible* features that enhance safety and security for passengers.

### Requirements

#### (1) Accessible Path of Travel:

Public transit areas should provide an exterior *accessible path of travel* that:

- (a) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”; and
- (b) Is connected to a *clear ground space* at designated passenger waiting and boarding areas.

#### (2) Surfaces:

Public transit areas should provide surfaces that:

- (a) Are level, firm, stable and slip-resistant;
- (b) Have openings that:
  - (i) Are located outside of an exterior *accessible path of travel*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and
  - (iv) Do not allow passage of an object that has a diameter of 13 mm maximum; and
- (c) Have *tactile attention indicators*, “Figure 1.3.3-A Transit Platform at Station”, at the edge of platform that meet the criteria in section “1.6.2. Tactile Attention Indicators”.

**(3) Signage:**

Public transit areas should provide *signage* that:

- (a) Identifies:
  - (i) Schedules;
  - (ii) Maps;
  - (iii) General information;
  - (iv) Service details; and
  - (v) Designated waiting and boarding areas; and
- (b) Meets the criteria in section “3.2.1. Signage and Wayfinding Systems”.

**(4) Benches and Seats:**

Public transit areas should provide benches and seats that

- (a) Have clear sight lines to:
  - (i) The vehicle roadway; and
  - (ii) Arriving and departing transit vehicles; and
- (b) Meet the criteria in section “1.5.1. Benches and Seats”.

**(5) Lighting:**

Public transit areas should provide lighting that:

- (a) Has levels that:
  - (i) Are 100 lux (10 ft. candles) minimum at platform level at boarding areas; and
  - (ii) Are 200 lux (20 ft. candles) minimum at platform level at all ticketing areas or at ticketing machines; and
- (b) Meet the criteria in section “3.1.1. Interior Lighting”.

**(6) Ticketing Dispensers:**

Public transit areas should provide ticketing dispensers that:

- (a) Are connected to an exterior *accessible path of travel*;
- (b) Have an adjacent *clear ground space* of 900 mm by 1500 mm;
- (c) Are located:
  - (i) In close proximity to designated waiting and boarding areas; and
  - (ii) In well-lit areas for safety and legibility of the device; and
- (d) Have controls and operating mechanisms that:
  - (i) Are 1050 mm maximum;
  - (ii) Have *tactile* features;
  - (iii) Have *colour/brightness contrast*;
  - (iv) Meet the criteria in section “3.3.3. Controls and Operating Mechanisms”; and
  - (v) Meet the criteria in section “2.6.6. Self-Service Kiosks”.

**(7) Stops, Shelters and Stations:**

Public transit areas should provide:

- (a) Stops that:
  - (i) Have a 2400 mm wide by 16 meters long passenger boarding or *ramp* deployment area for bus stops;
- (b) Shelters, “Figure 1.3.3-B Accessible Transit Shelter”, that:
  - (i) Have clear sight lines to the vehicle roadway, and arriving and departing transit vehicles; and
  - (ii) Are connected to an exterior *accessible path of travel*; and

- (c) Stations that:
- (i) Have a minimum of one *accessible entrance*;
  - (ii) Have *ramps* that meet the criteria in section “1.1.9. Exterior Ramps”;
  - (iii) Have stairs that meet the criteria in section “1.1.10. Exterior Stairs”;
  - (iv) Have elevators that meet the criteria in section 2.1.5. *Elevators*;  
and
  - (v) Have *universal washrooms* that meet the criteria in section “2.3.8. Universal Washrooms”.

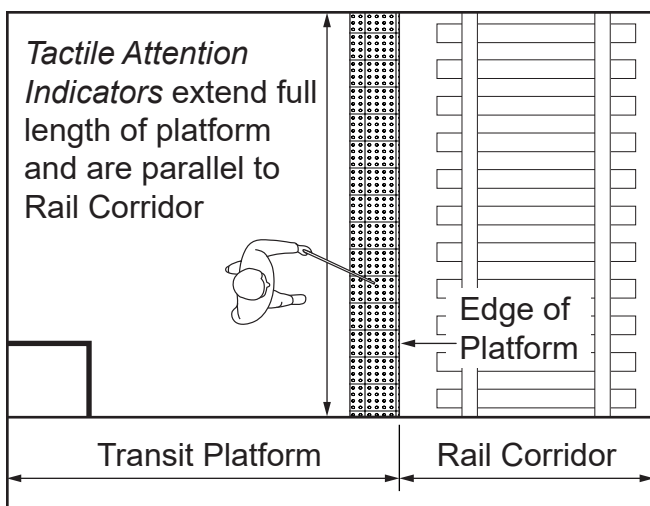


Figure 1.3.3-A Transit Platform at Station

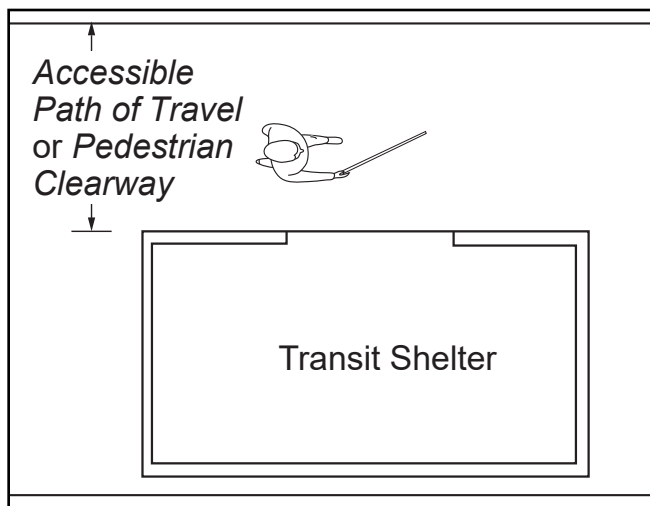


Figure 1.3.3-B Accessible Transit Shelter





# 1.4. Exterior Specialized Areas

## Section Summary

This section reviews the *accessible* design requirements for exterior specialized areas intended for use by the public and City staff. An exterior *accessible path of travel* should connect the public right of way to the *entrance* and exit of a site and continue throughout the property to provide access and ease of movement to available *amenities*. Clear sight lines and exterior lighting should be provided to maintain safe and secure visibility for all individuals, including persons who are deaf, deafened or hard of hearing and rely on their vision to better understand their surrounding environment.

## Contents in Section

- 1.4.1. Parks and Parkettes**
- 1.4.2. Spectator Areas**
- 1.4.3. Play Spaces**
- 1.4.4. Exterior Eating and Picnic Areas**
- 1.4.5. Public Pools and Spas**
- 1.4.6. Dogs Off-Leash Areas (DOLA)**
- 1.4.7. Service Animal Areas**
- 1.4.8. Balconies, Terraces and Patios**
- 1.4.9. Docks, Sea Walls and Piers**
- 1.4.10. Waterfront Areas**
- 1.4.11. Community Garden and Public Horticulture Areas**
- 1.4.12. Campgrounds**

### 1.4.1. Parks and Parkettes

#### Rationale

Parks and parkettes, big or small, provide access to exterior green space and should be designed to allow all individuals to engage in recreational and leisure activities.



#### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- 1.3. Parking, Vehicular Arrival and Departure Areas
- “1.4.3. Play Spaces”
- “1.4.4. Exterior Eating and Picnic Areas”
- “1.4.11. Community Garden and Public Horticulture Areas”
- “1.5.1. Benches and Seats”
- “1.5.2. Waste Receptacles and Recycling Bins”
- “2.2.6. Accessible Control Gates”
- “2.3.1. Multi-Stall Washrooms”
- “2.3.8. Universal Washrooms”
- “2.3.10. Accessible Change Rooms”
- “3.3.3. Controls and Operating Mechanisms”

#### Related References

- [Parks Canada Design Guidelines for Accessible Outdoor Recreation Facilities](#)
- [Parks & Trails Wayfinding Strategy](#)

#### Key Considerations

##### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at parks and parkettes to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

##### Accessible Control Gates

Where provided at parks and parkettes, *accessible* control gates should have an *accessible path of travel* for entry into and egress.

The clear width, when the door is in the open position, should allow for ease of movement for all individuals including persons using *mobility devices*.

### Amenities

Where provided at parks and parkettes, *amenities* should include *accessible* conveniences or services for use by the public.

### Requirements

#### (1) Accessible Path of Travel:

Parks and parkettes should provide an exterior *accessible path of travel* that:

- (a) Meets the criteria in section 1.1.1. *Exterior Accessible Paths of Travel*.

#### (2) Accessible Control Gates:

Where provided at parks and parkettes, *accessible* control gates should:

- (a) Have a clear width that is 950 mm minimum;
- (b) Meet the criteria in section "2.2.6. *Accessible Control Gates*"; and
- (c) Meet the criteria in section "3.3.3. *Controls and Operating Mechanisms*".

#### (3) Amenities:

Where provided at parks and parkettes, *amenities* should include:

- (a) Parking, vehicular arrival and departure areas that meet the criteria in section 1.3. *Parking, Vehicular Arrival and Departure Areas*;
- (b) Play spaces that meet the criteria in section "1.4.3. *Play Spaces*";
- (c) Exterior eating and picnic areas that meet the criteria in section "1.4.4. *Exterior Eating and Picnic Areas*";

- (d) Community garden and public horticulture areas that meet the criteria in section "1.4.11. *Community Garden and Public Horticulture Areas*";
- (e) Benches and seats that meet the criteria in section "1.5.1. *Benches and Seats*";
- (f) Waste receptacles and recycling bins that meet the criteria in section "1.5.2. *Waste Receptacles and Recycling Bins*"; and
- (g) Washrooms that:
  - (i) Meet the criteria in section "2.3.1. *Multi-Stall Washrooms*";
  - (ii) Meet the criteria in section "2.3.8. *Universal Washrooms*"; and
  - (iii) Meet the criteria in section "2.3.10. *Accessible Change Rooms*".

## 1.4.2. Spectator Areas

### Rationale

Spectator areas provide a designated space for the public to sit and view events such as sports games and performances. Benches and seats should be provided for both spectators, athletes and performers including persons with disabilities.

### Application

The scope of this section applies to open-air spectator areas that have fixed benches and seats, spaces designated for persons using *mobility devices* and fixed seats designated for *adaptable seating*.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- 1.3. Parking, Vehicular Arrival and Departure Areas
- 1.4. Exterior Specialized Areas
- 1.5. Exterior Furniture, Equipment and Street Elements
- “1.5.1. Benches and Seats”
- 2.3. Plumbing Fixtures, Washrooms and Change Rooms

### Related References

- [Reserved]

### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at spectator areas to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

### Benches and Seats

*Accessible* benches, seats, designated *clear ground spaces* and companion seating should be provided at spectator areas. *Adaptable seating* and/or open ended benches should be provided and designed to allow persons using *mobility devices* to side transfer out of their *mobility device* and onto a seat. Companion seating should be located adjacent to designated *clear ground spaces* or *clear floor spaces*. A variety of *accessible* seating should be provided. Where provided at spectator areas, temporary or permanent bleachers or hand-out steps should include *accessible* seating options. *Mobility device* storage space should be provided when spectators are expected to stay for longer periods of time and in *high-use* spectator areas.

## Amenities

Where provided at spectator areas, *amenities* should include *accessible* conveniences or services for use by the public.

## Requirements

### (1) Accessible Path of Travel:

Spectator areas, “Figure 1.4.2-C Locations of Accessible Seating”, should provide an exterior *accessible path of travel* that:

- (a) Has a clear width that is 1800 mm minimum wide; and
- (b) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”.

### (2) Benches and Seats:

Spectator areas should provide:

- (a) Benches and seats that meet the criteria in section “1.5.1. Benches and Seats”;
- (b) *Accessible* seating that includes 50% of the total number of *accessible* seats, rounding up to the nearest whole number, with back supports and armrests;
- (c) *Adaptable seating* that:
  - (i) Has armrests with rounded edges, are easily graspable, and free from obstructions; and
  - (ii) Meets the criteria in “Table 1.4.2-A Number of Accessible Seating and Clear Ground Space”;
- (d) Companion seating that meets the criteria in “Table 1.4.2-A Number of Accessible Seating and Clear Ground Space”;

- (e) Designated *clear ground spaces*, “Figure 1.4.2-A Designated Clear Ground Spaces”, that:
  - (i) Provide a minimum of two spaces;
  - (ii) Are 2400 mm wide by 1500 mm deep minimum, inclusive of two spaces side-by-side that are 900 mm wide by 1500 mm deep minimum; and
  - (iii) Meet the criteria in “Table 1.4.2-A Number of Accessible Seating and Clear Ground Space”;
- (f) Clear sight lines, “Figure 1.4.2-B Sight Lines at Seating”, to the main event and surrounding environment; and
- (g) *Mobility device* storage that:
  - (i) Provides space for a minimum of one device, where spectator areas have less than 200 seats total;
  - (ii) Provides space for a minimum of two devices, where spectator areas have more than 200 seats total;
  - (iii) Is located on the same level as the spectator area; and
  - (iv) Are 900 mm wide by 1500 mm deep minimum in size per *mobility device*.

Table 1.4.2-A Number of Accessible Seating and Clear Ground Space

Number of Fixed Seats in Seating Area	Minimum Number of <i>Clear Ground/Floor Spaces</i>	Minimum Number of <i>Adaptable Seating</i>	Minimum Number of Companion Seating
Up to 20	2	1	2
21 to 40	2	2	2
41 to 60	2	3	2
61 to 80	2	4	2
81 to 100	3	5	3
Over 100	3% of seating capacity	The greater of 5 seats or 5% of aisle	3% of seating capacity

**(3) Amenities:**

Where provided at spectator areas, *amenities* should include:

- (a) Parking, vehicular and departure areas that meets the criteria in section: [1.3. Parking, Vehicular Arrival and Departure Areas](#);
- (b) Exterior specialized areas that meet the criteria in section [1.4. Exterior Specialized Areas](#);
- (c) Exterior furniture, equipment and street elements that meet the criteria in section [1.5. Exterior Furniture, Equipment and Street Elements](#); and
- (d) Washrooms that meet the criteria in section [2.3. Plumbing Fixtures, Washrooms and Change Rooms](#).

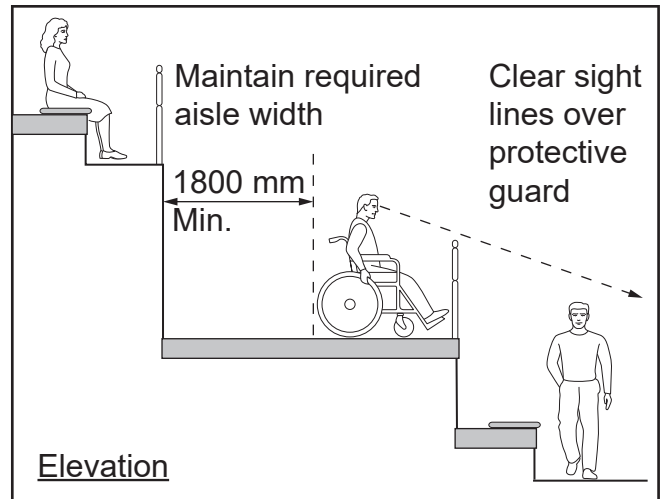


Figure 1.4.2-A Designated Clear Ground Spaces

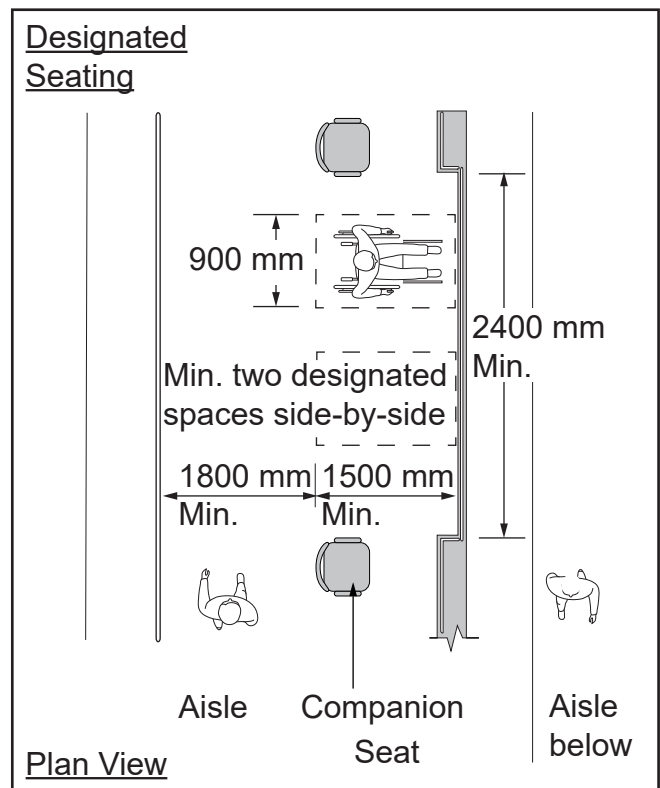


Figure 1.4.2-B Sight Lines at Seating

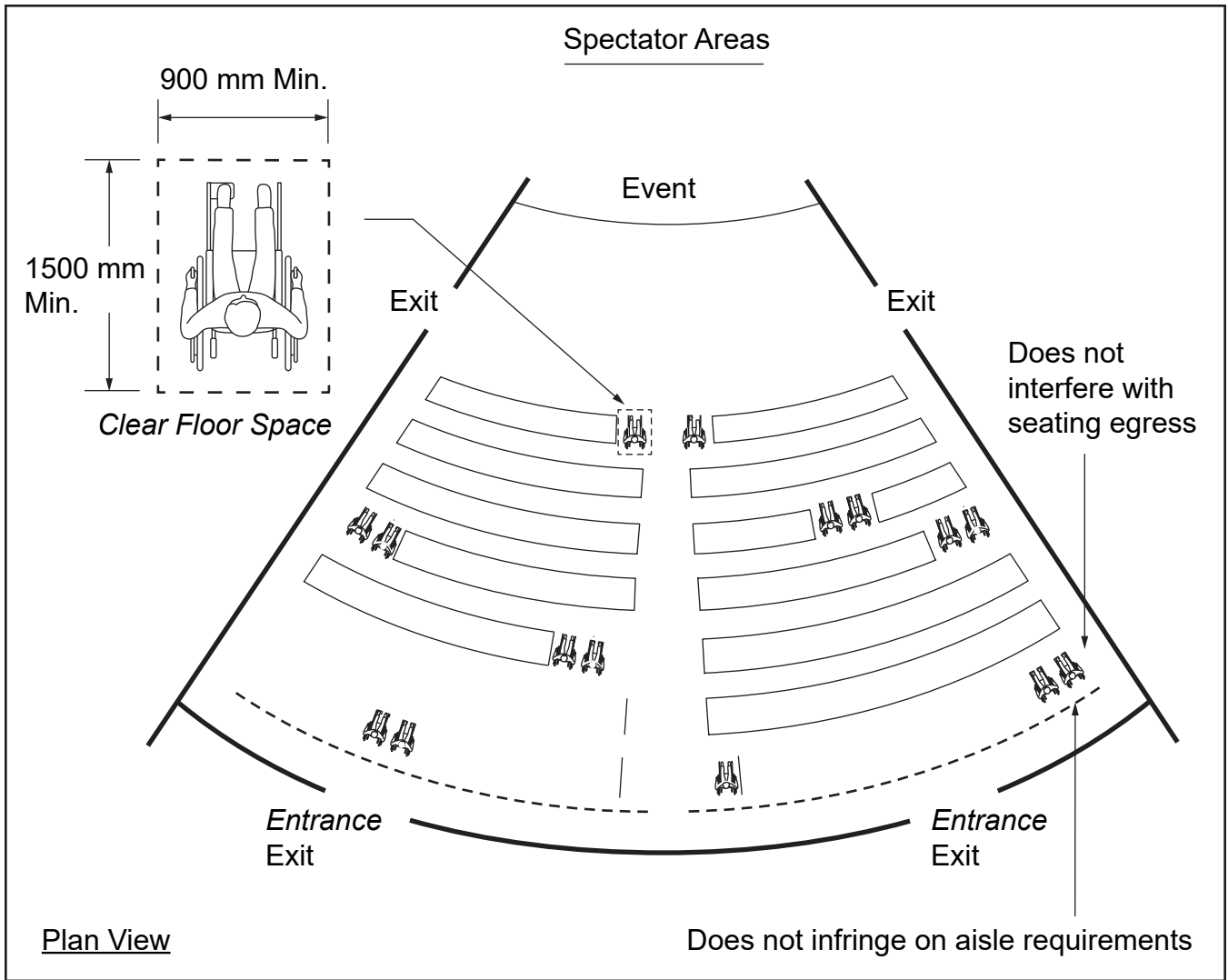


Figure 1.4.2-C Locations of Accessible Seating

### 1.4.3. Play Spaces

#### Rationale

Play spaces should welcome all individuals including persons who are young and old, families, caregivers, and persons with disabilities. They should be easy to navigate and engage all individuals. Play spaces should offer a variety of active and *passive play* experiences, landscape settings and opportunities to connect with others. Play is important for all children as a means of developing intelligence, physical skills and interpersonal and social awareness.



#### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes”
- “1.1.7. Handrails”
- “1.1.8. Guards”
- 1.3. Parking, Vehicular Arrival and Departure Areas
- 1.4. Exterior Specialized Areas
- “1.5.1. Benches and Seats”
- “1.5.2. Waste Receptacles and Recycling Bins”
- “1.5.3. Bicycle Racks, Storage and Lock-Up Areas”
- “2.2.6. Accessible Control Gates”
- “3.3.3. Controls and Operating Mechanisms”

#### Related References

- [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#)
- [Child Care Design and Technical Guideline](#)
- CSA Z614 - Annex Accessible Play Spaces in Canada
- Determination of Accessibility to Surface Systems Under and Around Playground Equipment (ASTM 1951)
- [Playground: Early Learning and Care Assessment for Quality Improvement](#)
- Standard Specifications for Impact Attenuation of Surface Systems Under and Around Playground Equipment (ASTM 1292)



## Key Considerations

### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at play spaces to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

### Accessible Control Gates

Where provided at play spaces, *accessible control gates* should have an *accessible path of travel* for entry into and egress. The clear width, when the door is in the open position, should allow for ease of movement for all individuals including persons using *mobility devices*. Formal enclosures around play spaces such as fencing provides a sense of safety and comfort adjacent to potential hazards such as waterfronts and vehicular roadways.

### Surfaces

Surfaces surrounding play equipment and components at play spaces should provide impact attenuating properties for injury prevention.

### Handrails and Guards

Handrails and guards should be provided on play equipment to allow for additional safety, stability and support where needed.

### Play Equipment and Components

Play equipment and components should allow all individuals to experience a variety of challenging and engaging play opportunities in a way that suits them at play spaces. They should be designed for individuals to socialize and fairly participate in both active and *passive play* experiences. Active play experiences provide physically interactive challenges and engagements. *Passive play* experiences, however, provide sensory or non-interactive challenges and engagements.

They should also provide space for rest, quiet play and observation of the activity zone. Play equipment and components should be *accessible*, adjustable and dispersed throughout play spaces at grade and elevation changes. Play features should include talking tubes, personal communication systems, interactive educational panels that engage multiple children at one time, sensory gardens, open play spaces, play mounds/hills and depressions that encourage climbing or rolling over, quiet zones, adjustable and flexible equipment, and sand and/or water areas.

### Transfer Systems

Transfer systems such as transfer platforms and/or transfer steps, should be provided at play spaces for play equipment and components. A transfer platform should provide a *clear ground space* to allow persons using *mobility devices* to side transfer at play equipment and components. Transfer steps provide additional support for maneuverability.

### Amenities

Where provided at play spaces, *amenities* should include *accessible* conveniences or services for use by the public. Stroller and/or *mobility device* storage space should be provided at *high-use* play spaces. Where shelters are provided for weather protection they should be located above benches and seats.

### Consultation

Consultation on outdoor play spaces with the public, including persons with disabilities, and the municipal Accessibility Advisory Committee (AAC) should be provided where an organization is required to have one under the Design of Public Spaces Standards.

## Requirements

### (1) Accessible Path of Travel:

Play spaces should provide an exterior *accessible path of travel* that:

- (a) Has a clear width, [R-1.4.3 (1)(a)], that:
  - (i) Is 2100 mm minimum; or
  - (ii) Is 3000 mm minimum, if the path requires vehicle access for *maintenance*; and
- (b) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”, or “1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes”.

### (2) Accessible Control Gates:

Where provided at play spaces, *accessible* control gates should:

- (a) Have opening controls that are childproof, and meet the criteria in section “3.3.3. Controls and Operating Mechanisms”; and
- (b) Meet the criteria in section “2.2.6. Accessible Control Gates”.

### (3) Surfaces:

Play spaces should provide surfaces that:

- (a) Are level, firm, stable and slip-resistant; and
- (b) Impact attenuating properties for injury prevention.

### (4) Handrails and Guards:

Play spaces should provide:

- (a) Handrails that:
  - (i) Are located on play equipment;
  - (ii) Are installed at 560 mm to 965 mm;
  - (iii) Are 510 mm to 710 mm at *ramps*;

- (iv) Have a 24 mm to 39 mm diameter; and

- (v) Meet the criteria in section “1.1.7. Handrails”; and

- (b) Guards that are located on play equipment, and meet the criteria in section “1.1.8. Guards”.

### (5) Play Equipment and Components:

Play spaces should provide play equipment and components that:

- (a) Provide active play experiences;
- (b) Provide *passive play* experiences that:
  - (i) Are located outside the activity zone in a quiet or enclosed area;
  - (ii) Have clear sight lines to the active play zone and the surrounding environment; and
  - (iii) Include a minimum of one sensory challenge and/or engagement;
- (c) Are *accessible* and adjustable;
- (d) Are dispersed throughout the area at grade and elevation changes including:
  - (i) A minimum of 50% of the total number provided, rounding up to the nearest whole number, at grade level; and
  - (ii) A minimum of 50% of the total number provided, rounding up to the nearest whole number, at an elevation;
- (e) Have *clear ground spaces* that:
  - (i) Are 900 mm by 1500 mm for front approach; or
  - (ii) Are 900 mm by 2200 mm for side approach;
- (f) Have reach ranges available for children that:

- (i) Are 2 to 5 years that are 460 mm to 910 mm; and
  - (ii) Are 5 to 12 years that are 460 mm to 1020 mm; and
- (g) Provide a minimum of 2 types of play equipment and components that can be used by children using *mobility devices*.

**(6) Transfer Systems:**

Play spaces should provide transfer systems, “Figure 1.4.3-A Transfer Platform at Play Structure” and “Figure 1.4.3-B Transfer Step at Play Structure”, that:

- (a) Include:
  - (i) Transfer platforms that are mounted 280 mm to 460 mm; or
  - (ii) Transfer steps that meet the criteria in section “1.1.10. Exterior Stairs”; and
- (b) Have adjacent *clear ground space* that is 900 mm by 1500 mm for front approach, or 900 mm wide by 2200 mm long minimum for a side approach.

**(7) Amenities:**

Where provided at play spaces, *amenities* should include:

- (a) Parking, vehicular and departure areas that meet the criteria in section 1.3. [Parking, Vehicular Arrival and Departure Areas](#);
- (b) Exterior specialized areas that meet the criteria in section 1.4. [Exterior Specialized Areas](#);
- (c) Benches and seats that:

- (i) Have shelter for weather protection, located above benches and seats, and have an overhead clearance that is 3000 mm minimum; and
  - (ii) Meet the criteria in section “1.5.1. [Benches and Seats](#)”;
- (d) Waste receptacles and recycling bins that meet the criteria in section “1.5.2. [Waste Receptacles and Recycling Bins](#)”; and
- (e) Stroller, walking aid, and *mobility device* waiting or parking area that:
- (i) Is located adjacent to other available *amenities*; and
  - (ii) Meets the criteria in section “1.5.3. [Bicycle Racks, Storage and Lock-Up Areas](#)”.

**(8) Consultation:**

Consultation on outdoor play spaces and the needs of children and caregivers with various disabilities should be provided that:

- (a) Meets the requirements in the [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#).

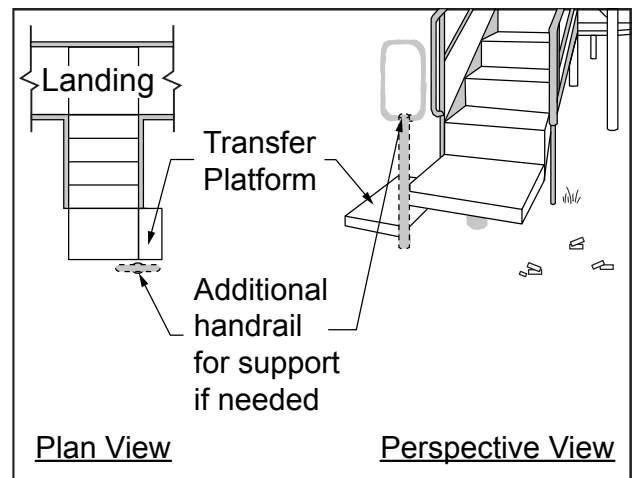


Figure 1.4.3-A Transfer Platform at Play Structure

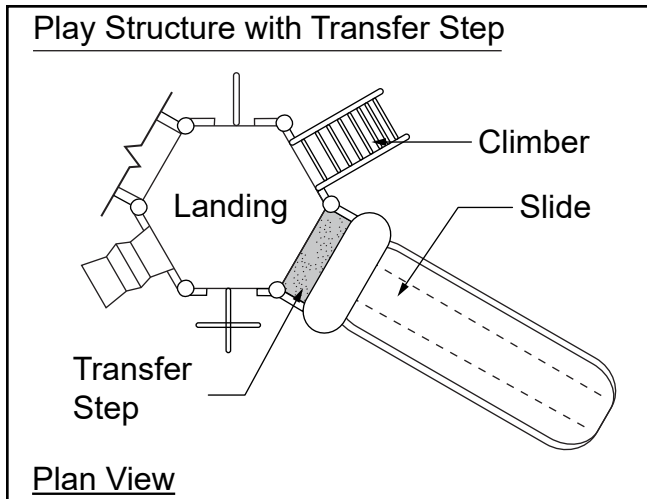


Figure 1.4.3-B Transfer Step at Play Structure

## 1.4.4. Exterior Eating and Picnic Areas

### Rationale

Exterior eating and picnic areas provide an *amenity* for the public including persons who use *mobility devices*. They should include exterior furnishings such as benches, seats and tables that provide a *clear ground space* for front approach and side transfer. Exterior furnishings should have *colour/brightness contrast* to enhance their visibility especially for persons with low vision.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes”
- “1.3.1. Off-Street Parking”
- “1.5.2. Waste Receptacles and Recycling Bins”
- 2.3. Plumbing Fixtures, Washrooms and Change Rooms

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at exterior eating and picnic areas to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

#### Tables

Tables, including picnic tables, should provide *clear ground space* between tables and on ends that connect to an exterior *accessible path of travel*, or *pedestrian clearway* to allow persons using *mobility devices* avoid the risk of creating an obstruction. Picnic tables should provide an extension that has underside knee and toe space for persons using *mobility devices*.

#### Amenities

Where provided at exterior eating and picnic areas, *amenities* should include *accessible* conveniences or services for use by the public.

#### Requirements

##### (1) Accessible Path of Travel:

Exterior eating and picnic areas should provide an exterior *accessible path of travel*, “Figure 1.4.4-A Accessible Path of Travel”, that:

- (a) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”, or “1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes”.

##### (2) Tables:

Exterior eating and picnic areas, “Figure 1.4.4-B Picnic Table with Knee Clearance”, should provide *accessible* tables that:

- (a) Include a minimum of 20% of the total amount provided on site, rounding up to the nearest whole number, but never less than one;
- (b) Have knee and toe space for a front approach that is 735 mm minimum high at the front edge, 500 mm minimum deep, and 900 mm minimum wide;
- (c) Have a surface that is 800 mm maximum;
- (d) Have a *clear ground space* that:
  - (i) Is 2000 mm by 2000 mm minimum; and
  - (ii) Is permitted to be shared between two tables; and
- (e) Have *colour/brightness contrast* with the surrounding environment.

##### (3) Amenities:

Where provided at exterior eating and picnic areas, *amenities* should include:

- (a) *Off-Street Parking* that meets the criteria in section “1.3.1. Off-Street Parking”;
- (b) Waste receptacles and recycling bins that meet the criteria in section “1.5.2. Waste Receptacles and Recycling Bins”; and
- (c) Public washrooms and change rooms that meet the criteria in section 2.3. *Plumbing Fixtures, Washrooms and Change Rooms*.

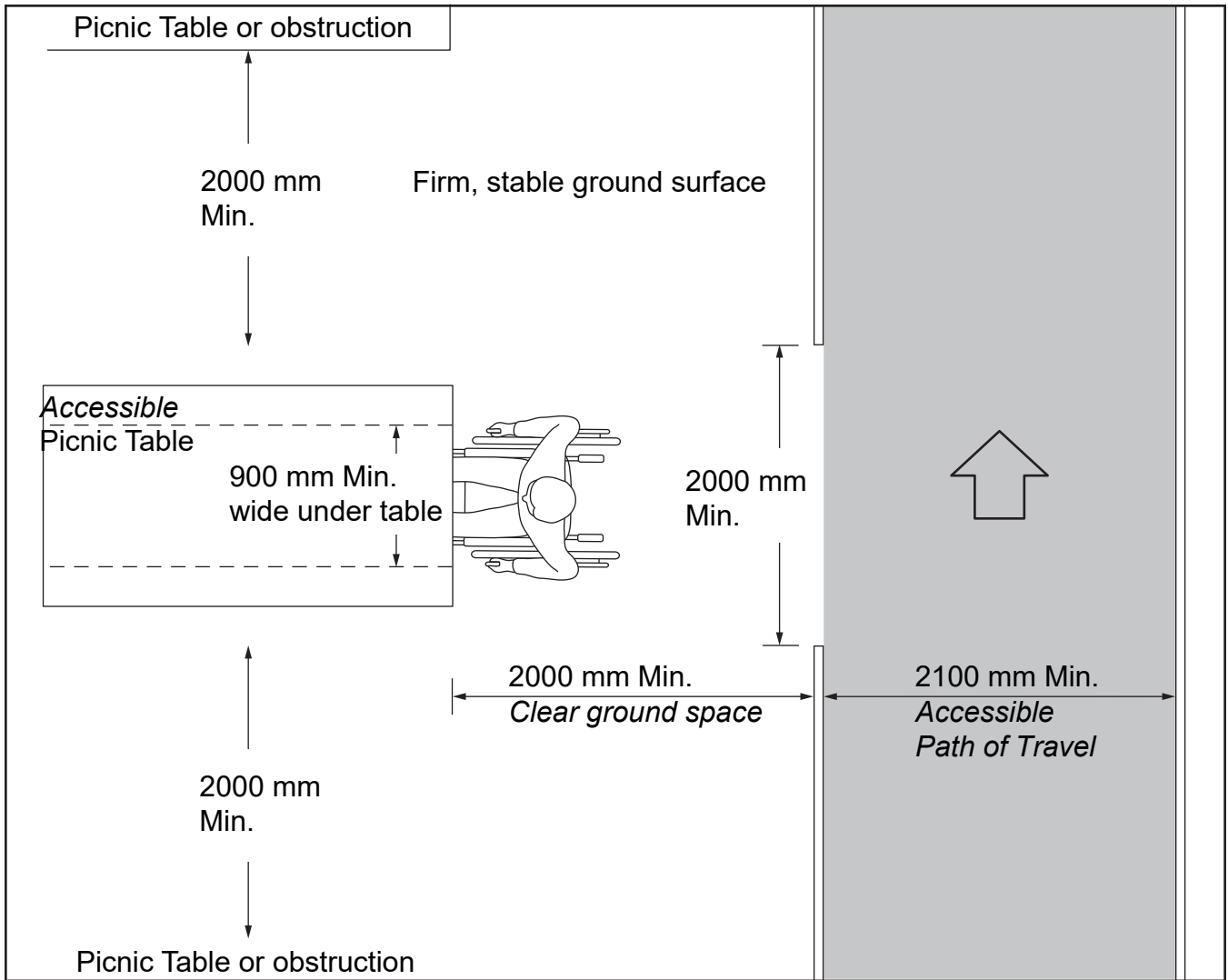


Figure 1.4.4-A Accessible Path of Travel

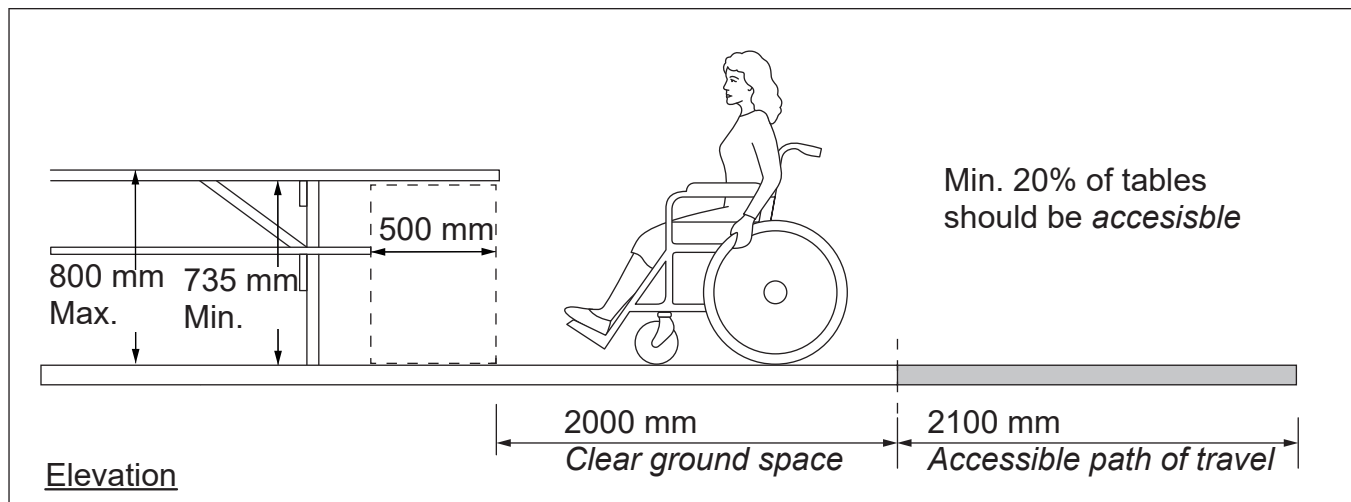


Figure 1.4.4-B Picnic Table with Knee Clearance

## 1.4.5. Public Pools and Spas

### Rationale

*Public pools and public spas* provide recreational and therapeutic aquatic experiences for the public including persons with disabilities. *Ramps and pool lifts* continue an exterior *accessible path of travel at public pools*, whereas *transfer walls* provide *accessible* entry into and exit from *public spas*.

### Application

The scope of this section applies to exterior and interior *public pools* and *public spas*.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.7. Handrails”
- “1.1.10. Exterior Stairs”
- “1.4.2. Spectator Areas”
- “1.6.2. Tactile Attention Indicators”
- “1.6.3. Tactile Direction Indicators”
- “2.1.1. Interior Accessible Paths of Travel”
- “2.3.7. Washroom and Change Room Accessories”
- “2.3.8. Universal Washrooms”
- “2.3.12. Universal Change Rooms”
- “2.4.5. Mobility Device Storage Areas”
- “1.4.7. Service Animal Areas”

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at *public pools* and *public spas* to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

#### Surfaces

A level ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling.



Where gratings and grilles, such as drainage tiles, scuppers or trenches are provided, the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

*Tactile attention indicators* should be provided around the perimeter of the pool deck. *Tactile directional indicators* should be provided throughout the pool deck and perimeter areas to *amenities*. Pool depth markings should be provided. They should be visible to help persons including persons with low vision understand the depth of the pool and judge if they can safely enter the water.

### Ramps

*Ramps* should be provided at *public pools* to allow persons using *mobility devices* or specialized pool chairs to have an *accessible path of travel* for entry into and egress at the water. They should be located as close as possible to the washrooms, bathing areas and change rooms for greater ease of movement to the pool. *Ramps* should be designed to be straight run without any curves in order to simplify navigation and prevent the limbs of persons using *mobility devices* from getting caught in the handrails.

### Handrails

Handrails should be provided at *public pools* and be designed to provide safety, support and *wayfinding* for persons moving along an *accessible path of travel*, including the pool deck and perimeter areas. The design of handrails below water on *ramps* should consider the impact of the movement of water and how it influences a person's ease of movement.

### Pool Lift

Where provided at *public pools*, *pool lifts* should be located to allow for *accessible* entry into and egress at the water. They should be designed with the option to be operated independently and located so that staff are able to oversee the use of the *pool lift*.

### Transfer Walls

Where provided at *public spas*, *transfer walls* should allow for *accessible* entry into and egress at the water. They should be designed to provide safety and support for persons using *mobility devices* making a lateral transition into the water.

### Splash Pads

Where provided at *public pools*, *splash pads* should be connected to an *accessible path of travel*.

### Spectator Areas

Where provided at *public pools*, spectator areas or galleries should be separated from the pool deck.

### Amenities

Where provided at *public pools* and *public spas*, *amenities* should include *accessible* conveniences or services for use by the public. At locations where individuals are expected to stay for longer periods of time, *mobility device* storage space should be provided. It should be located on the same level as the pool deck perimeter area so persons feel more at ease about leaving their personal items in storage. In locations where a higher proportion of persons using *mobility devices* is expected, additional storage should be provided. Tethering hooks for *service animals* (guide dogs) should be provided and located on the pool deck or perimeter areas.

## Requirements

### (1) Accessible Path of Travel:

*Public pools* and *public spas* should provide an *accessible path of travel*, “Figure 1.4.5-A Pool Deck and Perimeter Areas”, that:

- (a) Have a clear deck width that is 1800 mm minimum; and
- (b) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”, or “2.1.1. Interior Accessible Paths of Travel”.

### (2) Surfaces:

*Public pools* and *public spas* should provide surfaces that:

- (a) Are level, firm, stable and slip-resistant, non-abrasive, easy-to-clean and have rounded edges;
- (b) Allow for drainage using tiles, scuppers or trenches;
- (c) Have defined boundaries using *colour/brightness contrast* around:
  - (i) Pool deck and perimeter areas;
  - (ii) Diving boards;
  - (iii) Platforms for lifeguard chairs;
  - (iv) Starter blocks; and
  - (v) Pool equipment;
- (d) Have *tactile attention indicators* that meet the criteria in section “1.6.2. Tactile Attention Indicators”;
- (e) Have *tactile direction indicators* that
  - (i) Lead from the washrooms, bathing areas and change rooms to the pool deck, perimeter areas and *amenities*; and
  - (ii) Meet the criteria in section “1.6.3. Tactile Direction Indicators”;

- (f) Have pool markings that:
  - (i) Identify the pool depths;
  - (ii) Identify SHALLOW END and DEEP END; and
  - (iii) Have *colour/brightness contrast*.

### (3) Ramps:

*Public pools* should provide *ramps*, “Figure 1.4.5-B Ramp at Pool”, that:

- (a) Are designed to be straight run;
- (b) Are 1:12 (8.3%) maximum *running slope*;
- (c) Have a 1500 mm by 1500 mm minimum landing that:
  - (i) Is located on the bottom of the *ramp*;
  - (ii) Is submerged within the pool; and
  - (iii) Has a 600 mm to 900 mm high water depth above the bottom of the pool; and
- (d) Have *colour/brightness contrast* from the wall and the bottom of the pool.

### (4) Handrails:

*Public pools* should provide handrails, “Figure 1.4.5.-C Handrails at Pool”, that:

- (a) Are located along an *accessible path of travel* including pool deck and perimeter areas; and
- (b) Meet the criteria in section “1.1.7. Handrails”.

### (5) Pool Lifts:

Where *pool lifts* are provided at *public pools*, “Figure 1.4.5-E Pool Lift on Deck”, they should:

- (a) Be located where the water level is shallower than 1220 mm;

- (b) Have 900 mm wide by 2200 mm deep clear deck space that:
  - (i) Is parallel for transfer onto the *pool lift* seat; and
  - (ii) Is 305 mm measured from a line located behind the rear edge of the seat;
- (c) Have a 1:50 (2%) maximum *running slope* at deck surface from the center line of the *pool lift* seat to the pool edge;
- (d) Have a seat that:
  - (i) Is 450 mm wide;
  - (ii) Is 405 mm to 485 mm deep;
  - (iii) Is located 400 mm minimum from the center line of the *pool lift* seat to the edge of the pool;
  - (iv) Is equipped with a foot rest;
  - (v) Is equipped with a removable and movable arm rest;
  - (vi) Has a 400 pound (lbs.) weight capacity;
  - (vii) Sustains 1.5 times the static load minimum; and
  - (viii) Submerges 455 mm deep maximum depth below the stationary water level;
- (e) Have controls that:
  - (i) Are unobstructed, including when the *pool lift* is in use; and
  - (ii) Provide the option for independent use; and
- (f) Meets the manufacturer's specifications and installation instructions.

## (6) Transfer Walls:

Where provided at *public spas*, *transfer walls*, "Figure 1.4.5-D Transfer Wall with Steps", should:

- (a) Have a height between 405 mm to 485 mm;
- (b) Have a depth between 300 mm to 400 mm;
- (c) Be slip-resistant and have edges that are rounded;
- (d) Have a minimum of one grab bar that:
  - (i) Is perpendicular to the *public spa* and extends the full depth of the *transfer wall*;
  - (ii) Has a 100 mm to 150 mm clearance above the *transfer wall*;
  - (iii) Has a 610 mm clearance on both sides of the grab bar; and
  - (iv) Meets the criteria in section "2.3.7. Washroom and Change Room Accessories";
- (e) Have a *clear floor space* that:
  - (i) Is 900 mm by 2200 mm minimum;
  - (ii) Is connected to an exterior *accessible path of travel*; and
  - (iii) Is located on center with the grab bar; and
- (f) Have transfer steps that:
  - (i) Are located on the water side of the *transfer wall* 455 mm below the stationary water level;
  - (ii) Have a rise between successive treads be between 125 mm to 180 mm;
  - (iii) Have a run between successive steps be between 280 mm to 355 mm;
  - (iv) Have *colour/brightness contrast* nosings; and

- (v) Meet the criteria in section “1.1.10. Exterior Stairs”.

### (7) Splash Pads:

Where provided at *public pools*, *splash pads* should:

- (a) Be connected to an *accessible path of travel*; and
- (b) Provide a *gradual transition* into the water area.

### (8) Spectator Areas:

Where provided at *public pools*, *spectator areas* should:

- (a) Meet the criteria in section “1.4.2. Spectator Areas”.

### (9) Amenities:

Where provided at *public pools* and *public spas*, *amenities* should include:

- (a) Exterior furniture, equipment and street elements that meet the criteria in section 1.5. *Exterior Furniture, Equipment and Street Elements*;
- (b) Direct access to:
  - (i) At least two *universal washrooms* per floor, that meets the criteria in section “2.3.8. *Universal Washrooms*”; and
  - (ii) At least one *universal change room* that meets the criteria in section “2.3.12. *Universal Change Rooms*”;
- (c) *Mobility device storage areas* that meets the criteria in section “2.4.5. *Mobility Device Storage Areas*”;
- (d) Tethering hooks that:
  - (i) Are located on the wall or as a standalone support;
  - (ii) Are located in close proximity to the *public pool* entry and egress;

- (iii) Are provided with clear sight lines to the pool; and

- (iv) Meet the criteria in section “1.4.7. *Service Animal Areas*”; and

- (e) An aquatic chair.

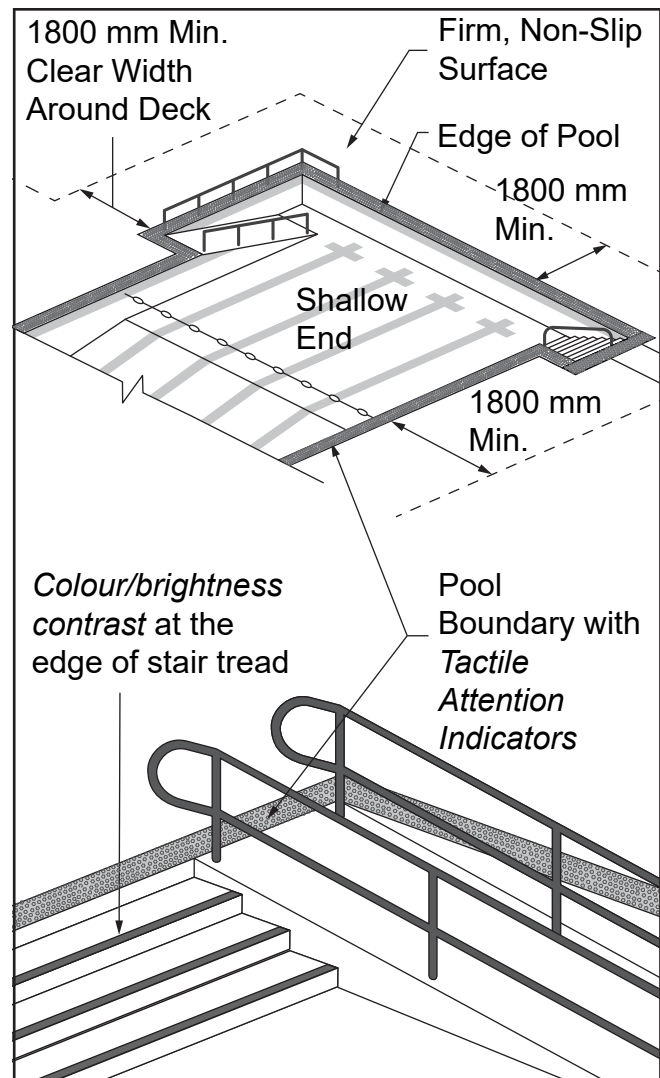


Figure 1.4.5-A Pool Deck and Perimeter Areas

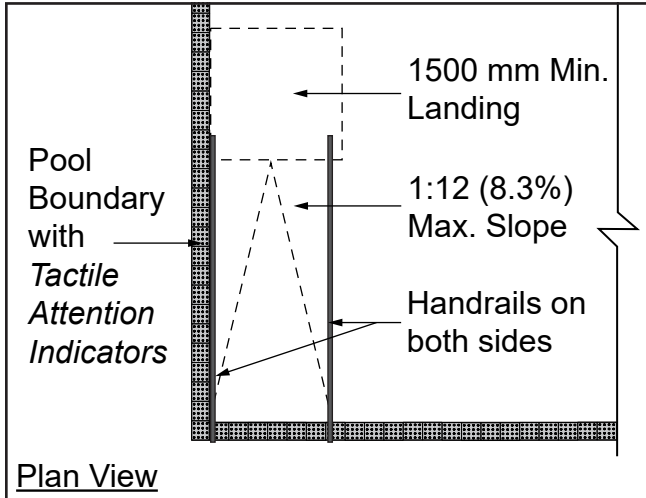


Figure 1.4.5-B Ramp at Pool

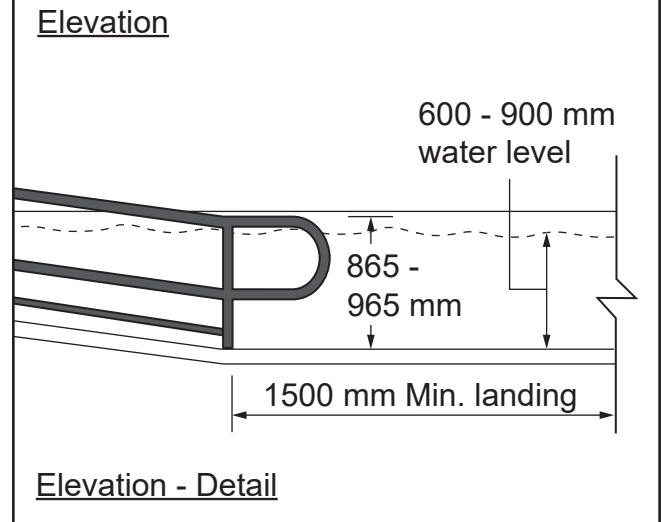
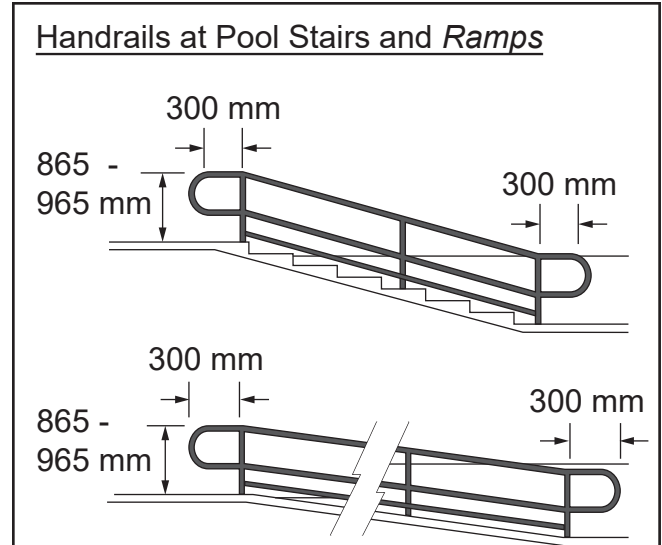


Figure 1.4.5-C Handrails at Pool

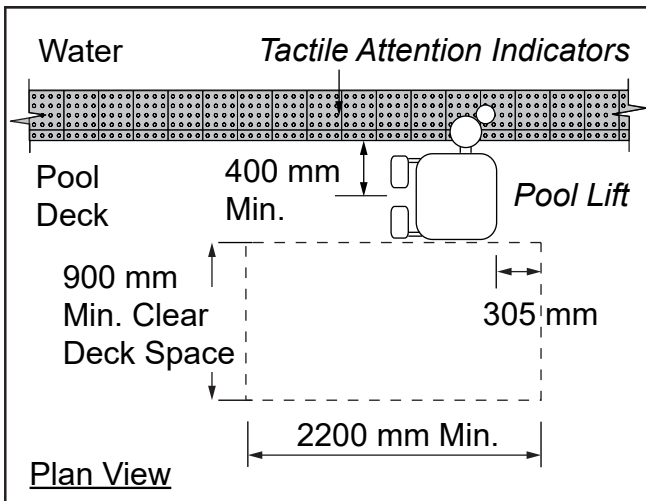


Figure 1.4.5-E Pool Lift on Deck

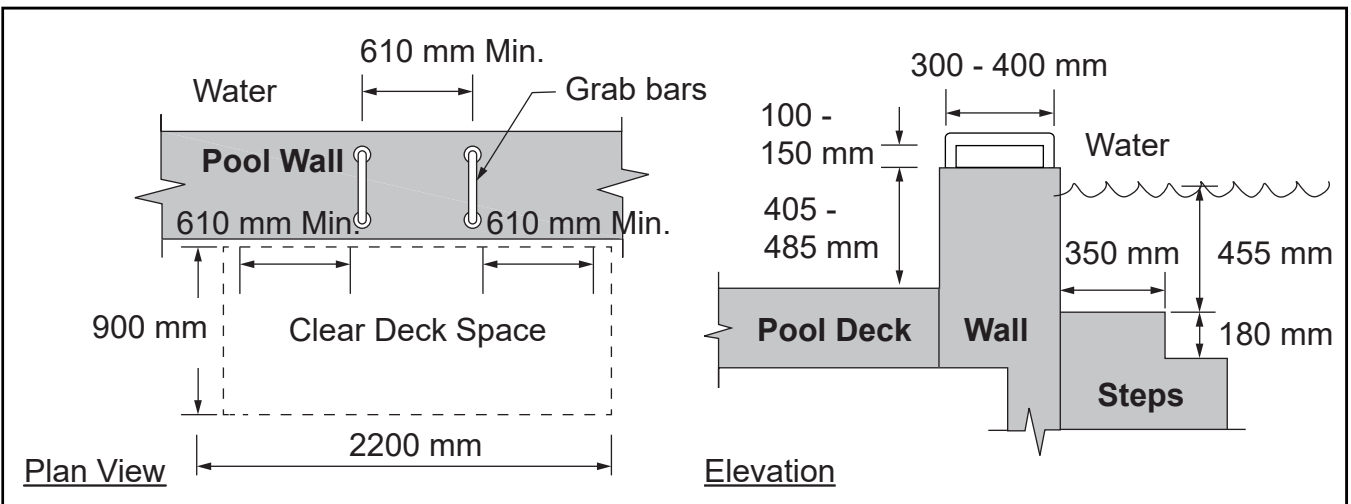


Figure 1.4.5-D Transfer Wall with Steps

## 1.4.6. Dogs Off-Leash Areas (DOLA)

### Rationale

Dogs Off-Leash Areas (DOLA) provide an enclosed or fully fenced exterior space where owners can bring their dogs to play with other off-leash dogs. DOLA's should be designed to engage both dogs and their owners including persons using *mobility devices* and persons who are blind or have low vision, and persons using *service animals* (guide dogs).

### Application

The scope of this section applies to DOLA's selected by the City of Toronto.



### Related Sections

- "1.1.1. Exterior Accessible Paths of Travel"
- "1.1.4. Exterior Paths of Travel to Entrances and Exits"
- "1.3.1. Off-Street Parking"
- "1.5.1. Benches and Seats"
- "1.5.2. Waste Receptacles and Recycling Bins"
- "2.2.1. Entrances"
- "2.2.6. Accessible Control Gates"
- "3.2.1. Signage and Wayfinding Systems"
- "3.3.3. Controls and Operating Mechanisms"

### Related References

- [Dogs Off-Leash Areas](#)
- [Pet Friendly Design Guidelines and Best Practices for New Multi-Unit Buildings](#)

### Key Considerations

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at DOLA's to allow for a continuous, unobstructed route providing exterior access to elements and spaces. Where DOLA's are divided, for small and large dogs, each area should be connected to an exterior *accessible path of travel*.

#### Accessible Control Gates

Where provided at DOLA's, *accessible* control gates should have an exterior *accessible path of travel* for entry into and egress. The clear width, when the door is in the open position, should allow for ease of movement for all individuals including persons using *mobility devices*.

The *accessible* control gates should have distinguishing elements or features that delineate the entrance to the DOLA for persons with low to no vision.

### Surfaces

A level ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling.

Where gratings and grilles are provided, the openings should be located outside of an *accessible path of travel*. *Service animals* (guide dogs) do not like the feeling of gratings and grilles on their paws and will avoid walking over these areas. In addition, gratings and grilles should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

### Signage

*Signage* should be provided at DOLA's that identify the designated area and available *amenities*.

### Amenities

Where provided at DOLA's, *amenities* should include *accessible* conveniences or services for use by the public. Waste receptacles should be provided, and where a high volume of individuals is anticipated, additional receptacles should be provided to avoid an overflow of waste products that may obstruct an exterior *accessible path of travel*. Where shelters are provided for weather protection, they should be located above benches and seats.

## Requirements

### (1) Accessible Path of Travel:

DOLA's should provide an exterior *accessible path of travel* that:

- (a) Meets the criteria in section "1.1.1. Exterior Accessible Paths of Travel", or "1.1.4. Exterior Paths of Travel to Entrances and Exits".

### (2) Accessible Control Gates:

DOLA's should provide *accessible* control gates, "Figure 1.4.6-A Dogs Off-Leash Area", that:

- (a) Have a vestibule that meets the criteria in section "2.2.1. Entrances";
- (b) Are equipped with pretensioned self-closing hinging mechanism to allow the gate to self-close gently;
- (c) Meet the criteria in section "2.2.6. Accessible Control Gates"; and
- (d) Have latches that meet the criteria in section "3.3.3. Controls and Operating Mechanisms".

### (3) Surfaces:

DOLA's should provide surfaces that:

- (a) Are level, firm, stable, slip-resistant and permeable;
- (b) Have openings that:
  - (i) Are located outside of the *accessible paths of travel*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and
- (iv) Do not allow passage of an object that has a diameter of 13 mm maximum.

#### (4) Signage:

DOLA's should provide *signage* that:

- (a) Meets the criteria in section "3.2.1. Signage and Wayfinding Systems".

#### (5) Amenities:

Where provided at DOLA's, *amenities* should include:

- (a) *Off-Street Parking* that meets the criteria in section "1.3.1. Off-Street Parking";
- (b) Benches and seats that:
  - (i) Have shelter for weather protection, located above benches and seats, and have an overhead clearance that is 3000 mm minimum; and
  - (ii) Meet the criteria in section "1.5.1. Benches and Seats"; and
- (c) Waste receptacles and recycling bins that meet the criteria in section "1.5.2. Waste Receptacles and Recycling Bins".

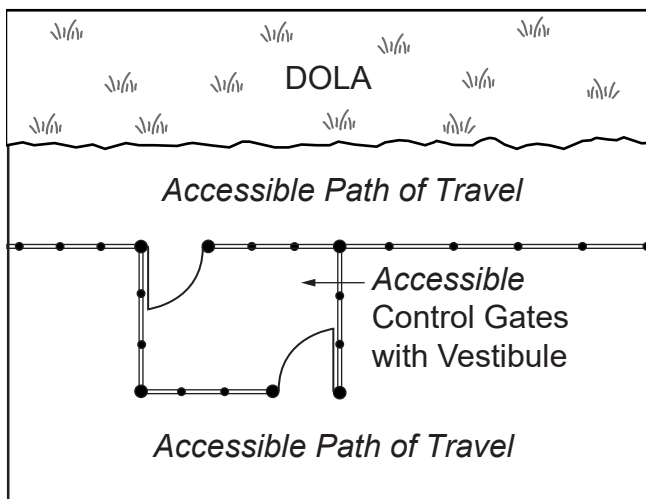


Figure 1.4.6-A Dogs Off-Leash Area



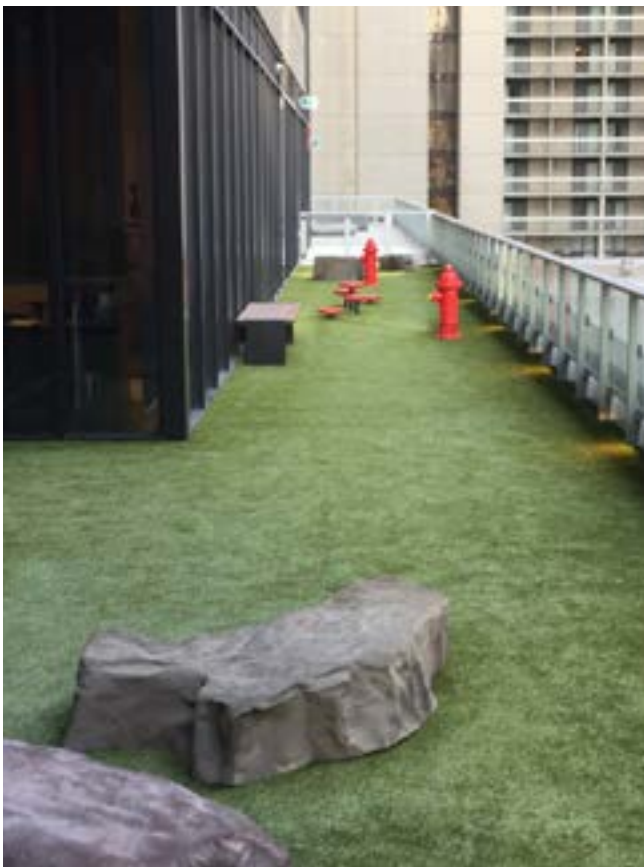
## 1.4.7. Service Animal Areas

### Rationale

*Service animal* areas provide designated space for animals such as guide dogs. Relief areas should be provided for guide dogs to relieve themselves, such as at an *accessible entrance* to a building. Tethering hooks should be provided for guide dogs to be securely tied down and safely wait or rest while their owner uses available *amenities* in the surrounding environment, such as at *public pools and public spas*.

### Application

The scope of this section applies to exterior and interior *service animal* areas at recreational facilities, and at *high-use areas* such as at corporate facilities, civic centres and office buildings.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.5.2. Waste Receptacles and Recycling Bins”
- “3.2.1. Signage and Wayfinding Systems”

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at *service animal* areas to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

#### Surfaces

A level ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling. Where gratings and grilles are provided, the openings should be located outside of an *accessible path of travel*. *Service animals* (guide dogs) do not like the feeling of gratings and grilles on their paws and will avoid walking over these areas.

In addition, gratings and grilles should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard. A drain or a permeable surface should be provided to ensure that the area can be washed down after being used by a *service animal* (guide dog).

### Relief Areas

Where provided, relief areas at *service animal* areas should allow quick and easy access to a safe, well maintained space, such as at an *accessible entrance* to a building, to relieve, big and small, guide dogs. Designers should understand the needs of the intended individuals to determine the location of relief areas appropriate for the facility. Where provided at relief areas, street elements such as decorative fire hydrants should create an encouraging environment for guide dogs to relieve themselves. Relief areas should be designed to be large enough for full-size guide dogs to turn about inside a designated area.

### Tethering Hooks

Where provided, tethering hooks at *service animal* areas should be designed so that guide dogs can safely wait and rest in a designated clear space or stall while being securely tied down while their owner uses available *amenities* in the surrounding environment, such as at *public pools* and *public spas*. Clear sight lines should be provided from tethering hooks to the intended *amenity* being used by owners to decrease the potential risk of separation anxiety between the *service animal* and the owner.

### Signage

*Signage* should be provided at *service animal* areas that identify the designated area and available *amenities*.

### Consultation

Consultation on *service animal* areas with the public, including persons with disabilities, and City staff should be provided.

## Requirements

### (1) Accessible Path of Travel:

*Service animal* areas should provide an *accessible path of travel* that:

- (a) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”.

### (2) Surfaces:

*Service animal* areas should provide surfaces that:

- (a) Are level, firm, stable, slip-resistant, easy-to-clean and permeable; and
- (b) Have openings that:
  - (i) Are located outside of the *accessible paths of travel*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and
  - (iv) Do not allow passage of an object that has a diameter of 13 mm maximum.

### (3) Relief Areas:

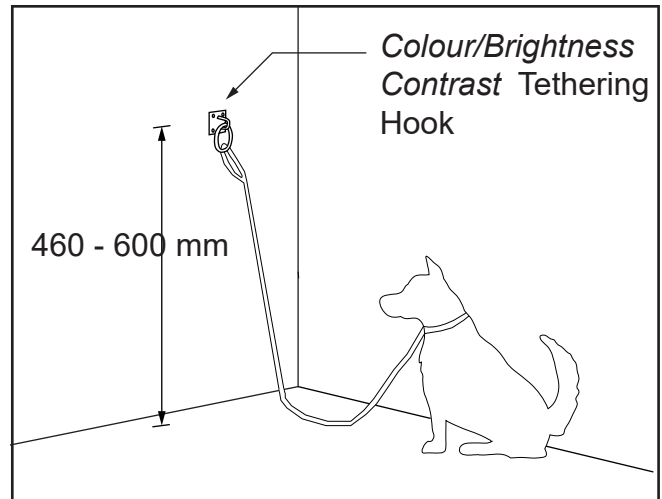
Where *service animal* areas provide relief areas, they should:

- (a) Be 3000 mm by 3000 mm minimum; and
- (b) Have *amenities* that include waste receptacles nearby that meet the criteria in section “1.5.2. Waste Receptacles and Recycling Bins”.

#### (4) Tethering Hooks:

Where *service animal* areas provide tethering hooks, “[Figure 1.4.7-A Tethering Hooks](#)”, they should:

- (a) Be mounted 460 mm to 600 mm;
- (b) Have *colour/brightness contrast*; and
- (c) Have a minimum of two designated *clear floor spaces* or stalls that:
  - (i) Are 1630 mm wide by 1270 mm deep minimum;
  - (ii) Have 900 mm minimum headroom clearance; and
  - (iii) Are located near a drain or a permeable surface.



[Figure 1.4.7-A Tethering Hooks](#)

#### (5) Signage:

*Service animal* areas should provide *signage* that:

- (a) Identifies the designated area and available *amenities*;
- (b) Includes *tactile* characters and/or *Braille*; and
- (c) Meets the criteria in section “[3.2.1. Signage and Wayfinding Systems](#)”.

#### (6) Consultation:

Consultation on the design and placement of *service animal* areas should be provided.

## 1.4.8. Balconies, Terraces and Patios

### Rationale

Balconies, terraces and patios provide an exterior *amenity* space for use by the public. They should be connected to an exterior or interior *accessible path of travel*.

### Application

The scope of this section does not apply to balconies, terraces and patios at private residences.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.7. Handrails”
- “1.1.8. Guards”
- “1.1.11. Obstructions, Protrusions and Overhead Objects”
- “2.1.1. Interior Accessible Paths of Travel”
- “2.2.3. Doors and Doorways”

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An exterior or interior *accessible path of travel* should be provided at balconies, terraces and patios to allow for a continuous, unobstructed route providing exterior or interior access to elements and spaces.

#### Doors

Where provided at balconies, terraces and patios, doors have an *accessible path of travel* for entry into and egress. The clear width, when the door is in the open position, should allow for ease of movement for all individuals including persons using *mobility devices*. Doors leading from the interior of a building should have a minimum threshold to provide an *accessible path of travel*.

#### Handrails and Guards

Handrails and guards (or walls) should be provided at balconies, terraces and patios. They should be designed to provide safety, support and clear sight lines to the environment for all individuals including persons using *mobility devices*.

## Amenities

Where provided at balconies, terraces and patios, *amenities* should include *accessible* conveniences or services for use by the public. Weather protection that shelters individuals from sun, wind and precipitation should be provided.

## Requirements

### (1) Accessible Path of Travel:

Balconies, terraces and patios should provide an exterior or interior *accessible path of travel*, [R-1.4.8. (1)], that:

- (a) Has a *clear ground space* that is 2500 mm minimum diameter; and
- (b) Meets the criteria in section "1.1.1. Exterior Accessible Paths of Travel" or "2.1.1. Interior Accessible Paths of Travel".

### (2) Doors:

Where provided at balconies, terraces and patios, doors should:

- (a) Open to the exterior, when leading from the interior of a building, and against a side wall or guard; and
- (b) Meet the criteria in section "2.2.3. Doors and Doorways".

### (3) Handrails and Guards:

Balconies, terraces and patios should provide:

- (a) Handrails, "Figure 1.4.8-A Balcony Handrail and Guard" and "Figure 1.4.8-B Patio Handrail and Guard", that meet the criteria in section "1.1.7. Handrails"; and
- (b) Guards that:
  - (i) Are 1070 mm high;
  - (ii) Have clear sight lines to the surrounding environment; and

- (iii) Meet the criteria in section "1.1.8. Guards".

### (4) Amenities:

Where provided at balconies, terraces and patios, *amenities* should include:

- (a) Shelter for weather protection, such as sun, wind and precipitation, that:
  - (i) Have an overhead clearance that is 2100 mm minimum; and
  - (ii) Meets the criteria in section "1.1.11. Obstructions, Protrusions and Overhead Objects".

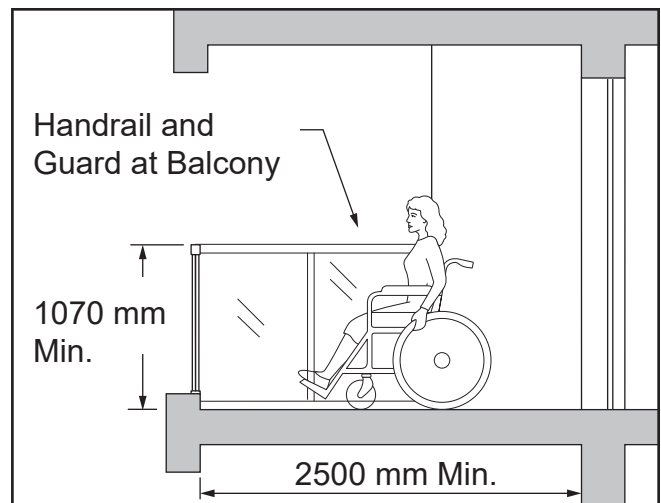


Figure 1.4.8-A Balcony Handrail and Guard

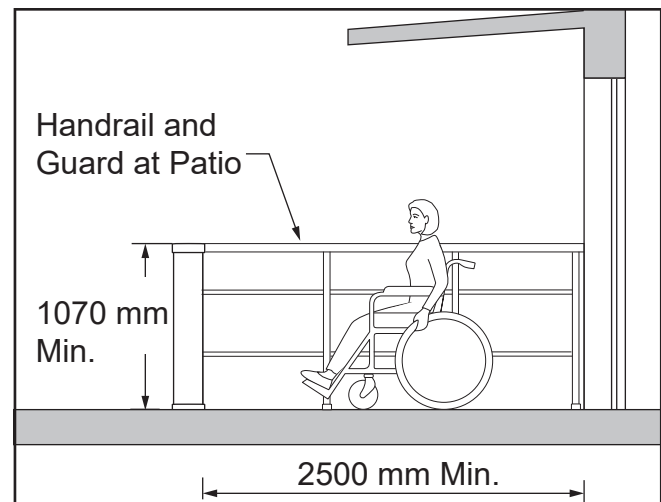


Figure 1.4.8-B Patio Handrail and Guard

## 1.4.9. Docks, Sea Walls and Piers

### Rationale

Docks, sea walls and piers provide exterior recreational and leisure space where persons can participate in fishing, boating or swimming. *Accessible* features should create a safe and supportive environment for all individuals along a water's edge.

### Application

The scope of this section applies to docks, sea walls, piers and ferry terminal docks. This section does not apply to areas that are below top of bank or designed for flood protection.



### Related Sections

- "1.1.1. Exterior Accessible Paths of Travel"

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at docks, sea walls and piers to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

#### Edge Protection

Edge protection should be provided at docks, sea walls and piers when adjacent to water or a drop-off to prevent individuals, including persons using *mobility devices*, from slipping or rolling over the edge of an exterior *accessible path of travel*. Edge protection can provide a means of *wayfinding* for persons with low or no vision who use a *white cane*. In some naturalized built environments, edge protection can create *barriers*, so each condition should be carefully assessed.

### Requirements

#### (1) Accessible Path of Travel:

Docks, sea walls and piers should provide an exterior *accessible path of travel* that:

- Has a clear width that is 2100 mm minimum; and
- Meets the criteria in section "1.1.1. Exterior Accessible Paths of Travel".

**(2) Edge Protection:**

Docks, sea walls and piers should provide edge protection that:

- (a) Has a 75 mm minimum curb, without impeding drainage; and
- (b) Has *colour/brightness contrast*.

## 1.4.10. Waterfront Areas

### Rationale

Waterfront areas provide exterior recreational and leisure space for the public. *Accessible* features should create a safe and supportive environment for all individuals along a water's edge.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes”
- “1.1.5. Rest Areas”
- “1.4.4. Exterior Eating and Picnic Areas”
- “1.4.11. Community Garden and Public Horticulture Areas”
- “1.5.2. Waste Receptacles and Recycling Bins”
- “3.2.1. Signage and Wayfinding Systems”

### Related References

- [Best Practice Guide: Sustainable Parks and Open Space Design](#)

### Key Considerations

#### Accessible Path of Travel

An *accessible path of travel* should be provided at waterfront areas to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

#### Edge Protection

Edge protection should be provided at waterfront areas when adjacent to water or a drop-off to prevent individuals, including persons using *mobility devices*, from slipping or rolling over the edge of an exterior *accessible path of travel*. Edge protection can provide a means of *wayfinding* for persons with low or no vision who use a *white cane*. In some naturalized built environments, edge protection can create *barriers*, so each condition should be carefully assessed.



## Signage

*Signage* should be provided at waterfront areas that identify available *amenities*.

## Amenities

Where provided at waterfront areas, *amenities* should include *accessible* conveniences or services for use by the public.

## Requirements

### (1) Accessible Path of Travel:

Waterfront areas should provide an exterior *accessible path of travel* that:

- (a) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”, or “1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes”.

### (2) Edge Protection:

Waterfront areas should provide edge protection that:

- (a) Has a 75 mm minimum curb, without impeding drainage; and
- (b) Has *colour/brightness contrast*.

### (3) Signage:

Waterfront areas should provide *signage* that:

- (a) Identifies available *amenities*;
- (b) Includes *tactile* characters and/or *Braille*; and
- (c) Meets the criteria in section “3.2.1. Signage and Wayfinding Systems”.

### (4) Amenities:

Where provided at waterfront areas, *amenities* should include:

- (a) *Rest areas* that meet the criteria in section “1.1.5. Rest Areas”;
- (b) Exterior eating and picnic areas that meet the criteria in section “1.4.4. Exterior Eating and Picnic Areas”;
- (c) Landscape materials and plantings that meet the criteria in section “1.4.11. Community Garden and Public Horticulture Areas”; and
- (d) Waste receptacles and recycling bins that meet the criteria in section “1.5.2. Waste Receptacles and Recycling Bins”.

## 1.4.11. Community Garden and Public Horticulture Areas

### Rationale

Landscape materials, trees, shrubs and plants should be selected to enhance enjoyment by all persons during the landscape design process. The stimulation of the senses, such as smell, sight, sound and touch should be considered when providing landscape materials and plants along an exterior *accessible path of travel*. Careful selection of plant types and their characteristics should be considered. Community garden and public horticulture areas provide exterior recreational and leisure space that should be designed to stimulate the individual's senses including smell, sight, sound and touch.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.4. Exterior Paths of Travel to Entrances and Exits”
- “4.1.1. General Exterior Maintenance”

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at community garden and public horticulture areas to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

#### Landscape Materials and Plantings

Landscape materials and plantings should be provided at community garden and public horticulture areas. They should be carefully selected and their characteristics should consider the needs of all individuals. Plantings with thorns or heavy berries may constitute a tripping hazard or risk of injury and should be avoided. While plants with scent or fragrance can help identify the *entrance*, for example.

#### Raised Planter Beds

Raised planter beds should be provided to engage persons using *mobility devices* and persons with limited mobility in the gardening experience. They should be designed to allow for drainage.

## Requirements

### (1) Accessible Path of Travel:

Community garden and public horticulture areas should provide an exterior *accessible path of travel* that:

- (a) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”, or “1.1.4. Exterior Paths of Travel to Entrances and Exits”.

### (2) Landscape Materials and Plantings:

Community garden and public horticulture areas should provide landscape materials and plantings that:

- (a) Are located outside of an *accessible path of travel*; and
- (b) Meet the criteria in section “4.1.1. General Exterior Maintenance”.

### (3) Raised Planter Beds:

Community garden and public horticulture areas should provide raised planter beds, “Figure 1.4.11-A Raised Planter Beds”, that:

- (a) Represent 20% minimum of the total number of planter beds available;
- (b) Drain well;
- (c) Have a top surface of 860 mm maximum; and
- (d) Have knee and toe space for a front approach that is 735 mm minimum high at the front edge, 500 mm minimum deep, and 900 mm minimum wide.

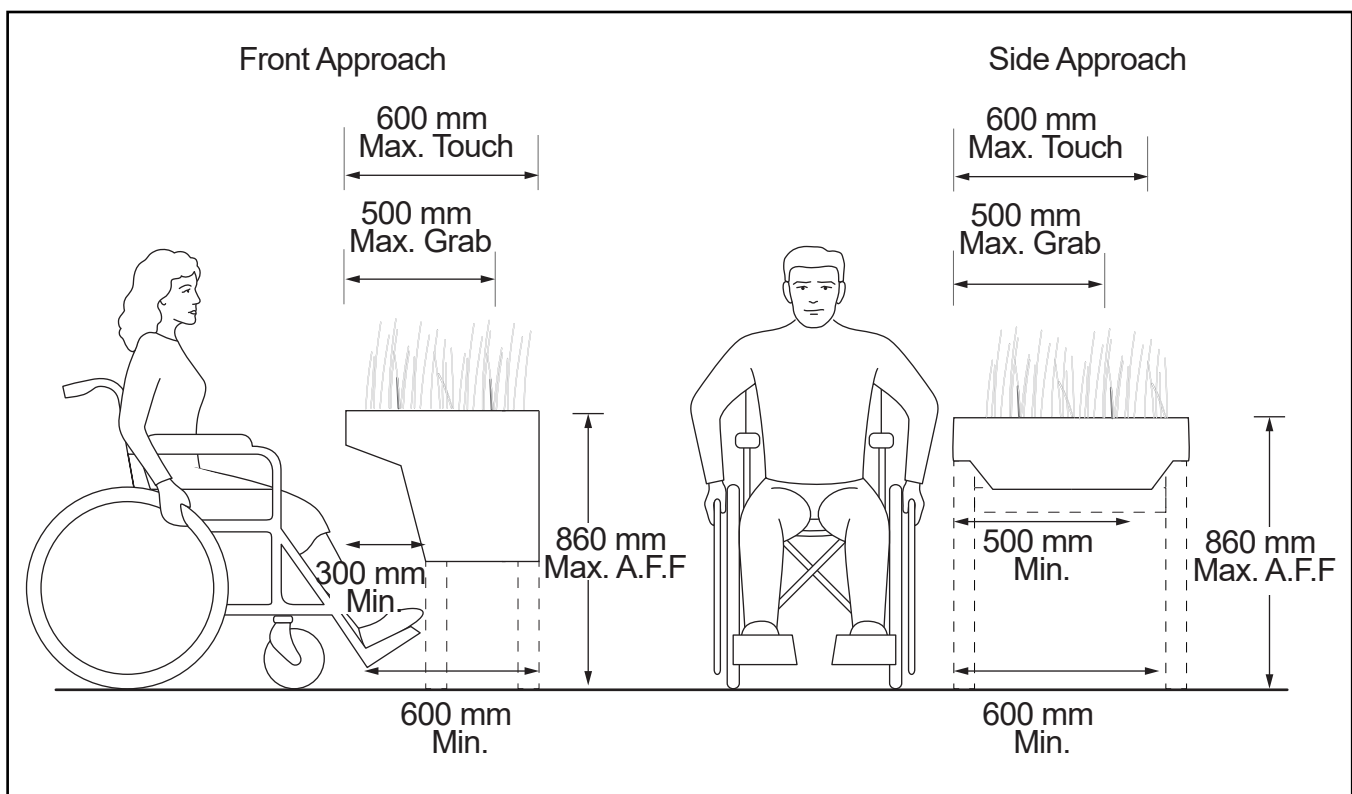


Figure 1.4.11-A Raised Planter Beds

## 1.4.12. Campgrounds

### Rationale

Campgrounds should provide *accessible* features as a basic framework to allow all campers to participate and engage in the camping experience. Campsites should be designed to allow for set-up for specific user needs when occupied.



### Related Sections

- “Space and Reach Range Dimensions”
- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes”
- “1.3.1. Off-Street Parking”
- “1.4.4. Exterior Eating and Picnic Areas”
- 2.3. Plumbing Fixtures, Washrooms and Change Rooms
- “3.2.1. Signage and Wayfinding Systems”
- “3.3.3. Controls and Operating Mechanisms”

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at campgrounds to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

#### Signage

*Signage* should be provided at campgrounds that identify available *amenities*.

#### Campsites

Campsites should be provided at campgrounds that are designed to provide clear space for tents, and parking space for trailers and/or recreational vehicle (RV) set-ups. Additional clear space should be provided for circulation, space to open a window or extension on a trailer and for privacy from adjacent campsites.

Campsites should provide parking spaces that have a *barrier* for the driver’s visual assistance to identify where the end of the parking space is when driving in reverse with a trailer. The minimum parking space width should integrate a buffer zone that is sized to provide circulation space for campers to move personal furnishings and equipment, as well as maneuvering space for persons using *mobility devices*. Campsites should be located in close proximity to campground *amenities*.

### Amenities

Where provided at campgrounds, *amenities* should include *accessible* conveniences or services for use by the public. Each campsite should provide an exterior eating and picnic area that includes a raised cooking station such as a barbeque (BBQ) and/or fire pit. *Accessible* controls and operating mechanisms should be provided. Electrical outlets should be provided to allow for the recharging of batteries for electric *mobility devices*.

### Requirements

#### (1) Accessible Path of Travel:

Campgrounds should provide an exterior *accessible path of travel* that:

- (a) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”, or “1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes”.

#### (2) Signage:

Campgrounds should provide *signage* that:

- (a) Identifies *amenities*; and
- (b) Meets the criteria in section “3.2.1. Signage and Wayfinding Systems”.

#### (3) Campsites:

Campgrounds should provide campsites that:

- (a) Minimum 10% *accessible* campsites out of the total number provided, rounding up to the nearest whole number;
- (b) Have tent, trailer and/or recreational vehicle (RV) set-ups that are 23.5 meters by 23.5 meters minimum square;
- (c) Provide privacy using various landscape materials and plantings; and
- (d) Have parking spaces, “Figure 1.4.12-A Accessible Campgrounds”, that:
  - (i) Are 3660 mm wide by 17.5 metres long minimum;
  - (ii) Have circulation space that is 1000 mm wide by the full length of the parking space;
  - (iii) Have a parking *barrier* located to mark the end of the parking space;
  - (iv) Are 6100 mm wide by 75% of the full length of the parking space minimum buffer zone along the side for equipment set-up; and
  - (v) Are 3050 mm wide by the full length of the parking space privacy clearance located between the next campsite.

**(4) Amenities:**

Where provided at campgrounds, *amenities* should include:

- (a) *Off-Street Parking* that meets the criteria in section “1.3.1. [Off-Street Parking](#)”;
- (b) Exterior eating and picnic areas that meet the criteria in section “1.4.4. [Exterior Eating and Picnic Areas](#)”;
- (c) Washrooms that meet the criteria in section 2.3. [Plumbing Fixtures, Washrooms and Change Rooms](#);
- (d) Raised cooking stations such as barbeques (BBQ) and/or fire pits, “[Figure 1.4.12-B Accessible Elements on an Accessible Campground](#)”, that:
  - (i) Are located at each campsite;
  - (ii) Have *clear ground space* that is 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach; and
  - (iii) Meet the criteria in “[Space and Reach Range Dimensions](#)”;
- (e) Electrical outlets for electrical *mobility devices* that:
  - (i) Are mounted 460 mm to 1000 mm; and
  - (ii) Provide 15 amps minimum; and
- (f) Controls and operating mechanisms that:
  - (i) Are 610 mm to 915 mm; and
  - (ii) Meet the criteria in section “3.3.3. [Controls and Operating Mechanisms](#)”.

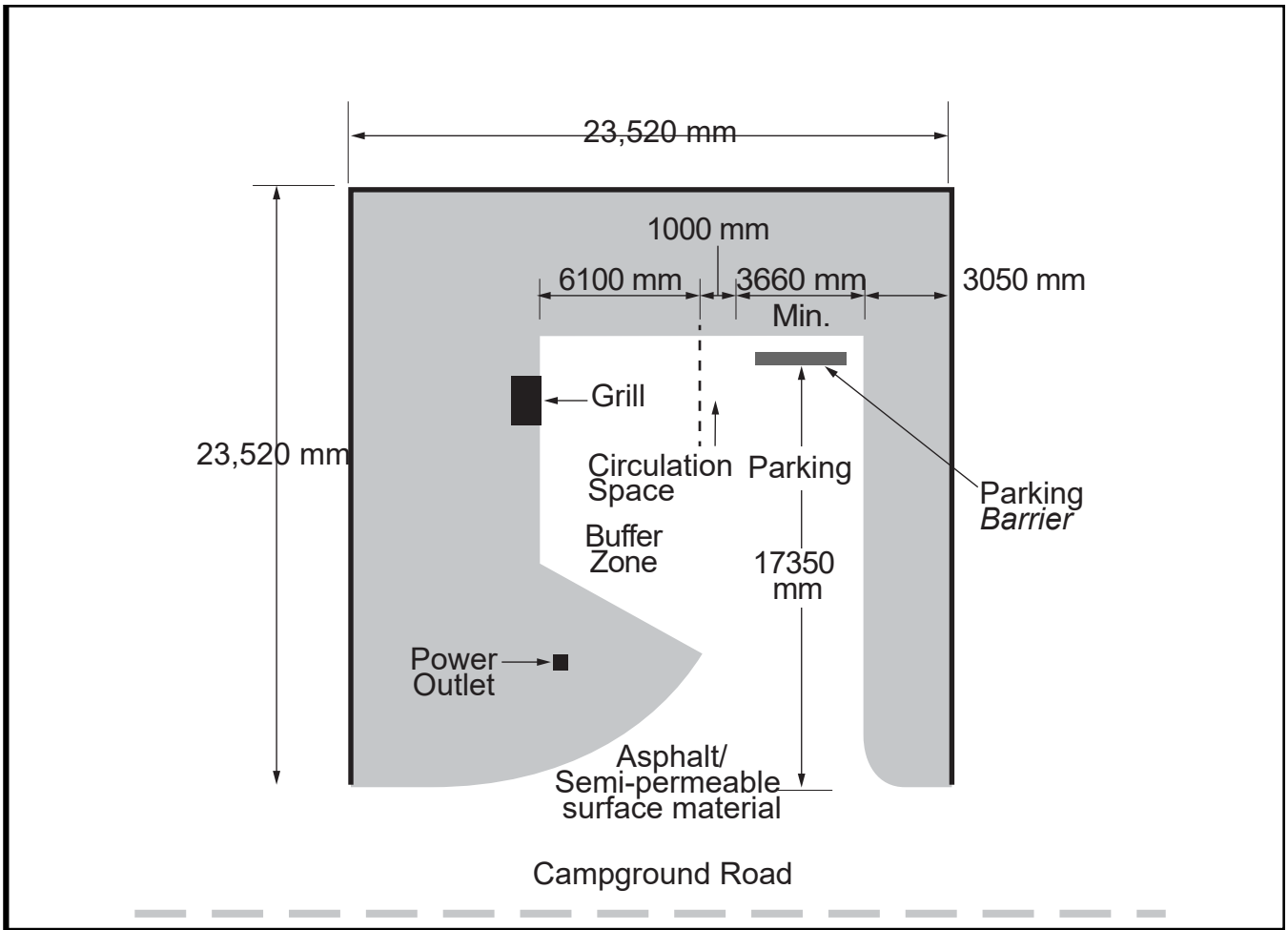


Figure 1.4.12-A Accessible Campgrounds

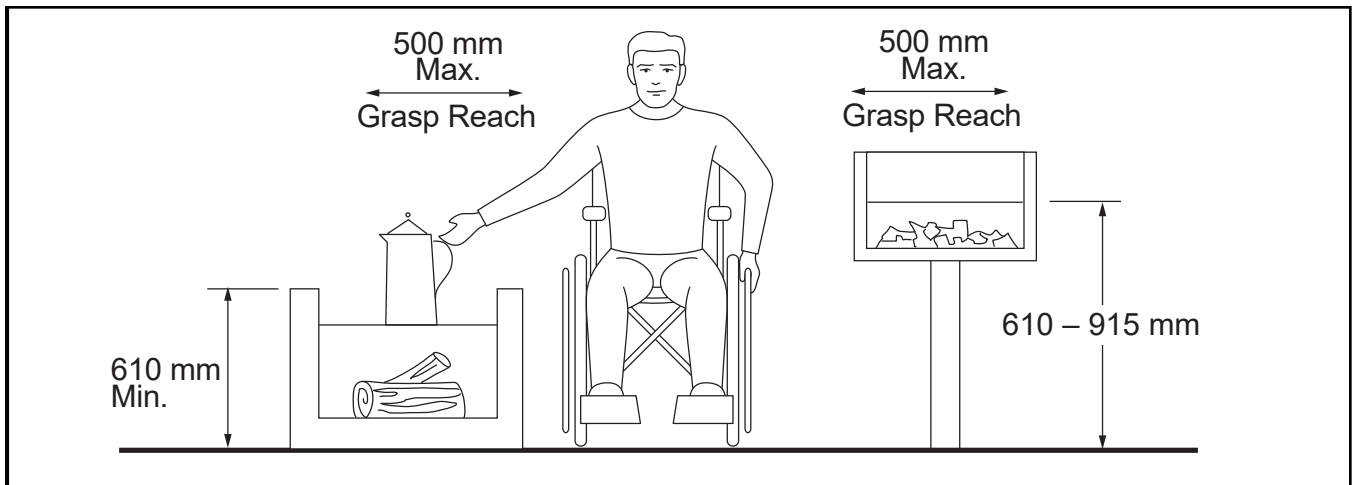


Figure 1.4.12-B Accessible Elements on an Accessible Campground





# 1.5. Exterior Furniture, Equipment and Street Elements

## Section Summary

This section reviews the *accessible* design requirements for exterior furniture, equipment and street elements intended for use by the public and City staff. All exterior furniture and equipment should be connected to an *accessible path of travel* and placed in a way that does not impede the minimum clear width. Street elements should have *colour/brightness contrast* from the surrounding environment to improve the visibility for persons with low vision. Any *street furniture* considered and used should meet the requirements in the City of Toronto's [Vibrant Street- Coordinated Street Furniture Program](#) to ensure a safe and predictable streetscape that promotes an *accessible* environment.

The City's existing Street Furniture Program administers the procurement and distribution of City approved co-ordinated street furnishings based on long standing contract agreements. Consultation with Transportation Services Street Furniture team is recommended to confirm the specific design and placement locations of *street furniture* elements on City capital projects within the public right-of-way.

## Contents in Section

### 1.5.1. Benches and Seats

### 1.5.2. Waste Receptacles and Recycling Bins

### 1.5.3. Bicycle Racks, Storage and Lock-Up Areas

### 1.5.4. Post and Mailboxes

### 1.5.5. Exterior Water Bottle Filling Stations and Drinking Fountains

## 1.5.1. Benches and Seats

### Rationale

Benches and seats should be connected to an exterior *accessible path of travel* or *pedestrian clearway*. Designers should consider the needs of the intended individuals when determining the design and placement of benches and seats. A variety of *accessible* seating and components should be provided.

### Application

The scope of this section applies to benches and seats provided in the built environment such as at *rest areas*, as well as parks recreation and exterior specialized areas. Benches and seats located in naturalized areas should meet the criteria in the [Toronto Multi-Use Trail Guidelines](#).



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”

### Related References

- [Furniture Design & Placement](#)
- [Street Furniture](#)
- [Toronto Multi-Use Trail Design Guidelines](#)
- [Vibrant Streets](#)

### Key Considerations

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at benches and seats to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

#### Surfaces

A level ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling. Where gratings and grilles are provided, the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

#### Clear Ground Spaces

*Clear ground spaces* should be provided adjacent to benches and seats to designate an area to be utilized by persons using *mobility devices*, a *service animal*, a walking aid/cane or a stroller.

## Components

Components, such as back support and armrests, provide safety and stability for individuals including older adults/seniors and persons with disabilities at benches and seats. Where open-ended benches are provided, they should have adjacent *clear ground space* to allow persons using *mobility devices* to side transfer on and off the bench. Where armrests are provided, they should be located in the middle of the bench, and be designed to have rounded edges, be easily graspable, and free from obstructions. The intended individuals should be considered when determining which combination of components should be provided.

## Requirements

### (1) Accessible Path of Travel:

Benches and seats should be connected to an exterior *accessible path of travel* that:

- (a) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”.

### (2) Clear Ground Spaces:

Benches and seats, “Figure 1.5.1-A Benches”, should provide a *clear ground space* that:

- (a) Is located on at least one side of a bench, and outside of an exterior *accessible path of travel*;
- (b) Is 900 mm wide by 1500 mm minimum long for a front approach; and
- (c) Is not obstructed by exterior furniture, equipment and street elements that are located in close proximity.

### (3) Surfaces:

Benches and seats should be provided on surfaces that:

- (a) Are level, firm, stable and slip-resistant; and
- (b) Have openings that:
  - (i) Are located outside of an exterior *accessible path of travel* and the *clear ground space*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and
  - (iv) Do not allow passage of an object that has a diameter of 13 mm maximum.

### (4) Components:

Benches and seats should provide components that:

- (a) Have a seat that:
  - (i) Is 460 mm;
  - (ii) Is 450 mm wide to 460 mm deep; and
  - (iii) Has foot space under the bench in order to allow individuals to lean forward to stand;
- (b) Have back support that:
  - (i) Is 450 mm minimum above bench seat; and
  - (ii) Is angled 5 to 15 degrees;
- (c) Have armrests that:
  - (i) Are 600 mm;
  - (ii) Have rounded edges; and
  - (iii) Are made from materials that are durable and easily graspable; and
- (d) Have *colour/brightness contrast* from the surrounding environment.

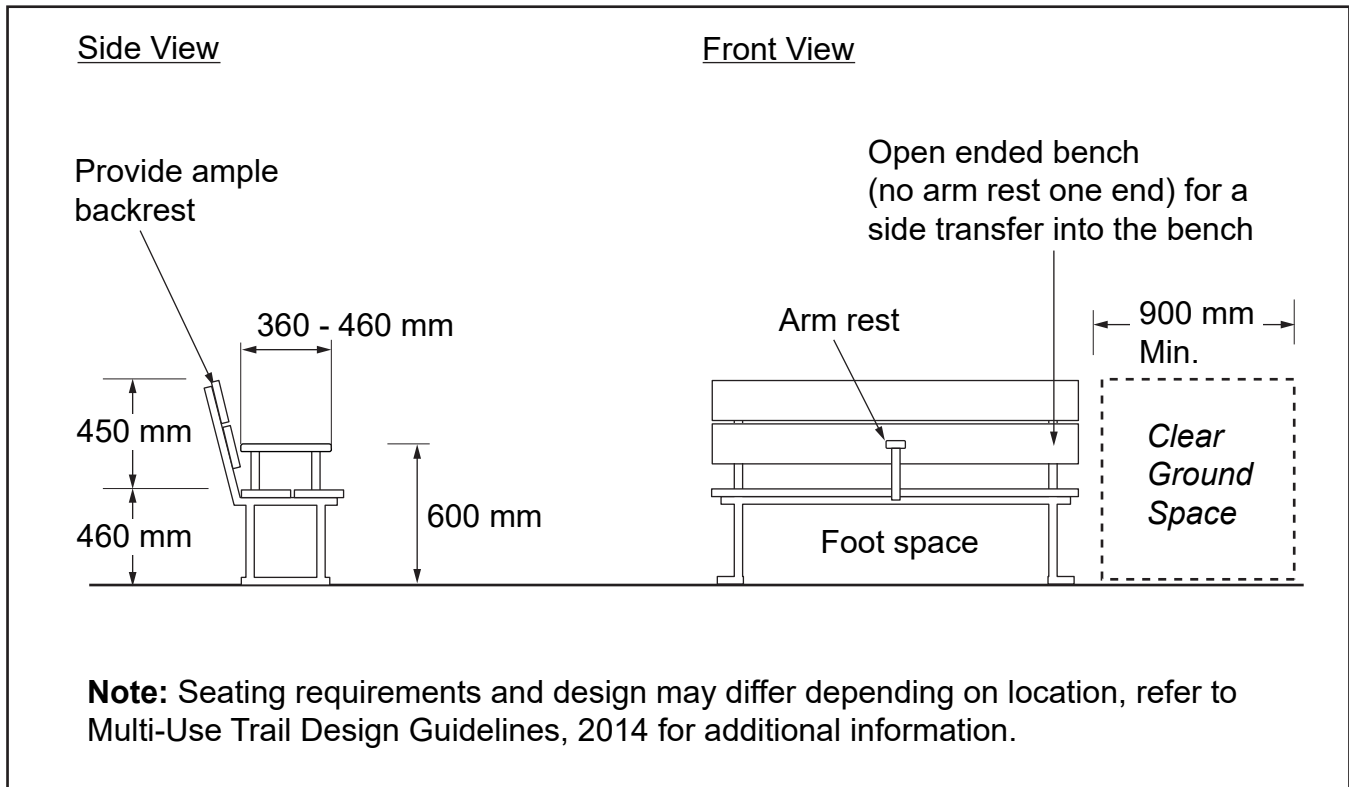


Figure 1.5.1-A Benches

## 1.5.2. Waste Receptacles and Recycling Bins

### Rationale

Waste receptacles and recycling bins should be connected to an exterior *accessible path of travel* or *pedestrian clearway*. Designers should consider the needs of the intended individuals, and the proximity to available *amenities*, where provided, in the surrounding environment when determining the design and placement of waste receptacles and recycling bins. The location and number of waste receptacles or recycling bins provided should consider whether an area is a *high-use area* or *low-use area*, and reflect the program and *amenities* available in the surrounding environment. Ensuring a consistent arrangement of waste receptacles and recycling bins can create predictability to the object's location. Allowing for predictable placement can reduce the need for persons with low or no vision to touch the surfaces to identify the waste receptacle or recycling bin.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes”
- “1.1.4. Exterior Paths of Travel to Entrances and Exits”
- “3.3.3. Controls and Operating Mechanisms”

### Related References

- [City of Toronto Requirements for Garbage, Recycling and Organics Collection Services for New Developments and Redevelopments](#)
- [Furniture Design & Placement](#)

### Key Considerations

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at waste receptacles or recycling bins to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

#### Surfaces

A level ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling. Where gratings and grilles are provided, the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

### Controls and Operating Mechanisms

Controls and operating mechanisms, such as lids and openings, should be provided at waste receptacles and recycling bins and have *accessible* space and reach ranges. The placement of openings should be designed with consideration for persons with low to no vision. Openings should be placed in the same order wherever they are located. For example, the left-side opening should be waste and the right-side opening should be recycling.

### Requirements

#### (1) Accessible Path of Travel:

Waste receptacles and recycling bins should be connected to an exterior *accessible path of travel* that:

- (a) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”;
- (b) Meets the criteria in section “1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes”; or
- (c) Meets the criteria in section “1.1.4. Exterior Paths of Travel to Entrances and Exits”.

#### (2) Surfaces:

Waste receptacles and recycling bins should be provided on surfaces, , that:

- (a) Are level, firm, stable and slip-resistant; and
- (b) Have openings that:
  - (i) Are located outside of an exterior *accessible path of travel*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and

- (iv) Do not allow passage of an object that has a diameter of 13 mm maximum.

#### (3) Controls and Operating Mechanisms:

Waste receptacles and recycling bins should provide controls and operating mechanisms, “Figure 1.5.2-A Waste and Recycle Containers”, that:

- (a) Have a self-closing lid;
- (b) Have openings that:
  - (i) Face an exterior *accessible path of travel*; and
  - (ii) Are distinguishable in shape and colour whether they are single or combined;
- (c) Are 900 mm to 1050 mm;
- (d) Have a 22 N maximum operating force;
- (e) Are operable using a closed fist;
- (f) Have *colour/brightness contrast* from the surrounding environment;
- (g) Are *cane detectable*; and
- (h) Meet the criteria in section “3.3.3. Controls and Operating Mechanisms”.

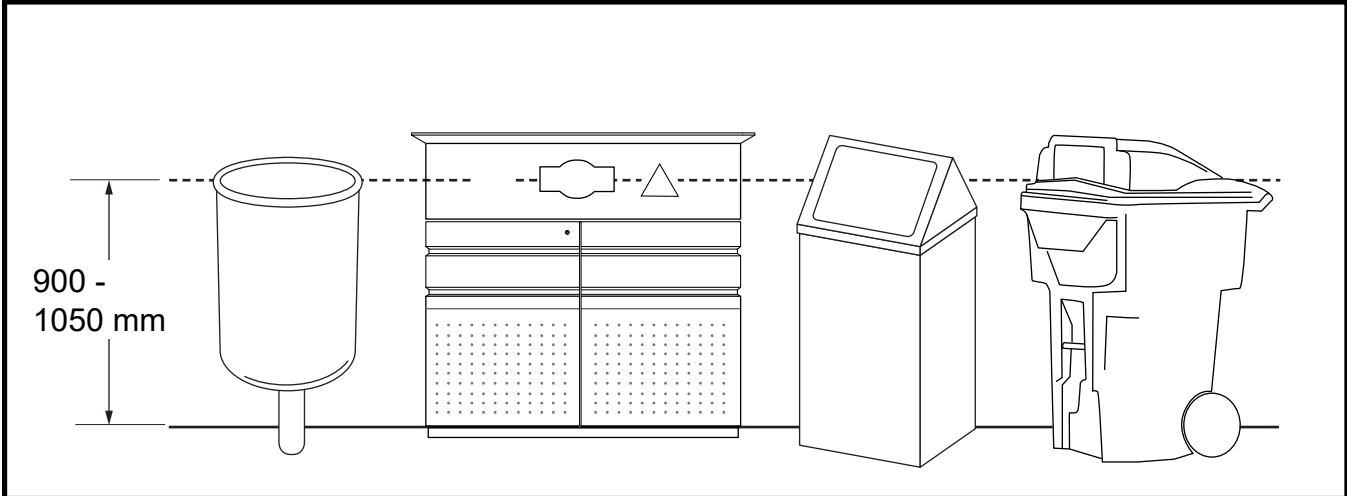


Figure 1.5.2-A Waste and Recycle Containers

## 1.5.3. Bicycle Racks, Storage and Lock-Up Areas

### Rationale

Bicycle racks, storage and lock-up areas that are fixed should be connected to, but located outside of, an exterior *accessible path of travel*. The intended individuals should be considered when determining the location and number of spaces provided for a variety of bicycle types including single, multiple and *adaptive bicycles*. The components of the bicycle racks, storage and lock-up areas should have *accessible* elements to enhance their usability. Bicycle racks, storage and lock-up areas should be provided in locations that reflect the program and *amenities* available in the surrounding environment.

### Application

The scope of this section does not apply to bicycle sharing systems. Where bicycle racks are installed on the road surface, soft surfaces, or on a stepped right-of-way environment, they should meet the criteria in this section.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “3.3.3. Controls and Operating Mechanisms”

### Related References

- [Bicycle Parking Facilities](#)
- [Guidelines for the Design and Management of Bicycle Parking Facilities](#)

### Key Considerations

#### Amount

The amount of spaces for bicycle racks, storage, and lock-up areas provided should consider whether an area is a *high-use* or *low-use*. If an insufficient number of spaces are provided there is potential that the public will use exterior furnishings, equipment and street elements that were not designed for this use.

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at bicycle racks, storage and lock-up areas to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

#### Surfaces

A level ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*.



The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling. Where gratings and grilles are provided, the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

### Controls and Operating Mechanisms

Where provided, controls and operating mechanisms at bicycle racks, storage and lock-up areas should have *accessible* space and reach ranges.

## Requirements

### (1) Amount:

Bicycle racks, storage and lock-up areas should provide:

- (a) Space for single bicycle storage and lock-up areas;
- (b) Space for multiple bicycle storage and lock-up areas; and
- (c) Space for *adaptive bicycle* storage and lock-up areas.

### (2) Accessible Path of Travel:

Bicycle racks, storage and lock-up areas should be connected to, and located outside of, an exterior *accessible path of travel* or *pedestrian clearway* that:

- (a) Meets the criteria in section “1.1.1. [Exterior Accessible Paths of Travel](#)”.

### (3) Surfaces:

Bicycle racks, storage and lock-up areas should be provided on surfaces that:

- (a) Are level, firm, stable and slip-resistant;
- (b) Have openings that:
  - (i) Are located outside of an exterior *accessible path of travel*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and
  - (iv) Do not allow passage of an object that has a diameter of 13 mm maximum; and
- (c) Are *cane detectable*; and
- (d) Have *colour/brightness contrast* from adjacent surfaces.

### (4) Controls and Operating Mechanisms:

Bicycle racks, storage and lock-up areas should provide controls and operating mechanisms that:

- (a) Are 900 mm to 1050 mm;
  - (i) Except for post and ring bicycle racks in the right-of-way that are 360 mm to 750 mm at the ring portion;
- (b) Have a 22 N maximum operating force;
- (c) Are operable using a closed fist;
- (d) Have *colour/brightness contrast* from the surrounding environment;
- (e) Are *cane detectable*; and
- (f) Meet the criteria in section “3.3.3. [Controls and Operating Mechanisms](#)”.

## 1.5.4. Post and Mailboxes

### Rationale

Post and mailboxes are areas designed for mail and parcel pick up. This area and associated elements should consider how persons with disabilities will navigate the space and use *accessible* elements. Post and mailboxes should be provided at locations that reflect the program and *amenities* available in the surrounding environment.

### Application

The scope of this section applies to providing access to post and mailboxes operated by a building owner and not those operated by Canada Post. The design of mailboxes owned and operated by Canada Post should meet the criteria in their national standards and do not need to meet the criteria in this section. Equipment and street elements that are newly designed for the City Street Furniture Program should meet the criteria in this section.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “3.2.1. Signage and Wayfinding Systems”
- “3.3.3. Controls and Operating Mechanisms”

### Related References

- [Delivery Planning Standards Manual for Builders and Developers](#)
- [Rural Mailbox Guidelines](#)

### Key Considerations

#### Amount

The amount of post and mailboxes provided should consider whether an area is a *high-use* or *low-use*.

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at post and mailboxes to allow for a continuous, unobstructed route providing exterior access to elements and spaces. A *clear ground space* should be provided adjacent to post and mailboxes to allow for front and side approach, as well as a clear turning space for persons using *mobility devices*.

#### Surfaces

A level ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling.

Where gratings and grilles are provided, the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

### Controls and Operating Mechanisms

Controls and operating mechanisms at exterior post and mailboxes should have *accessible* space and reach ranges.

### Signage

*Signage* should be provided at exterior post and mailboxes that provides identification.

## Requirements

### (1) Amount:

Post and mailboxes, “[Figure 1.5.4-A Community Mailboxes](#)”, should provide:

- (a) Minimum 10% *accessible* of the total amount provided.

### (2) Accessible Path of Travel:

Post and mailboxes should be connected to, and located outside of, an exterior *accessible path of travel* or *pedestrian clearway* that:

- (a) Has a *clear ground space*, “[Figure 1.5.4-B Community Mailboxes Arrangement](#)”, that is 900 mm by 1500 mm minimum for a front approach, or 900 mm by 2200 mm minimum for a side approach;
- (b) Has a clear turning space, within any enclosed areas, that is 2500 mm minimum in diameter; and
- (c) Meets the criteria in section “[1.1.1. Exterior Accessible Paths of Travel](#)”.

### (3) Surfaces:

Post and mailboxes should be provided on surfaces that:

- (a) Are level, firm, stable and slip-resistant;
- (b) Have openings that:
  - (i) Are located outside of an exterior *accessible path of travel*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and
  - (iv) Do not allow passage of an object that has a diameter of 13 mm maximum; and
- (c) Are *cane detectable*; and
- (d) Have *colour/brightness contrast* from adjacent surfaces.

### (4) Controls and Operating Mechanisms:

Post and mail boxes should provide controls and operating mechanisms that:

- (a) Are 460 mm to 1050 mm;
- (b) Have a 22 N maximum operating force;
- (c) Are operable using a closed fist;
- (d) Have *colour/brightness contrast* from the surrounding environment;
- (e) Are *cane detectable*; and
- (f) Meet the criteria in section “[3.3.3. Controls and Operating Mechanisms](#)”.

**(5) Signage:**

Post and mail boxes should provide *signage* that:

- (a) Provides identification;
- (b) Has 19 mm minimum high numbers on mailboxes; and
- (c) Meets the criteria in “3.2.1. Signage and Wayfinding Systems”.

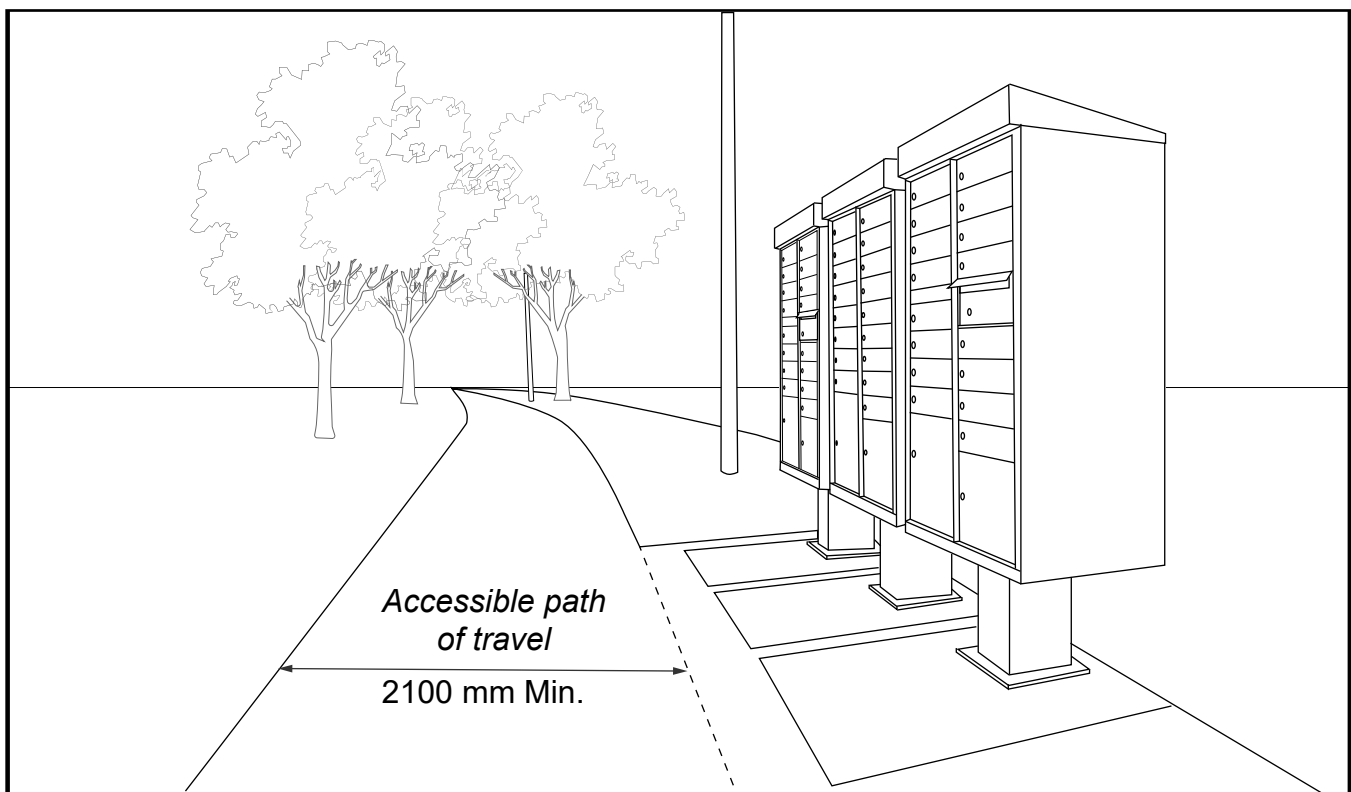


Figure 1.5.4-A Community Mailboxes

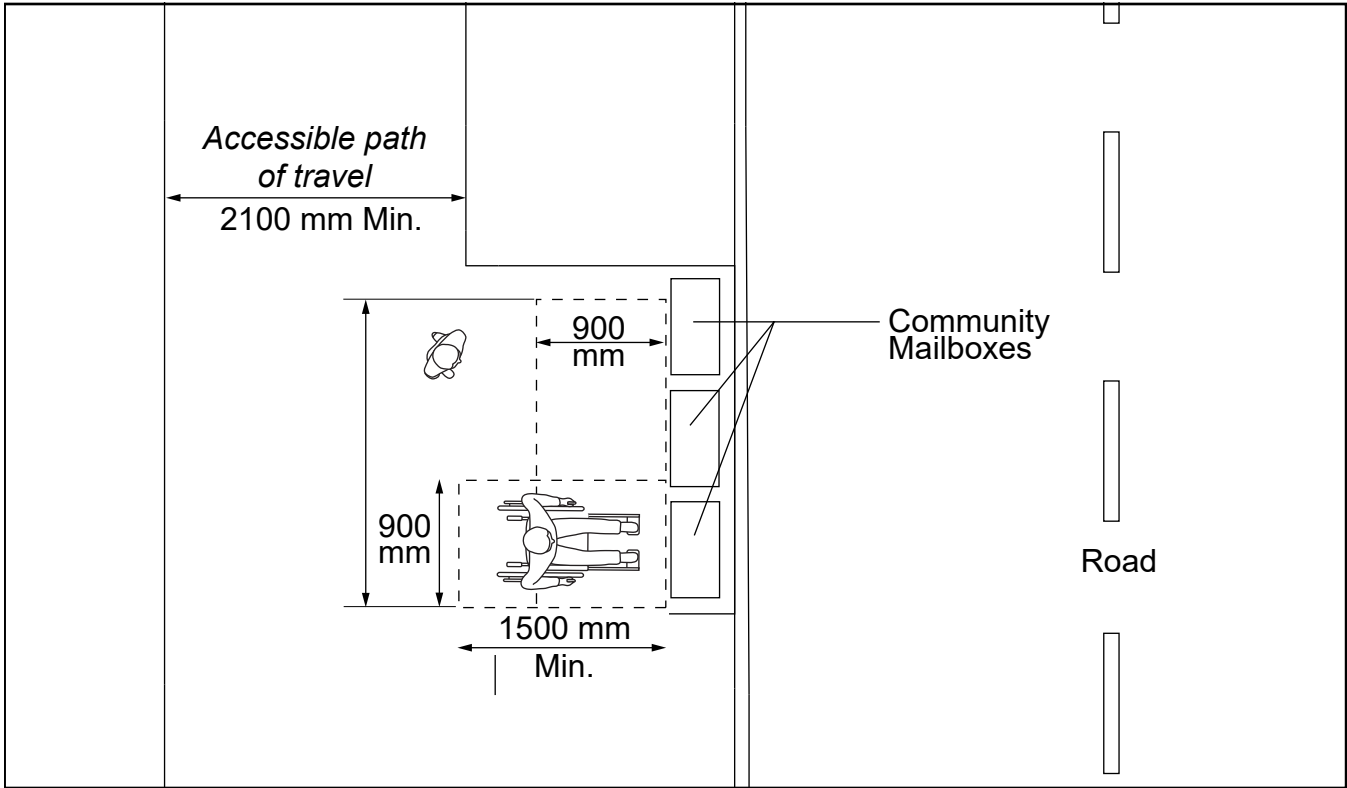


Figure 1.5.4-B Community Mailboxes Arrangement

## 1.5.5. Exterior Water Bottle Filling Stations and Drinking Fountains

### Rationale

Water bottle filling stations and drinking fountains are an *amenity* that should be connected to, but located outside of, an exterior *accessible path of travel*. Water bottle filling stations are preferred over drinking fountains because they provide greater opportunity for use and require less maneuverability for all individuals. Water bottle filling stations and drinking fountains should be at locations that reflect the program and *amenities* available in the surrounding environment.

### Application

The scope of this section applies to water bottle filling stations and drinking fountains located at parks, recreation and exterior and interior specialized areas such as play spaces and Dog Off-Leash Areas (DOLA). Equipment and street elements that are newly designed for the City Street Furniture Program should meet the criteria in this section.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “2.3.13. Interior Water Bottle Filling Stations and Drinking Fountains”

### Related References

- [Water Bottle Policy in City Parks and Facilities](#)

### Key Considerations

#### Amount

The amount of *accessible* water bottle filling stations and drinking fountains provided should consider whether an area is a *high-use* or *low-use*.

#### Accessible Path of Travel

An exterior *accessible path of travel* should be provided at water bottle filling stations and drinking fountains to allow for a continuous, unobstructed route providing exterior access to elements and spaces. A *clear ground space* should be provided adjacent to water bottle filling stations and drinking fountains to allow for front and side approach, as well as a clear turning space for persons using *mobility devices*.

#### Surfaces

A level ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling.

Where gratings and grilles are provided the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

## Design

The design of exterior and interior water bottle filling stations and drinking fountains should be consistent.

## Requirements

### (1) Amount:

Water bottle filling stations and drinking fountains should provide:

- (a) A minimum of one *accessible* unit where one or more is provided.

### (2) Accessible Path of Travel:

Water bottle filling stations and drinking fountains should be connected to an exterior *accessible path of travel* that:

- (a) Has a *clear ground space* that is 900 mm by 1500 mm minimum for a front approach, or 900 mm by 2200 mm minimum for a side approach;
- (b) Has a clear turning space, within any enclosed areas, that is 2500 mm minimum in diameter; and
- (c) Meets the criteria in section "1.1.1. Exterior Accessible Paths of Travel".

### (3) Surfaces:

Water bottle filling stations and drinking fountains should be provided on surfaces that:

- (a) Are level, firm, stable and slip-resistant; and
- (b) Have openings that:
  - (i) Are located outside of an exterior *accessible path of travel*;
  - (ii) Allow for drainage;
  - (iii) Are oriented perpendicular to the direction of travel where elongated; and
  - (iv) Do not allow passage of an object that has a diameter of 13 mm maximum;
- (c) Are *cane detectable*; and
- (d) Have *colour/brightness contrast* from adjacent surfaces.

### (4) Design:

Water bottle filling stations and drinking fountains should:

- (a) Meet the criteria in section "2.3.13. Interior Water Bottle Filling Stations and Drinking Fountains".





# 1.6. Exterior Materials and Finishes

## Section Summary

This section reviews the *accessible* design requirements for exterior materials and finishes intended to be used by the public and City staff. The design of floor or ground surfaces should strategically use materials, *colour/brightness contrast* and textural cues, such as *tactile attention indicators* and *tactile direction indicators*, to improve the safety, visibility and detectability of elements and features in the built environment. Careful consideration of materials and finishes can also help with navigation and *wayfinding*.

## Contents in Section

### 1.6.1. Ground Surfaces

### 1.6.2. Tactile Attention Indicators

### 1.6.3. Tactile Direction Indicators

## 1.6.1. Ground Surfaces

### Rationale

Ground surfaces should strategically use materials and finishes to enhance the usability and *accessibility* of the built environment.

### Application

The scope of this section applies exterior ground surfaces.



### Related Sections

- “1.6.2. Tactile Attention Indicators”
- “1.6.3. Tactile Direction Indicators”
- “3.2.1. Signage and Wayfinding Systems”

### Related References

- [Reserved]

### Key Considerations

#### Materials

Where naturalized or manufactured ground surface materials are provided, they should be designed to enhance an exterior *accessible path of travel*.

#### Colour/Brightness Contrast

*Colour/brightness contrast* should be provided on ground surfaces to assist in identifying key elements in the built environment and aid in *wayfinding*.

#### Textural Cues

Ground surfaces should provide textural cues such as *tactile walking surface indicators (TWSI)* which should be *cane detectable* to help with navigation and *wayfinding* for persons with low or no vision. Objects or elements should provide *tactile* characters and/or *Braille* to help with navigation and *wayfinding* for persons with low or no vision. Wall surfaces should be smooth and non-abrasive.

## Requirements

### (1) Materials:

Where naturalized or manufactured ground surface materials are provided, they should:

- (a) Be level, firm, stable, and slip-resistant;
- (b) Be matte (non-*glare*);
- (c) Avoid heavily patterned finishes that have a busy design; and
- (d) Not be subject to upheaval and settling from frost or thaw cycles.

### (2) Colour/Brightness Contrast:

Ground surfaces should provide *colour/brightness contrast* that:

- (a) Has a light reflectance value (LRV) that is 50% minimum from the LRV of adjacent surfaces.

### (3) Textural Cues:

Ground surfaces should provide textural cues that:

- (a) Include *tactile walking surface indicators (TWSI)* such as:
  - (i) *Tactile attention indicators*, that meet the criteria in section “1.6.2. [Tactile Attention Indicators](#)”; and
  - (ii) *Tactile directional indicators*, that meet the criteria in section “1.6.3. [Tactile Direction Indicators](#)”;
- (b) Include *tactile* characters and/or *Braille* that meet the criteria in section “3.2.1. [Signage and Wayfinding Systems](#)”; and
- (c) Are smooth and non-abrasive.

## 1.6.2. Tactile Attention Indicators

### Rationale

*Tactile attention indicators* are one type of *tactile walking surface indicator (TWSI)* that should be *can detectable* by persons with low or no vision using a *white cane* for navigation and *wayfinding* in the built environment.

### Application

The scope of this section applies to *tactile attention indicators* used in the exterior and interior built environment.



### Related Sections

- “1.1.10. Exterior Stairs”
- “1.2.4. Curb Ramps”
- “1.2.5. Depressed Curbs”
- “1.3.3. Public Transit Areas”
- “1.4.5. Public Pools and Spas”
- “1.6.1. Ground Surfaces”
- “2.1.7. Escalators”

### Related References

- [AODA, Integrated Accessibility Standards, PART IV.1 Design of Public Spaces Standards](#)
- [CSA B651 Accessible Design for the Built Environment](#)
- [ISO 23599: 2012 Assistive Products for Blind and Vision - Impaired Persons - Tactile Walking Service Indicators](#)
- [Tactile Walking Surface Indicators](#)

### Key Considerations

#### Location

*Tactile attention indicators* should be located where critical safety information, upcoming hazards and decision making points should be communicated to individuals. They should also be located at grade and elevation changes, unprotected edges with a drop-off or a slope, platforms, pool decks, the top of stairs, landings where there is a door leading onto the stair or *ramp* landing, the top and bottom of escalators, *curb ramps* and *depressed curbs*. In addition, they should be located to identify an entry into a vehicular roadway where no curbs or any other element separates the roadway from an exterior *accessible path of travel* or *pedestrian clearway*.

## Surfaces

*Tactile attention indicators* should be provided on floor or ground surfaces to improve the safety, visibility, and detectability of elements and features in the built environment.

## Design

*Tactile attention indicators* should be designed as circular, flat-topped, truncated domes/ cones. The spacing between adjacent domes/ cones should be adjusted depending on their size. The larger the individual domes/cones the more distant the space between them. They should be *cane detectable* by persons with low or no vision using a *white cane* to understand the textural cue underfoot. *Tactile attention indicators* should be installed as inlaid tiles or as individual nail heads and be wide enough to be detected and not stepped over. Inlaid tiles, when compared to surface applied tiles, have shown to require less *maintenance* and reduce the risk of tripping.

## Requirements

### (1) Location:

*Tactile attention indicators* should be located at:

- (a) Stairs, installed:
  - (i) At the top of the stair;
  - (ii) At landings, where there is a door leading onto the landing of stairs;
  - (iii) One full tread depth back from the first step; and
  - (iv) Meeting the criteria in section "1.1.10. Exterior Stairs";
- (b) Any edge of a platform that:
  - (i) Is not protected by a guard;
  - (ii) Is higher than 250 mm, or is sloped steeper than 1:3 (33%); and
  - (iii) Is installed to extend the full width;

- (c) *Curb ramps*, installed:
  - (i) At the bottom of the curb;
  - (ii) To extend the full width;
  - (iii) To be set back 150 mm to 200 mm from the curb edge; and
  - (iv) Meeting the criteria in section "1.2.4. Curb Ramps";
- (d) *Depressed curbs*, installed:
  - (i) At the bottom of the curb;
  - (ii) To extend the full width;
  - (iii) To be set back 150 mm to 200 mm from the curb edge; and
  - (iv) Meeting the criteria in section "1.2.5. Depressed Curbs";
- (e) Pool decks, installed:
  - (i) At the water's edge;
  - (ii) To extend around the perimeter of the pool;
  - (iii) Meeting the criteria in section "1.4.5. Public Pools and Spas";
- (f) Escalators, installed:
  - (i) At the top and bottom; and
  - (ii) Meeting the criteria in section "2.1.7. Escalators";
- (g) Entries into a vehicular roadway where no curbs or any other element separates the roadway from an exterior *accessible path of travel* or *pedestrian clearway*.

### (2) Surfaces:

*Tactile attention indicators* should provide surfaces that:

- (a) Meet the criteria in section "1.6.1. Ground Surfaces".

**(3) Design:**

Tactile attention indicators, "Figure 1.6.2-A Tactile Attention Indicator", should be designed to:

- (a) Have circular, flat-topped and truncated domes/cones that:
  - (i) Are 4 mm to 5 mm high; and
  - (ii) Meet the criteria in "Table 1.6.2-A Top Diameter and Centre-to-Centre Spacing Requirements"; and
- (b) Be inlaid tiles or individual nail heads that are 610 mm deep; and
- (c) Meet the criteria in [ISO 23599: 2012 Assistive Products for Blind and Vision - Impaired Persons - Tactile Walking Service Indicators](#).

Table 1.6.2-A Top Diameter and Centre-to-Centre Spacing Requirements

Top diameter of truncated domes or cones (mm)	Spacing centre-to-centre in a square grid (mm)
12	42 to 61
15	45 to 63
18	48 to 65
20	50 to 68
25	55 to 70

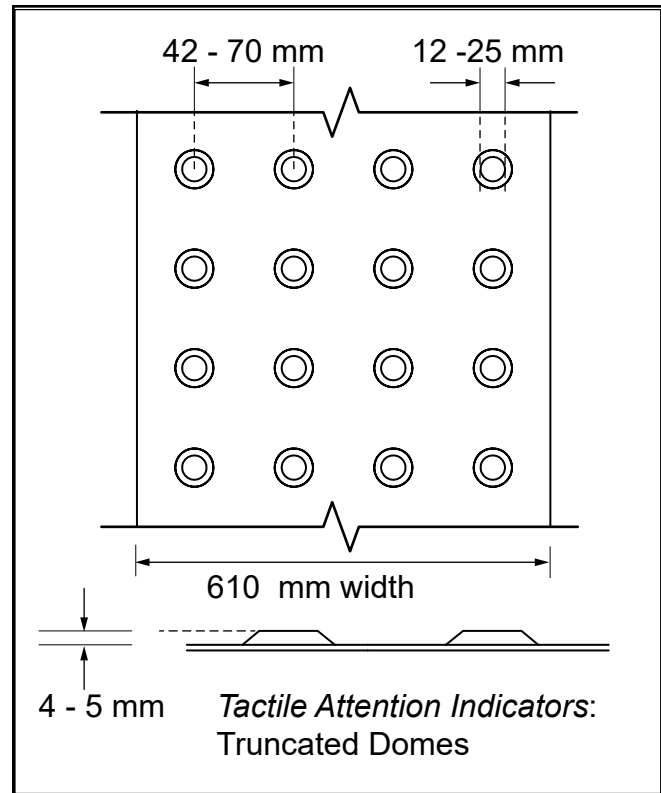


Figure 1.6.2-A Tactile Attention Indicator

### 1.6.3. Tactile Direction Indicators

#### Rationale

*Tactile direction indicators* are one type of *tactile walking surface indicator (TWSI)* that should be *cane detectable* by persons with low or no vision using a *white cane* for navigation and *wayfinding* in the built environment.

#### Application

The scope of this section applies to *tactile direction indicators* used in the exterior and interior built environment.



#### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “1.3.2. Passenger Pick-Up and Drop-Offs”
- “1.6.1. Ground Surfaces”
- “2.1.1. Interior Accessible Paths of Travel”
- “2.2.1. Entrances”

#### Related References

- [CSA B651 Accessible Design for the Built Environment](#)
- [ISO 23599: 2012 Assistive Products for Blind and Vision - Impaired Persons - Tactile Walking Service Indicators](#)
- [Tactile Walking Surface Indicators](#)

#### Key Considerations

##### Location

*Tactile direction indicators* should be located to communicate an exterior or interior *accessible path of travel* or *pedestrian clearway* and act as a tool to help with *wayfinding* to major destinations or *amenities*.

##### Surfaces

*Tactile direction indicators* should be provided on floor or ground surfaces to improve the safety, visibility and detectability of elements and features in the built environment.

##### Design

*Tactile direction indicators* should be designed as parallel, flat-topped elongated bars that extend in the direction of an exterior or interior *accessible path of travel*. They should be *cane detectable* by persons using a *white cane* to understand the textural cue underfoot.

They should be installed as inlaid tiles or as individual bars. Inlaid tiles, when compared to surface-applied tiles, have shown to require less *maintenance* and reduce the risk of tripping.

## Requirements

### (1) Location:

*Tactile direction indicators* should be located:

- (a) Along the *accessible path of travel*:
  - (i) At *passenger pick-up and drop-offs* that meet the criteria in section “1.3.2. Passenger Pick-Up and Drop-Offs”;
  - (ii) From main building *entrances* that meet the criteria in section “2.2.1. Entrances”, to major destinations or *amenities* within a space; and
  - (iii) That meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”, or “2.1.1. Interior Accessible Paths of Travel”.

### (2) Surfaces:

*Tactile direction indicators* should provide surfaces that:

- (a) Meet the criteria in section “1.6.1. Ground Surfaces”.

### (3) Design:

*Tactile direction indicators*, “Figure 1.6.3-A Tactile Direction Indicator”, should be designed to be/have:

- (a) Parallel, flat-topped elongated bars that:
  - (i) Are 4 mm to 5 mm high; and

- (ii) Meet the criteria in “Table 1.6.3-A Top Width and Centre-to-Centre Spacing Requirements”; and
- (b) Inlaid tiles or individual bars that:
  - (i) Are 250 mm to 300 mm wide;
  - (ii) Have 600 mm minimum of clear space on each side; and
  - (iii) Have 270 mm minimum top length; and
- (c) Meet the criteria in [ISO 23599:2012 Assistive Products for Blind and Vision - Impaired Persons - Tactile Walking Service Indicators](#).

Table 1.6.3-A Top Width and Centre-to-Centre Spacing Requirements

Top width of flat-topped elongated bars (mm)	Spacing centre-to-centre (mm)
17	57 to 78
20	60 to 80
25	65 to 83
30	70 to 85



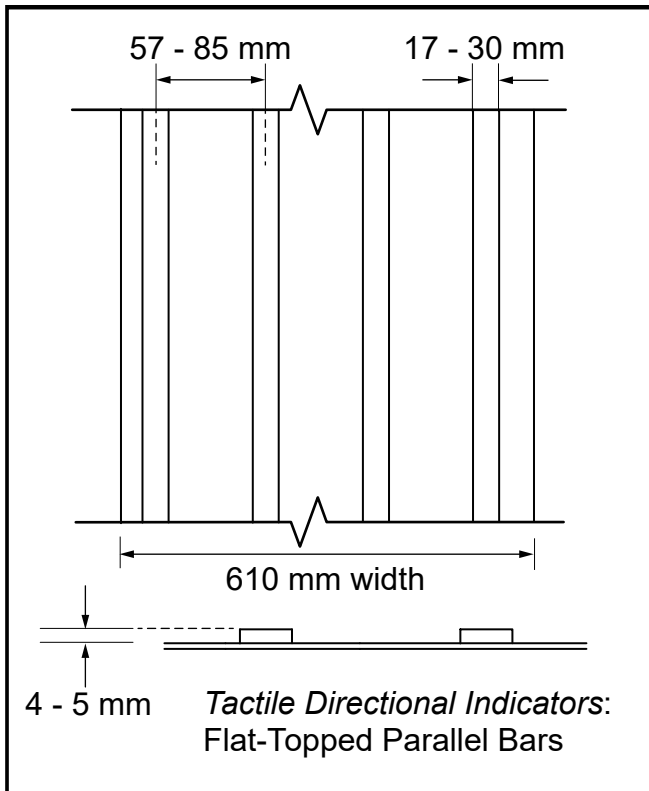


Figure 1.6.3-A Tactile Direction Indicator



# Interior

# 2



# 2.1 Interior Paths of Travel

## Section Summary

This section reviews the *accessible* design requirements for interior paths of travel intended for use by the public and City staff. Interior paths of travel include interior *accessible paths of travel*, *ramps*, stairs, elevators, LULA lifts and escalators. Interior *accessible paths of travel*, similar to an exterior *accessible path of travel*, should provide a continuous, unobstructed route providing interior access to elements and spaces throughout a building.

## Contents in Section

### 2.1.1. Interior Accessible Paths of Travel

### 2.1.2. Obstacles

### 2.1.3. Interior Ramps

### 2.1.4. Interior Stairs

### 2.1.5. Elevators

### 2.1.6. Limited Use, Limited Application (LULA) Lifts

### 2.1.7. Escalators

## 2.1.1. Interior Accessible Paths of Travel

### Rationale

Interior *accessible paths of travel* should provide a continuous, unobstructed route providing interior access to elements and spaces throughout a building. It is important to assess the intended occupants of a building in order to implement adequate space to ensure the highest level of access is provided.

### Application

The scope of this section applies to interior aisles, corridors and hallways.



### Related Sections

- “1.1.7. Handrails”
- “1.1.5. Rest Areas”
- “2.1.2. Obstacles”
- “2.7.1. Floor, Wall and Ceiling Surfaces”

### Related References

- [Office Design Guidelines](#)
- [Office Modernization - Accessibility Toolkit](#)

### Key Considerations

#### Location

Interior *accessible paths of travel* should be located within *high-use area* and *low-use areas*.

#### Surfaces

A level floor surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*. Where carpets are provided, the piles should be low to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

#### Clear Widths

The clear width of interior *accessible paths of travel* should be free from obstacles such as temporary or permanent obstructions, protrusions and overhead objects. *High-use*, interior *accessible paths of travel* should provide clear widths to allow for the simultaneous passage of two persons using *mobility devices*. *Low-use*, interior *accessible paths of travel* should provide clear widths to allow for the passage of one person using a *mobility device*.

### Clear Turning Spaces

Clear turning spaces should be provided at interior *accessible paths of travel* to create space for persons using *mobility devices* to make a 360° turn at main access and decision making points and to easily change direction. At locations where the minimum clear width is provided, passing areas should be provided to allow for easy and seamless maneuverability.

### Clear Floor Spaces

Where provided at interior *accessible paths of travel*, *clear floor spaces* should create unobstructed, level floor areas that are sized to provide the space for persons using *mobility devices*. The size of the *clear floor space* should be adjusted depending on the intended approach (front, side).

### Passing Areas

Passing areas should be provided at interior *accessible paths of travel* to create an unobstructed space for persons using *mobility devices* to turn and change their direction of travel. They should be located at *high-use areas*, and corridors and hallways that have long travel distances to allow two persons using *mobility devices* to pass one another.

### Additional Features

Where provided at interior *accessible paths of travel*, additional features should include handrails, convex mirrors and *rest areas*. Handrails create safety and support for the public moving along *accessible paths of travel*. Convex mirrors create safety and security. *Rest areas* create space for the public to safely rest or wait, enjoy their surrounding environment or regain their strength to continue moving along an interior path of travel.

## Requirements

### (1) Location:

Interior *accessible paths of travel* should be located:

- (a) Throughout a building;
- (b) At *high-use areas* such as:
  - (i) *Accessible entrances*;
  - (ii) Primary corridors and hallways; and
  - (iii) Washrooms; and
- (c) At *low-use areas* such as:
  - (i) Offices;
  - (ii) Meeting rooms;
  - (iii) Between furniture and equipment; and
  - (iv) Aisles in areas of assembly.

### (2) Surfaces:

Interior *accessible paths of travel* should provide surfaces that:

- (a) Are level, firm, stable, and slip-resistant;
- (b) Reduce the risk of tripping hazards; and
- (c) Have floor surfaces that meet the criteria in section “2.7.1. Floor, Wall and Ceiling Surfaces”.

### (3) Clear Widths:

Interior *accessible paths of travel* should provide a clear width that:

- (a) Are 1800 mm minimum at *high-use areas*, “[Figure 2.1.1-A Clear Width in High-Use Areas](#)”;
- (b) Are 1100 mm minimum at *low-use areas*, “[Figure 2.1.1-B Clear Width in Low-Use Areas](#)”; and

- (c) Are clear from obstructions, protrusions and overhead objects that meet the criteria in section “2.1.2. Obstacles”.

#### (4) Clear Turning Spaces:

Interior *accessible paths of travel* should provide clear turning spaces, “Figure 2.1.1-C Clear Turning Space”, that:

- (a) Are 2500 mm minimum in diameter, at 360° turns, that are located at:
  - (i) Vestibules at *entrances*;
  - (ii) Lobbies (*entrance* and elevator);
  - (iii) Corridor intersections;
  - (iv) Entryways into offices and large public assembly or conference rooms;
  - (v) At dead ends of a corridor and hallway; and
  - (vi) At 30 m intervals; and
- (b) Are 2500 mm minimum in diameter, at 180° turns and 90° turns, “Figure 2.1.1-D 90 Degree Turn”, that are located where the clear width is 1300 mm minimum.

#### (5) Clear Floor Spaces:

Where provided at interior *accessible paths of travel*, *clear floor spaces*, “Figure 2.1.1-E Clear Floor Space”, should:

- (a) Be 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm minimum for a side approach.

#### (6) Passing Areas:

Interior *accessible paths of travel* should provide passing areas, “Figure 2.1.1-F Passing Areas”, that:

- (a) Are unobstructed;

- (b) Are 1800 mm by 1800 mm; and

- (c) Are located:

- (i) At the beginning of a corridor and hallway;
- (ii) At dead ends of a corridor and hallway; and
- (iii) At 30 m intervals; and
- (iv) Where the clear width of interior *accessible paths of travel* are less than 1600 mm.

#### (7) Additional Features:

Where provided at interior *accessible paths of travel*, additional features should include:

- (a) Handrails that:

- (i) Are located in corridors when the linear interior path of travel is greater than 30 m;
- (ii) Are located on at least one side of the corridor; and
- (iii) Meet the criteria in section “1.1.7. Handrails”;

- (b) Convex mirrors that are located:

- (i) In the corners of ceilings at *high-use areas*;
- (ii) At unobstructed passing areas;
- (iii) At intersections along the interior path of travel where the line of sight is impeded; and
- (iv) At quiet areas as a security measure; and

- (c) *Rest areas* that meet the criteria in section “1.1.5. Rest Areas”.



## 2.1. Interior Paths of Travel

### 2.1.1. Interior Accessible Paths of Travel

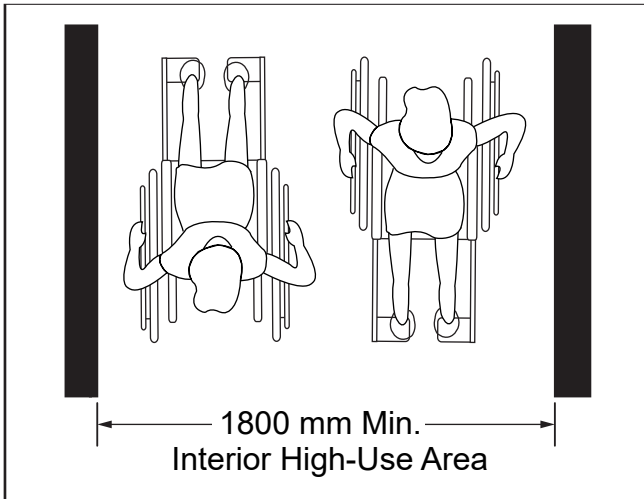


Figure 2.1.1-A Clear Width in High-Use Areas

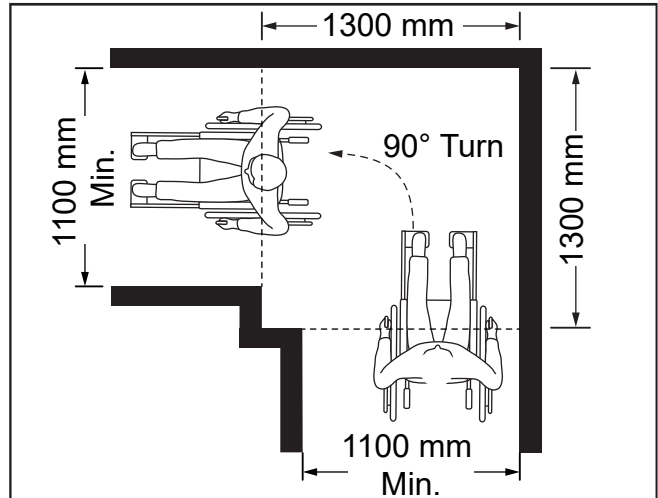


Figure 2.1.1-D 90 Degree Turn

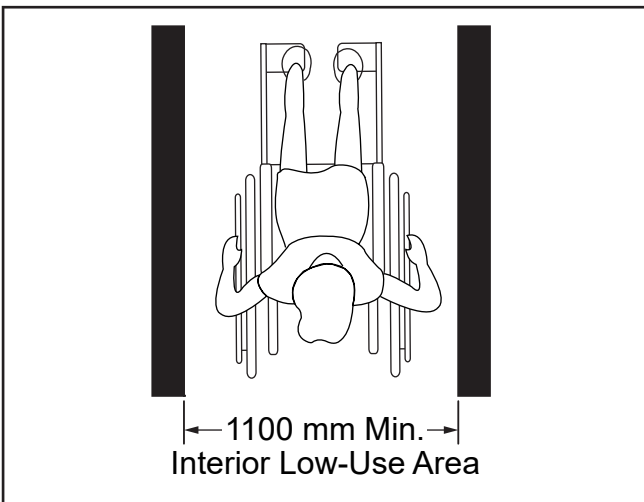


Figure 2.1.1-B Clear Width in Low-Use Areas

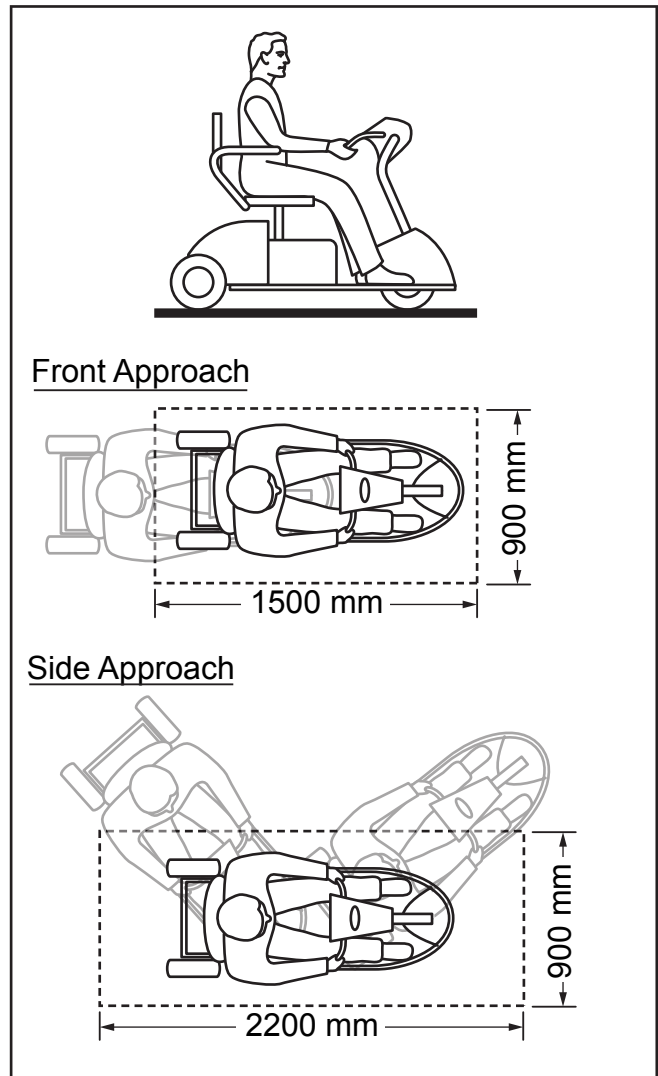


Figure 2.1.1-E Clear Floor Space

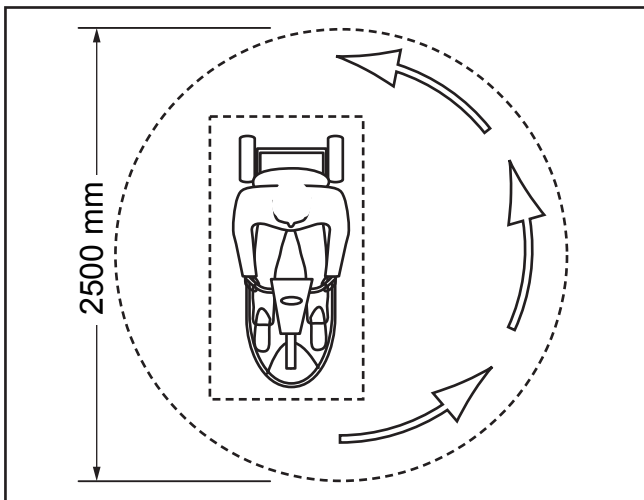


Figure 2.1.1-C Clear Turning Space

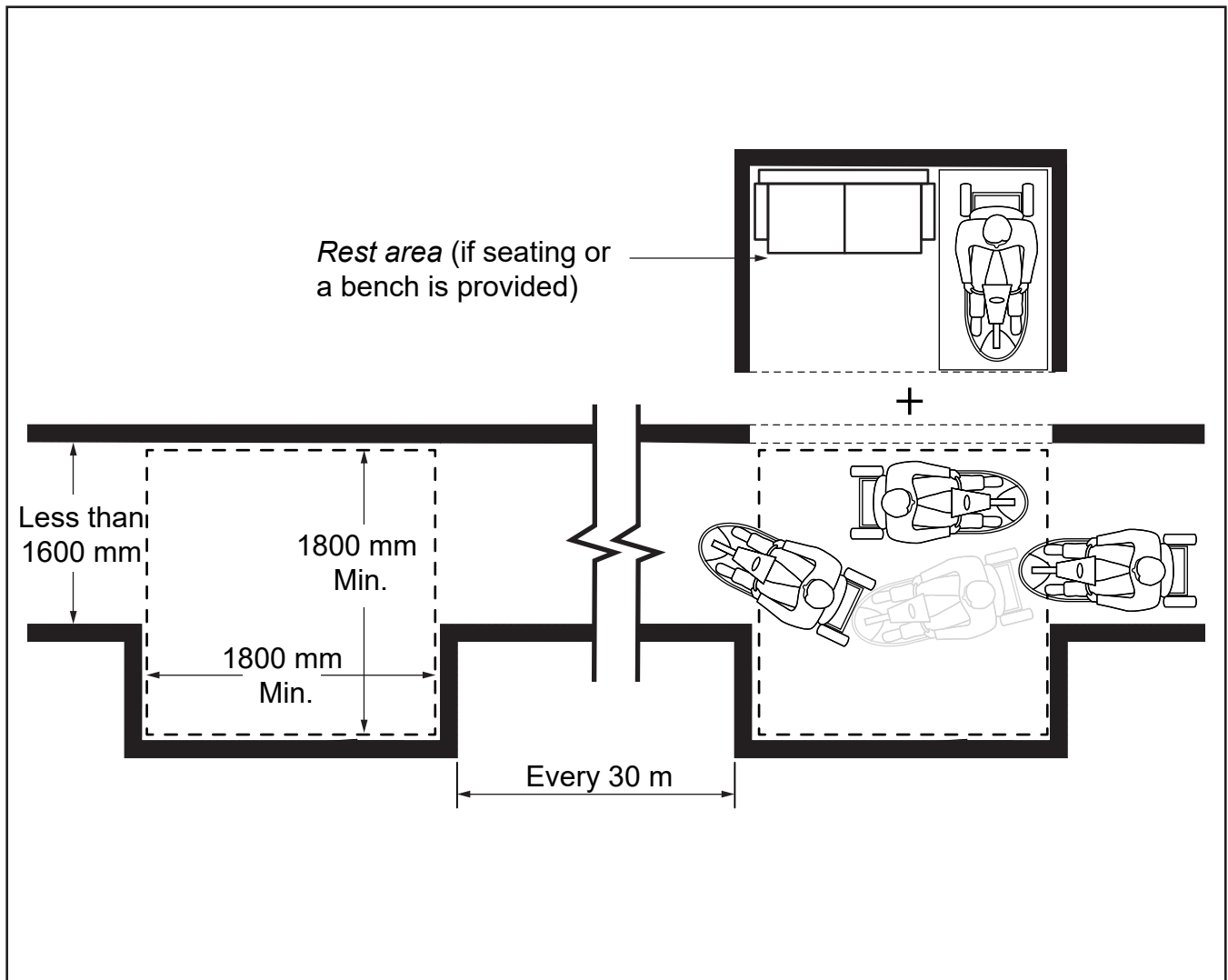


Figure 2.1.1-F Passing Areas

## 2.1.2. Obstacles

### Rationale

Obstacles include temporary or permanent obstructions, protrusions and overhead objects. Where provided, they should not impede interior paths of travel, including interior *accessible paths of travel*, and should be located to reduce the risk of potential hazards especially for persons with low or no vision.

### Application

The scope of this section applies to temporary or permanent building elements such as interior furnishings and equipment, plants, waste receptacles and recycling bins, drinking fountains, office equipment and technology, *signage* and vending machines.



### Related Sections

- [Reserved]

### Related References

- [Reserved]

### Key Considerations

#### Clear Width

The clear width of an interior paths of travel should be free from obstacles such as temporary or permanent obstructions, protrusions and overhead objects. Where provided, obstacles should limit the distance that the clear width is reduced.

#### Overhead Clearances

Where provided at interior paths of travel, obstacles should have clearances from the ground to the object to reduce the risk of potential hazards.

#### Cane Detectability

Where provided at interior paths of travel, obstacles should be designed to be *cane detectable* so that they can be identified by persons using a *white cane* for navigation and wayfinding.

### Requirements

#### (1) Clear Width:

Where provided at interior paths of travel, obstacles should:

- (a) Limit the distance that the clear width is reduced:
  - (i) To 950 mm minimum wide; and
  - (ii) To 615 mm maximum long, parallel to the direction of travel; and

- (b) Have a *clear floor space*, located before and after the reduced clear width.

**(2) Overhead Clearances:**

Where provided at interior paths of travel, obstacles should have overhead clearances that:

- (a) Are 2100 mm minimum *A.F.F.*

**(3) Cane Detectability:**

Where provided at interior paths of travel, obstacles should:

- (a) Be *cane detectable* that:
  - (i) Have the bottom edge of the object be mounted at or below 680 mm *A.F.F.*; and
  - (ii) Project no more than 100 mm into an *accessible paths of travel*.

## 2.1.3. Interior Ramps

### Rationale

Interior *ramps*, similar to exterior *ramps*, provide *accessible paths of travel* to overcome grade and elevation changes. Their *slopes* should have a *gradual transition* as they allow for better control and ease of movement for persons using *mobility devices*.

### Application

The scope of this section applies to all interior *ramps* including those that are retrofitted within existing heritage buildings or properties with extensive structural limitations.



### Related Sections

- “1.1.7. Handrails”
- “1.1.8. Guards”
- “1.1.9. Exterior Ramps”

### Related References

- [Reserved]

### Key Considerations

#### Design

The design of interior *ramps* should provide slopes that have a *gradual transition* as they allow for better control and ease of movement for persons using *mobility devices*.

### Requirements

#### (1) Design:

The design of interior *ramps* should:

- (a) Meet the criteria in section “1.1.7. Handrails”;
- (b) Meet the criteria in section “1.1.8. Guards”; and
- (c) Meet the criteria in section “1.1.9. Exterior Ramps”.

## 2.1.4. Interior Stairs

### Rationale

Where interior stairs are provided to overcome grade and elevation changes they should be adjacent to interior *accessible paths of travel* such as interior *ramps* or elevators. Interior stairs should integrate *accessible* elements to enhance their usability for all individuals especially for persons with low or no vision and persons with limited mobility.



### Related Sections

- "1.1.7. Handrails"
- "1.1.8. Guards"
- "1.1.10. Exterior Stairs"

### Related References

- [Reserved]

### Key Considerations

#### Design

The design of interior stairs should be consistent throughout a building and within a set of stairs. The consistent design of the risers and treads help individuals predict their movements on the stairs and reduces the risk of tripping or falling.

### Requirements

#### (1) Design:

The design of interior stairs should:

- Meet the criteria in section "1.1.7. Handrails";
- Meet the criteria in section "1.1.8. Guards"; and
- Meet the criteria in section "1.1.10. Exterior Stairs".

## 2.1.5. Elevators

### Rationale

Elevators or passenger elevating devices play an important part in maintaining continuous interior *accessible paths of travel*. They should be used instead of Limited Use, Limited Application lifts and platform lifts because they securely navigate a change in level, whereas, platform lifts often require operational assistance and leave individuals, including persons using *mobility devices*, feeling confined or restricted.

### Application

The scope of this section applies to new, and retrofitted or upgraded elevators within an existing building (heritage or otherwise) to the maximum extent possible. The criteria of this section does not apply to freight elevators except where they are used as combination freight and passenger elevators. In some cases there may be other factors to consider, including physical or structural constraints which must be reviewed with City staff on a case-by-case basis.



### Related Sections

- “3.3.3. Controls and Operating Mechanisms”

### Related References

- Appendix E of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators

### Key Considerations

#### Design

The design of elevators, such as their interior cab size, should consider the intended individuals of the building. Larger interior cab sizes should be provided where a high proportion of persons using *mobility devices* are anticipated. Elevators should be designed to utilize audible, visual and operational features to ease the experience of all individuals such as allowing for additional time to enter and exit the elevator safely.

#### Controls and Operating Mechanisms

Controls and operating mechanisms provided at elevators should be clearly distinguished from their surrounding surfaces to help persons with low vision to clearly find *operable portions or controls*. A *clear floor space* should be provided to allow persons using *mobility devices* the space to approach without any obstructions or protrusions. Elevator cab doors should provide longer opening times where a high proportion of seniors or persons using *mobility devices* are anticipated.

#### Additional Features

Where provided at elevators, additional features should be integrated into the design to enhance usability and accessibility, as well as, safety during operation.

## Requirements

### (1) Design:

Elevators should be designed to:

- (a) Meet the criteria in [Appendix E of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators](#); and
- (b) Have an interior cab size and door clear width, "[Figure 2.1.5-A Interior Cab Dimension](#)", "[\[R-2.1.5. \(1\)\(b\)\]](#)", that meet the criteria in "[Table 2.1.5-A Elevator Dimensions](#)".

Table 2.1.5-A Elevator Dimensions

Door Location	Door Clear Width (mm)	Inside Car Side to Side (mm)	Inside Car Back Wall to Front Return (mm)
Centred	1065	2030	1295
Side (off-centre)	915*	1725	1295
Any	915*	1370	2030
Any	915*	1525	1525

[\*Tolerance of 16 mm is permitted]

### (2) Controls and Operating Mechanisms:

Elevators should provide controls and operating mechanisms that have:

- (a) Hall buttons in elevator lobbies, "[Figure 2.1.5-B Car Control Buttons](#)" and "[Figure 2.1.5-C Hall Call Buttons](#)", that:
  - (i) Have a 19 mm minimum diameter in the smallest dimension;
  - (ii) Are mounted with its centreline at 900 mm to 1050 mm *A.F.F.*; and

- (iii) Have visual signals to indicate when each call is registered and received;

- (b) Interior cab *operable portions or controls* that:

- (i) Are mounted with its centreline at 1220 mm maximum *A.F.F.*;
- (ii) Are located on a horizontal control panel placed as close as possible to the opening side of the elevator cab door;

- (iii) Have a 19 mm minimum diameter;

- (iv) Are arranged with numbers in ascending order; and

- (v) Have visual and audible feedback to announce the floor number;

- (c) Have a *clear floor space* that is 900 mm by 1500 mm minimum for a front approach;

- (d) *Tactile* characters and *Braille* placed immediately to the left of the control buttons; and

- (e) Meet the criteria in section "[3.3.3. Controls and Operating Mechanisms](#)".

### (3) Additional Features:

Where provided at elevators, additional features should include:

- (a) Floor/car designations that:

- (i) Are 50 mm high characters and include *Braille* that meets the criteria in [CSA B651-12 Clause E.19](#);
- (ii) Are provided on both cab door jambs of the elevator hoistway *entrances*; and
- (iii) Are mounted with its centreline at 1525 mm *A.F.F.* from the baseline of the characters;

- (b) A two-way communication system and a hands free speaker system that:



- (i) Are provided within the elevator with the highest *operable portions or controls* located at 1050 mm maximum *A.F.F.*; and
- (ii) Have the ability to interact using sign language or face-to-face communication for those who are deaf, deafened or hard of hearing;
- (c) Floor surfaces that:
  - (i) Are firm, stable, slip-resistant;
  - (ii) Have *colour/brightness contrast* from the surrounding walls; and
  - (iii) Where provided with carpet, have a pile height that is 13 mm maximum tall;
- (d) Handrails that:
  - (i) Are located on all non-access walls mounted between 865 mm to 920 mm *A.F.F.*; and
  - (ii) Have a clearance of 35 mm to 45 mm between the handrails and the wall;
- (e) A flat mirror that is located between the ceiling and handrail on the wall opposite to the door;
- (f) Illumination levels at the *operable portions or controls*, floor surface, cab threshold, and landing sill that are 100 lux minimum; and
- (g) Cab doors that:
  - (i) Have a reopening device that will stop and reopen elevator doors when an object or person is sensed at a minimum of 125 mm +/- 25 mm and at 735 mm +/- 25 mm *A.F.F.* without requiring contact for activation; and
  - (ii) Have a minimum period of 5 seconds before the doors start to close if it is a hall call, and 3 seconds if it is a car call.

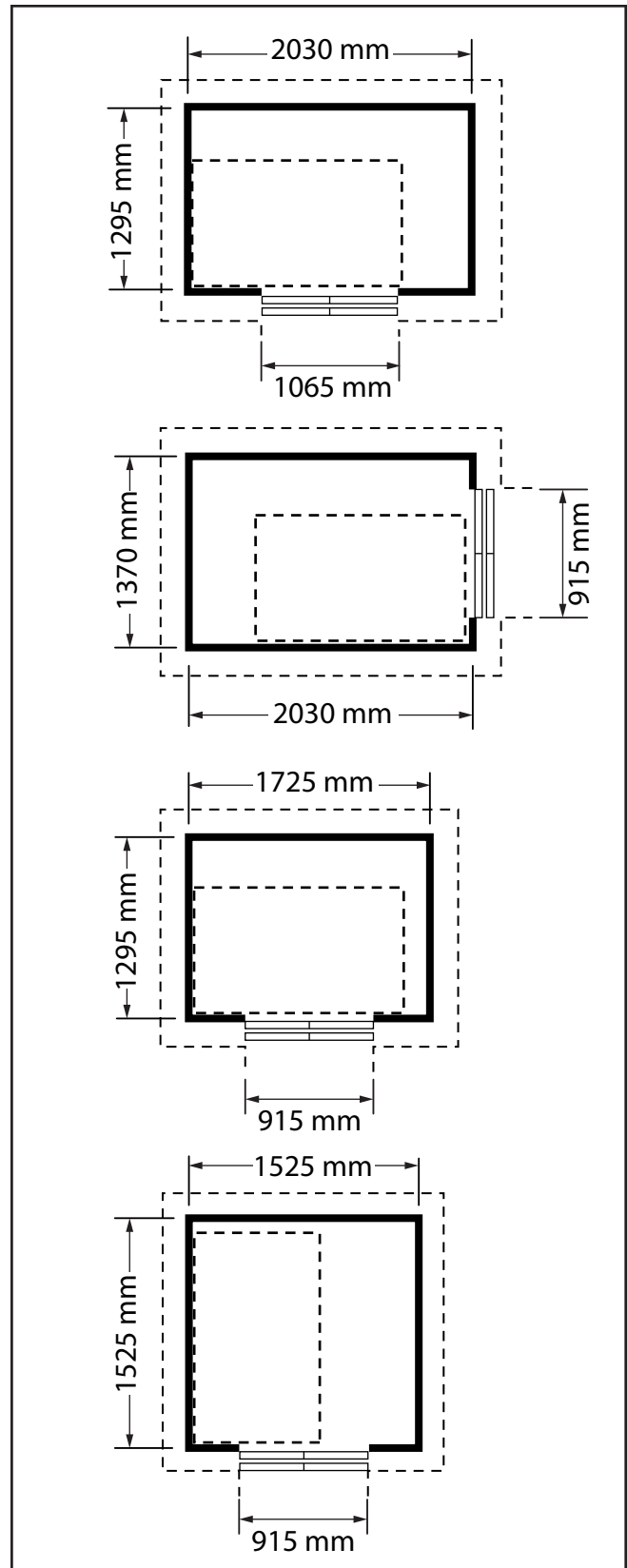


Figure 2.1.5-A Interior Cab Dimension

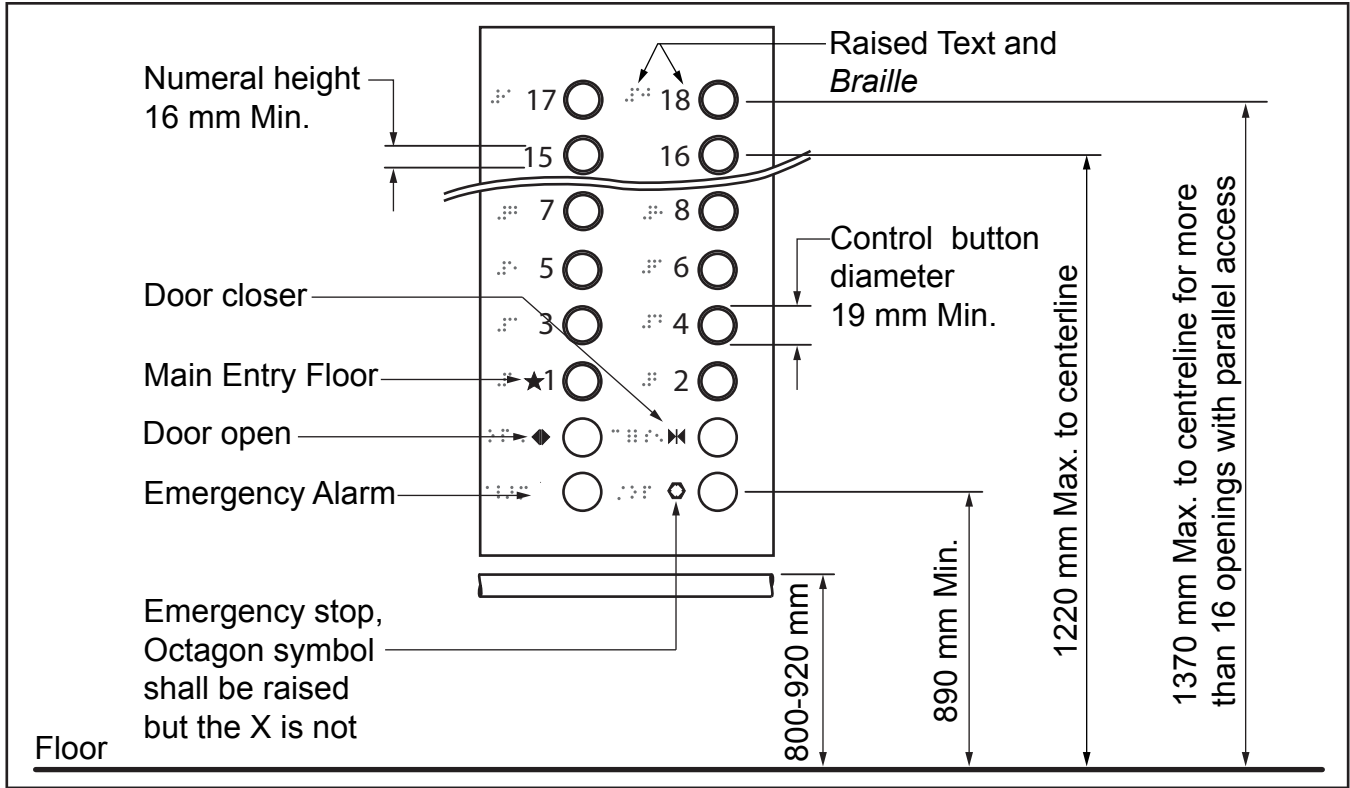


Figure 2.1.5-B Car Control Buttons

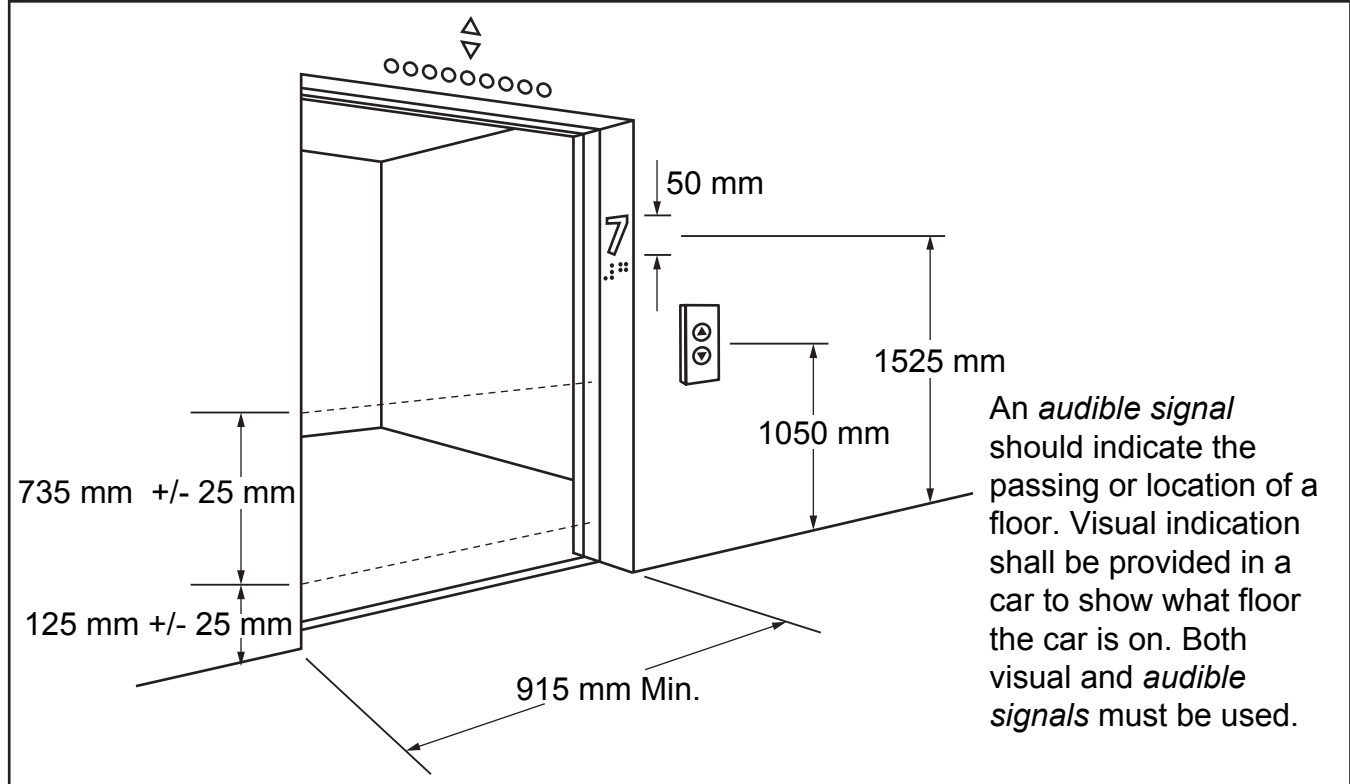


Figure 2.1.5-C Hall Call Buttons

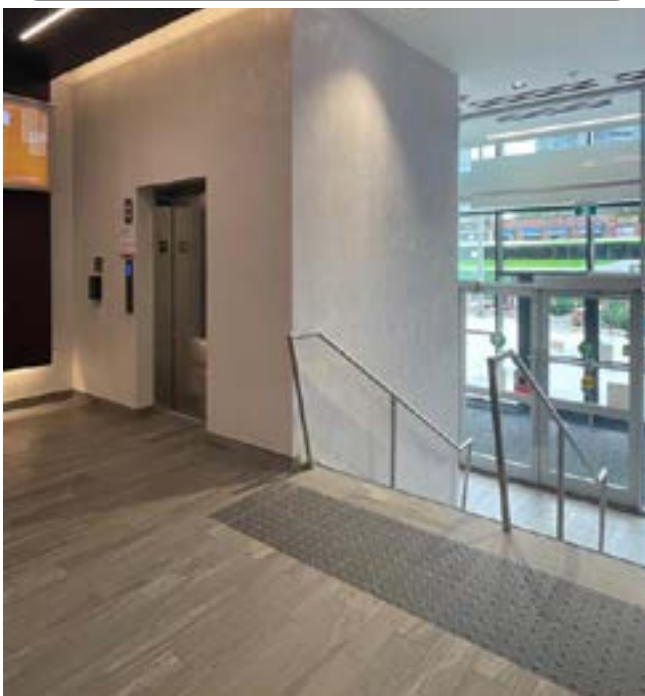
## 2.1.6. Limited Use, Limited Application (LULA) Lifts

### Rationale

Limited Use, Limited Application (LULA) lifts are a combination of a small commercial elevator and lift that allows for independent use and have *accessible* controls. Where LULA lifts are provided, they should integrate *accessible* elements to enhance their usability for all individuals especially for persons using *mobility devices*. In new buildings, LULA lifts should be used in lieu of platform lifts. Whenever possible passenger elevators, extensive grading, and *ramps* should be used instead of LULA lifts.

### Application

The scope of this section applies to Limited Use, Limited Application lifts as well as platform lifts that are used in retrofits where the use of an elevator is not possible due to physical or structural constraints.



### Related Sections

- “3.3.3. Controls and Operating Mechanisms”

### Related References

- CSA B355-09 Lifts for Persons with Physical Disabilities

### Key Considerations

#### Location

LULA lifts should be located in interior retrofits where there is a physical or structural constraint. Designers should consider that they are limited in their vertical travel distance as they can leave an individual feeling unsafe at certain heights.

#### Design

LULA lifts should be designed to overcome limited elevation changes. Larger interior cab sizes should be provided where a high proportion of persons using *mobility devices* are anticipated. Additional space for an assistant that can operate the LULA lift should be provided.

#### Controls and Operating Mechanisms

Controls and operating mechanisms provided at LULA lifts should be designed so that a user can independently operate the LULA lift.

### Requirements

#### (1) Location:

LULA lifts should be located:

- (a) At interior retrofits, where there is a physical or structural constraint, “[R-2.1.6. (1)(a)]”.

**(2) Design:**

LULA lifts should be designed to:

- (a) Have *clear floor space* that is 900 mm by 1500 mm minimum for a front approach; and
- (b) Have standing space for one person minimum.

**(3) Controls and Operating Mechanisms:**

LULA lifts should provide controls and operating mechanisms that:

- (a) Have *operable portions or controls* that:
  - (i) Can be used without assistance; and
  - (ii) Do not require continuous pressure; and
- (b) Meet the criteria in section “3.3.3. Controls and Operating Mechanisms”.

## 2.1.7. Escalators

### Rationale

Where escalators are provided to overcome grade and elevation changes they should be adjacent to interior *accessible paths of travel* such as interior *ramps* or elevators. Escalators should integrate *accessible* elements to enhance their usability for all individuals especially for persons with low or no vision, persons with limited mobility, and persons with cognitive disabilities.



### Related Sections

- “1.6.2. Tactile Attention Indicators”
- “2.1.1. Interior Accessible Paths of Travel”
- “2.1.5. Elevators”
- “3.2.1. Signage and Wayfinding Systems”

### Related References

- Appendix E of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators

### Key Considerations

#### Location

Where provided, escalators should be located in close proximity to interior *accessible paths of travel* such as an elevator.

#### Signage

*Signage* should be provided at escalators that identify the location of interior *accessible paths of travel*.

#### Tactile Attention Indicators

Where provided, escalators should provide *tactile attention indicators*. The top and bottom landing of escalators can be problematic and hazardous for persons with low to no vision. Textural warnings help to maintain safety as they navigate through a building and towards an escalator.

## Requirements

### (1) Location:

Where provided, escalators should be located:

- (a) In close proximity to interior *accessible paths of travel* that meets the criteria in section “2.1.1. Interior Accessible Paths of Travel” and “2.1.5. Elevators”.

### (2) Signage:

Escalators should provide *signage* that:

- (a) Identifies the location of an interior *accessible path of travel*; and
- (b) Meets the criteria in section “3.2.1. Signage and Wayfinding Systems”.

### (3) Tactile Attention Indicators:

Where provided, escalators should provide *tactile attention indicators* that:

- (a) Meet the criteria in section “1.6.2. Tactile Attention Indicators”.

# 2.2 Entrances, Exits, Doors and Doorways

## Section Summary

This section reviews the *accessible* design requirements for interior *entrances*, exits, doors and doorways intended for use by the public and City staff. *Entrances*, exits, doors and doorways connect exterior paths of travel to interior paths of travel. Doors and doorways can create *barriers* where provided and connected to *accessible paths of travel*. They should integrate *accessible* elements to enhance their usability for all individuals including persons with low to no vision and persons using *mobility devices*.

## Contents in Section

### 2.2.1. Entrances

### 2.2.2. Exits

### 2.2.3. Doors and Doorways

### 2.2.4. Door Controls and Devices

### 2.2.5. Vision Panels and Strips

### 2.2.6. Accessible Control Gates

## 2.2.1. Entrances

### Rationale

All *entrances*, including the principal *entrance* to a building, should be *accessible* and lead from exterior *accessible paths of travel* at sidewalk level, or a *ramp* that leads from a *sidewalk*. Integrating *accessible* elements to enhance the usability of *entrances* will help to ensure that all individuals are able to enter a building with independence, equitable use and dignity.



### Related Sections

- 1.3.2. Passenger Loading Zones
- 1.5.1. Benches and Seats
- 2.2.3. Doors and Doorways
- 2.4.4. Queuing Guides and Waiting Areas
- 3.2.1. Signage and Wayfinding Systems
- 3.2.2. Two-Way Communication Systems

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of *accessible entrances* provided to a building, in addition to the principal *entrance*, should consider the use of its facilities and the needs of all persons.

#### Doors and Doorways

Doors and doorways should be provided at *entrances* that connect exterior and interior *accessible paths of travel*. Exterior exit doors should be provided at *entrances*.

#### Vestibules

Vestibules should be provided at *entrances* that are designed to meet the needs of persons using larger *mobility devices* to reduce the risk of any user not having a sufficient clear turning space between two sets of doors. A user should be able to maneuver through a vestibule without being hit by the door opening or closing. Where possible, the use of swinging doors in vestibules should be avoided or minimized in the design of a facility.



Doors and doorways should be provided at vestibules that are either in series or are not aligned. Sliding doors that have proximity scanning devices to control *power door operators* should be used at *entrances* with vestibules located in *high-use areas*.

### Surfaces

Surfaces, such as seasonal *entrance* mats, should be provided at *entrances* to help reduce the impact of inclement weather. Permanent (or inlaid) mats, when compared to temporary (surface applied) mats, have shown to require less *maintenance* and reduce the risk of tripping hazards.

### Signage

*Signage* should be provided at *entrances* to help individuals including persons with cognitive disabilities, persons experiencing confusion or age-related dementia while navigating and *wayfinding*. Waiting areas should be provided with *signage* that identifies the location for wheel-trans vehicles and that the area is a designated *passenger pick-up and drop-off* area.

### Waiting Areas

Waiting areas should be provided at entrances to create a designated *passenger pick-up and drop-off (PPUDO)* area for persons waiting for their transportation. They should have clear sight lines from benches and seating to the *entrance* and to *PPUDO*'s. Communication systems should be provided at waiting areas to ensure that individuals are able to access information, contact and obtain assistance when they need it.

### Passenger Pick-Up and Drop-Off (PPUDO)

Where provided at *entrances*, *PPUDO*'s should be located in close proximity to a buildings principal *entrance*.

### Additional Features

Where additional features are provided at *entrances*, they should include weather protection, such as canopies, that have overhead clearances and are free from obstacles. Canopies help to reduce the impact of inclement weather and provide safe passage at *entrances* provided to a building.

### Requirements

#### (1) Amount:

*Entrances* should provide:

- (a) A minimum amount of *accessible entrances* that meet the criteria in the Table 2.2.1-A Number of Entrances.

Table 2.2.1-A Number of Entrances

Number of Entrances	Number of Accessible Entrances
1 to 3	1 to 3
4 or 5	4 or 5
More than 5	Not less than 50% or 5

#### (2) Signage:

*Entrances* should provide *signage* that:

- (a) Identifies the location of:
  - (i) *Accessible* elements;
  - (ii) Designated waiting areas;
  - (iii) Wheel-trans vehicles; and
  - (iv) Passenger *PPUDO*'s;
- (b) Incorporates the International Symbol of Access; and
- (c) Meets the criteria in section 3.2.1. *Signage and Wayfinding Systems*.

**(3) Doors and Doorways:**

*Entrances*, that include more than one door or doorway, should provide doors and doorways that:

- (a) Have at least one door that meets the criteria in section 2.2.3. [Doors and Doorways](#).

**(4) Vestibules:**

*Entrances* should provide vestibules that:

- (a) Have single doors, [Figure 2.2.4-A](#), or double doors, [Figure 2.2.4-B](#), into the vestibule that:
  - (i) Are in a series, or are not aligned; and
  - (ii) Have a clear turning space that is 2500 mm minimum in diameter, [\[R-2.2.1. \(4\)\(a\)\(iii\)\]](#), plus the width of any door that swings into the space in the path of travel from one door to another.

**(5) Surfaces:**

*Entrances* should provide surfaces that:

- (a) Have permanent (inlaid) or temporary (surface applied) seasonal *entrance* mats, [Figure 2.2.1-C](#), that:
  - (i) Have a thickness that is 13 mm maximum *A.F.F.*;
  - (ii) Have gently *beveled* edges;
  - (iii) Are level with the adjacent floor surface;
  - (iv) Extend in the direction of interior *accessible paths of travel*; and
  - (v) Have *colour/brightness contrast*.

**(6) Waiting Areas:**

*Entrances* should provide waiting areas, [Figure 2.2.1-D](#), that:

- (a) Are connected to interior *accessible paths of travel*;
- (b) Have benches and seats that meet the criteria in section 1.5.1. [Benches and Seats](#);
- (c) Have 3% minimum, rounding up to the nearest whole number, but never less than two, *clear floor space* that is 900 mm wide by 1500 mm minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach;
- (d) Have 5% minimum *adaptable seating*, rounding up to the nearest whole number, but never less than one;
- (e) Have clear sight lines to the:
  - (i) *Entrance* doors and doorways; and
  - (ii) *Passenger pick-up and drop-off*;
- (f) Have communication systems that:
  - (i) Have a call bell;
  - (ii) Information telephone; and
  - (iii) Meet the criteria in section 3.2.2. [Two-Way Communication Systems](#);
- (g) Are located in environments that are temperature controlled; and
- (h) Meet the criteria in section 2.4.4. [Queuing Guides and Waiting Areas](#).

**(7) Passenger Pick-Up and Drop-Off (PPUDO):**

Where provided at *entrances*, *PPUDO*'s, [Figure 2.2.1-D](#), should:

- (a) Meet the criteria in section 1.3.2. [Passenger Loading Zones](#).

**(8) Additional Features:**

Where provided at *entrances*, additional features should include:

- (a) Weather protection or canopies that have 2100 mm A.F.F. overhead clearance, [Figure 2.2.1-E](#), for pedestrians.

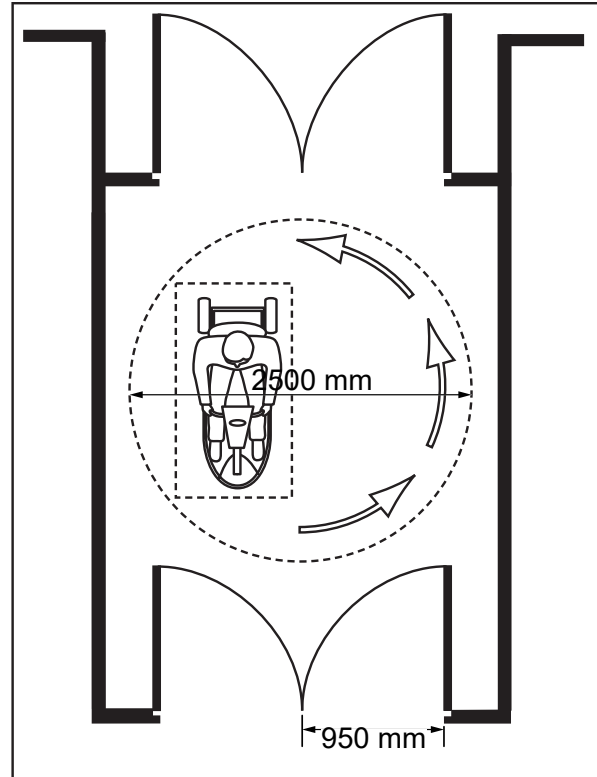


Figure 2.2.1-B Design - Double Doors

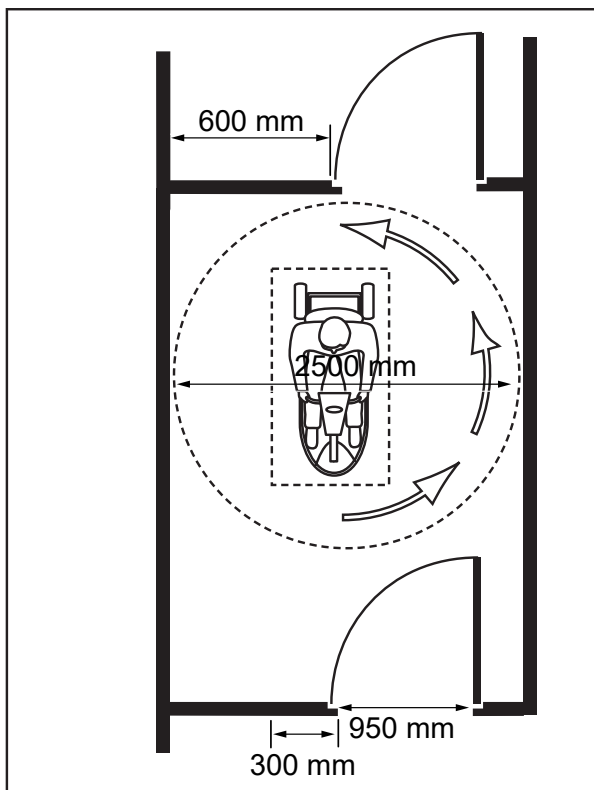


Figure 2.2.1-A Design - Single Door

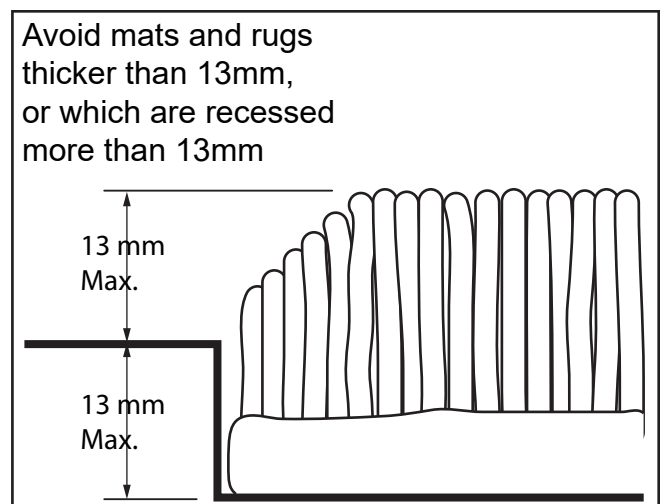


Figure 2.2.1-C Surfaces

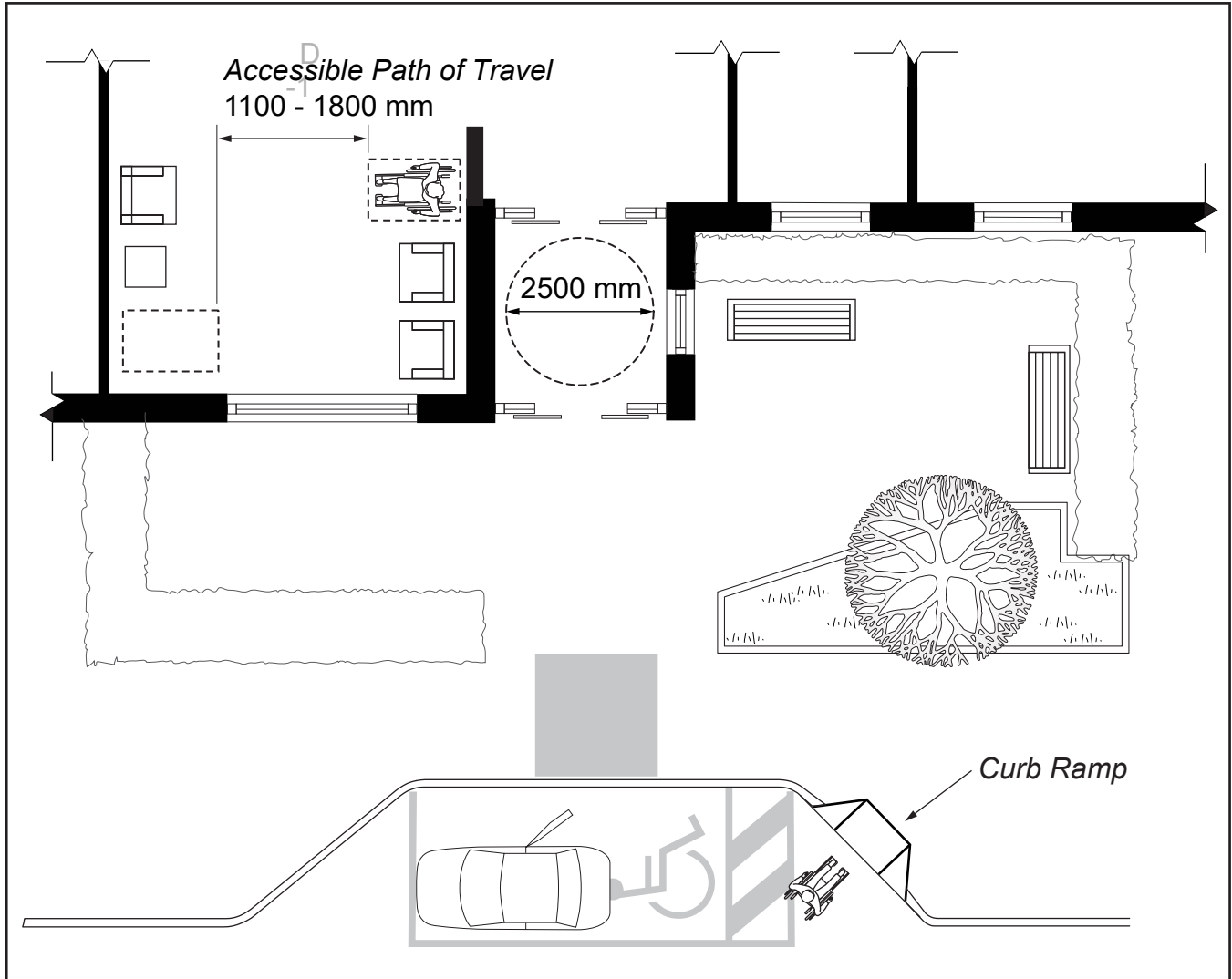


Figure 2.2.1-D Waiting Area

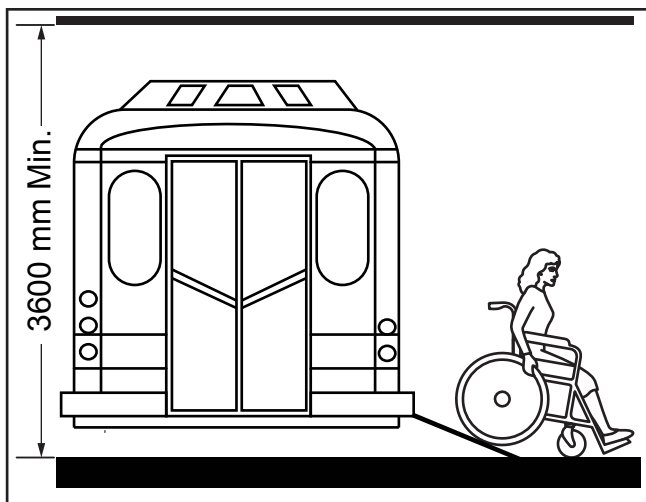


Figure 2.2.1-E Overhead Clearance

## 2.2.2. Exits

### Rationale

Exits should be *accessible* and lead from an interior to an exterior *accessible path of travel*. Integrating *accessible* elements to enhance the usability of exits will help to ensure that all individuals are able to exit a building with independence, equitable use and dignity.

### Application

The scope of this section applies to exits at the first storey of a building.



### Related Sections

- “1.1.1. Exterior Accessible Paths of Travel”
- “2.2.1. Entrances”

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of *accessible* exits provided to a building should consider the use of its facilities and the needs of all persons.

#### Accessible Paths of Travel

An interior and exterior *accessible path of travel* should be connected to exits to allow for a continuous, unobstructed route providing equitable means of egress.

### Requirements

#### (1) Amount:

Exits should provide:

- (a) A minimum amount of *accessible* exits that meet the criteria in the [Table 2.2.2-A Number of Exits](#).

Table 2.2.2-A Number of Exits

Number of Exits	Number of <i>Accessible</i> Exits
2	2
More than 2	Not less than 50%
More than 5	Not less than 50%

**(2) Accessible Paths of Travel:**

Exits should provide an interior and exterior *accessible path of travel* that:

- (a) Meet the criteria in section “2.2.1. Entrances”; and
- (b) Meets the criteria in section “1.1.1. Exterior Accessible Paths of Travel”.

## 2.2.3. Doors and Doorways

### Rationale

Doors and doorways that connect interior and exterior *accessible paths of travel* can create *barriers* for individuals. It is important to consider eliminating doors where they are not required for acoustic or physical privacy.

### Application

The scope of this section applies to all doors and doorways that connect interior and exterior *accessible paths of travel*. It also applies to at least one door or doorway where more than one is provided, such as double doors. Doors and doorways at *service rooms* and *service spaces* are exempt from the criteria in this section.



### Related Sections

- “2.2.4. Door Controls and Devices”
- “2.2.5. Vision Panels and Strips”

### Related References

- [Office Design Guidelines](#)
- [Office Modernization - Accessibility Toolkit](#)

### Key Considerations

#### Clear Width

The clear width at doors, when the door is in the open position, and doorways should be provided with unobstructed entry and egress to a building and interior *accessible paths of travel*. The location of door controls and devices should not obstruct the clear width.

#### Latch Side Clear Space

Latch side clear space should be provided at doors to allow for independent, equitable and dignified access for all individuals, including persons using *mobility devices*. Latch side clear space should be provided beyond the edge of the door opening where the door swings toward (pull side) and away (push side) from the approach side. Latch side clear space provide maneuverability space for persons using *mobility devices* to approach and simultaneously use the door controls and opening devices with ease of movement.

#### Vestibules

Where provided, vestibules at doors should be designed to meet the needs of persons using larger *mobility devices* to reduce the risk of any user not having a sufficient clear turning space between two sets of doors. A user should be able to maneuver through a vestibule without being hit by the door opening or closing.

Where possible, the use of swinging doors in vestibules should be avoided or minimized in the design of a facility.

### Door Controls and Devices

Door controls and devices should be provided at doors and doorways that have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist. Where controls for *power door operators (PDO)* are provided at doors they should require minimal opening force when the *PDO* is deactivated by an emergency alarm. Where proximity scanning devices to control *PDO*'s at sliding doors are provided, such as at *high-use area entrances*, they should be equipped with door release (panic) hardware to allow for a safe means of egress during an emergency.

### Materials and Finishes

Materials and finishes should be provided at doors and doorways that can be distinguished from adjacent surfaces especially where connected to interior *accessible paths of travel*. *Colour/brightness contrast* is important to provide visibility for persons with low to no vision to safely navigate, enter and exit rooms and spaces they are intending to use. Fully glass doors, sidelights and vision panels should be designed to reduce the risk of hazard and have vision strips to create a visual *barrier* to stop individuals, especially persons with low vision, from walking into the door.

### Thresholds

Where thresholds are provided at doors and doorways, they should have a minimal transition to allow for a level floor surface and *accessible path of travel*. Raised thresholds can create *barriers* for individuals including persons using *mobility devices*.

### Additional Features

Where additional features are provided at doors and doorways, they should include *cane detectable guards*. *Cane detectable guards* help to reduce the risk of hazard and obstruction for persons who have low or no vision as they navigate along interior *accessible paths of travel* or means of egress. They should also be located where doors swing toward (pull side) the approach side or have proximity scanning devices to control *PDO*'s.

### Requirements

#### (1) Clear Width:

Doors and doorways should provide clear width, [Figure 2.2.3-A](#), that:

- (a) Are 950 mm minimum, [\[R-2.2.3. \(1\) \(a\)\]](#);
- (b) Are measured from the face of the door or door release (panic) hardware to the door jamb when the door is opened 90° from the frame;
- (c) Are located at all doors, [\[R-2.2.3. \(1\) \(c\)\]](#), including:
  - (i) Fire doors;
  - (ii) Smoke doors;
  - (iii) Exits;
  - (iv) Sliding doors;
  - (v) Gates; and
  - (vi) At least one door or doorway where more than one is provided; and
- (d) Where provided, have projections that are 100 mm maximum and 865 mm minimum *A.F.F.*



**(2) Latch Side Clear Space:**

Doors and doorways should provide latch side clear space that:

- (a) Has 600 mm minimum on the pull side of a swinging door, [Figure 2.2.3-A](#);
- (b) Has 300 mm minimum on the push side of a swinging door;
- (c) Has 300 mm minimum on both sides of a sliding door; and
- (d) Has clear space that:
  - (i) Is level;
  - (ii) Is 1800 mm wide measured from the inside of the door face, by 1800 mm long measured from the outside of the door face, on the pull side of the door; and
  - (iii) Is 1500 mm wide measured from the inside of the door face, by 1500 mm long measured from the outside of the door face, on the push side of a swinging door.

**(3) Vestibules:**

Doors and doorways should provide vestibules that:

- (a) Have single doors, or double doors into the vestibule that:
  - (i) Are in a series, or are not aligned; and
  - (ii) Have a clear turning space that is 1800 mm to 1900 mm minimum in diameter, plus the width of any door that swings into the space in the path of travel from one door to another.

**(4) Door Controls and Devices:**

Doors and doorways should provide door controls and devices that:

- (a) Meet the criteria in section "[2.2.4. Door Controls and Devices](#)".

**(5) Materials and Finishes:**

Doors and doorways should provide materials and finishes that:

- (a) Have *colour/brightness contrast* from adjacent surfaces; and
- (b) Meet the criteria in section "[2.2.5. Vision Panels and Strips](#)".

**(6) Thresholds:**

Doors and doorways should provide thresholds, [Figure 2.2.3-B](#), that:

- (a) Are level;
- (b) Have a 0 mm to 6 mm maximum vertical rise; or
- (c) Have a 6.1 mm to 13 mm maximum rise with a *beveled* edge of 1:2 (50%) maximum.

**(7) Additional Features:**

Where provided at doors and doorways, additional features, [[R-2.2.3. \(6\)](#)], should include:

- (a) *Cane detectable* guards where the door is not fully inset or recessed, [Figure 2.2.3-C](#), that:
  - (i) Are located on the pull side of a swinging door, or are located on the pull side of a swinging door that has proximity scanning devices to control *PDO*'s;
  - (ii) Installed perpendicular to the wall; and

- (iii) Extend the full clear door width plus 50 mm beyond the edge of the door opening;
- (b) Doors that are inset or recessed, [Figure 2.2.3-D](#), from interior *accessible paths of travel*;
- (c) Where privacy is not a concern, a vision panel that meets the criteria in [“2.2.5. Vision Panels and Strips”](#); and
- (d) Door kick plates that extend 300 mm minimum *A.F.F.* in *high use-areas*.

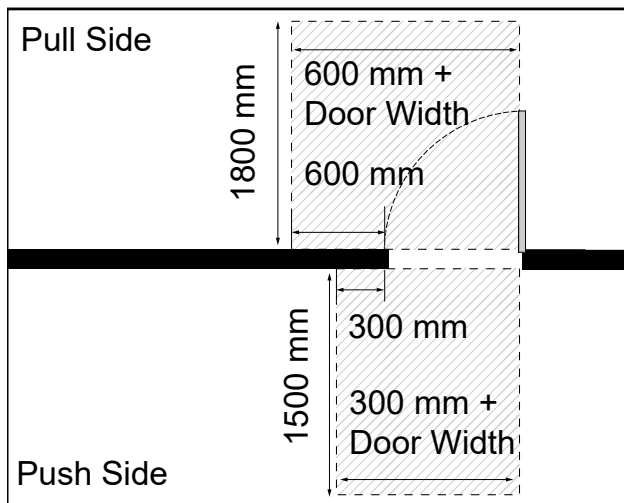


Figure 2.2.3-A Latch Side Clear Space

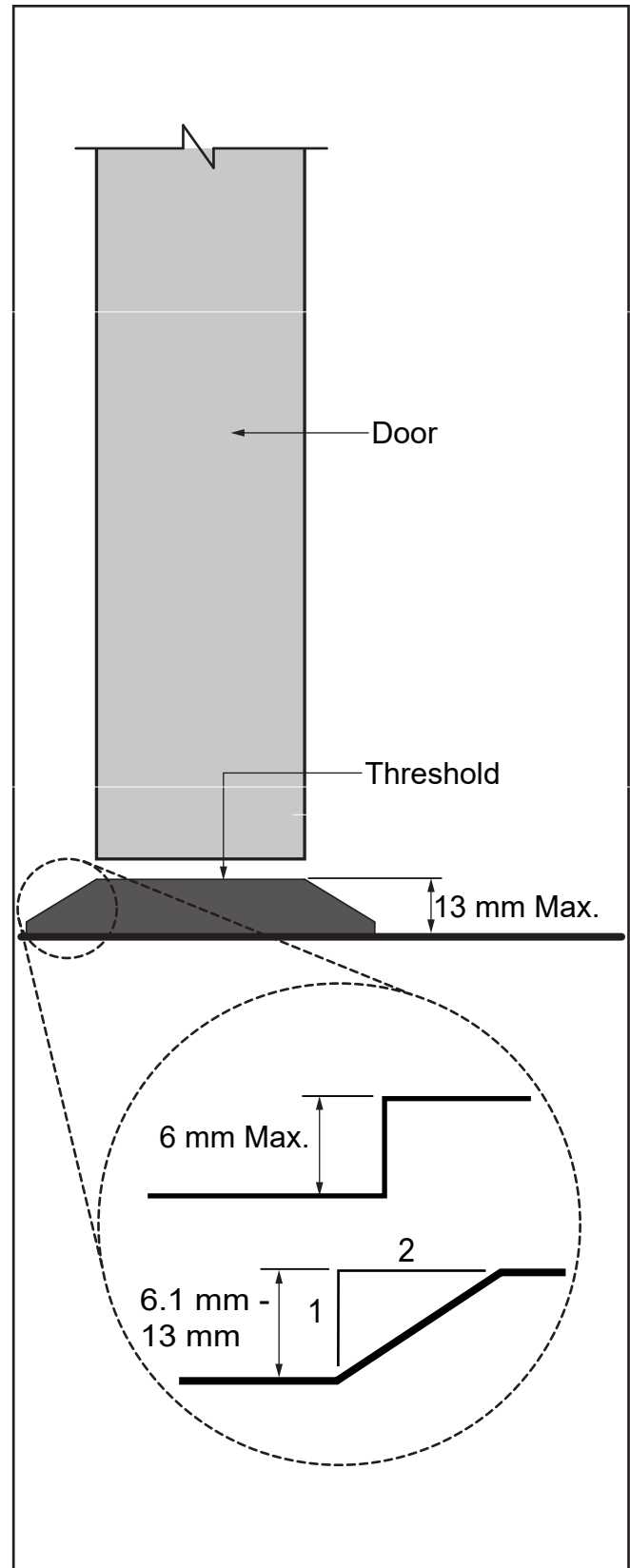


Figure 2.2.3-B Thresholds

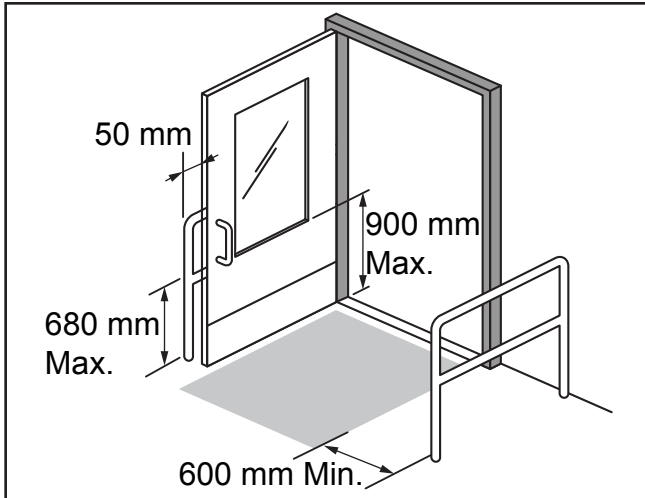


Figure 2.2.3-C Cane Detectable Guards

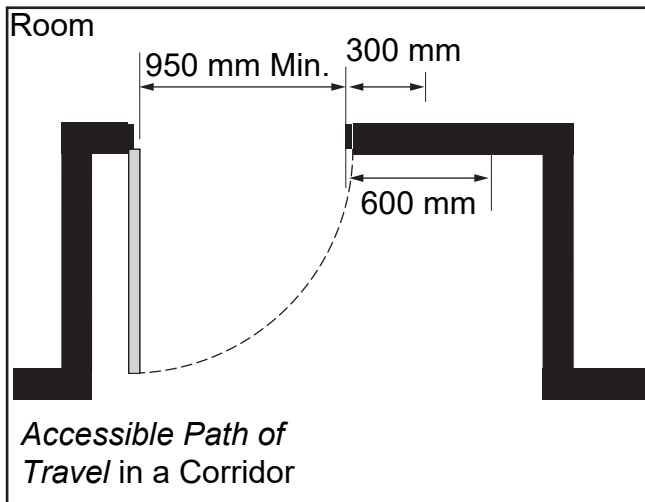


Figure 2.2.3-D Inset or Recessed Doors

## 2.2.4. Door Controls and Devices

### Rationale

Door controls and devices including control for *power door operators* and door opening devices (hardware) enhance the usability of doors for all individuals to navigate through. They should have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

### Application

The scope of this section applies to all doors and doorways that connect interior and exterior *accessible paths of travel*.



### Related Sections

- “2.2.1. Entrances”
- 2.2.3. Doors and Doorways

### Related References

- Office Modernization - Accessibility Toolkit

### Key Considerations

#### Control for a Power Door Operator (PDO)

Control for a *PDO* should be provided at doors that are connected to *accessible paths of travel* to ensure that a consistent level of access is provided throughout a building. Where they are not installed, rough-in construction should be provided for the future installation of a control for a *PDO*.

Manual control for a *PDO*'s, such as an elongated-type (preferred), a circular-type (push button), should have *operable portions or controls*, and be installed to have *clear floor space* and reach range dimensions for persons using *mobility devices* to use. Where control for a *PDO* is deactivated by an emergency alarm, the door should be designed to require minimal force to open.

Automatic control for a *PDO*, such as a proximity scanning device, or a *wave-to-open*-type should be provided at doors in *high-use areas*. Where provided, they should be equipped with door release (panic) hardware to allow for a safe means of egress during an emergency. However, consider that persons who are blind or have low vision may experience more difficulty activating *wave-to-open* type.

Where pressure sensitive mats or infra-red sensors are provided, the layout or coverage should ensure that persons using *mobility devices*, seniors or persons with visual limitations have time to clear the opening safely before the door closes again.

### Door Opening Devices

Door opening devices (hardware), such as handles and locks, should be provided at doors. They should be designed to have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist. They should have *colour/brightness contrast* from adjacent surfaces so that persons with low vision can easily find and operate door opening devices.

### Requirements

#### (1) Control for a Power Door Operator (PDO):

Control for a *PDO* should:

- (a) Be located at:
  - (i) *Entrances* that meet the criteria in section “2.2.1. Entrances”;
  - (ii) Both sets of doors in a vestibule;
  - (iii) Doors connected to *accessible paths of travel* that have door closers, electromagnetic hold-open, or no latch side clearance;
  - (iv) Doors entering into all public meeting rooms and assembly space;
  - (v) Larger multi-purpose or training rooms and board rooms serving more than 30 persons;
  - (vi) Doors entering into publicly accessed reception areas;
  - (vii) Doors leading into an area of refuge;
  - (viii) Doors leading in public buildings providing access to essential services, programs and highly used work support areas; and
  - (ix) All *accessible* facilities, such as washrooms and change rooms that meet the criteria in section 2.3. [Plumbing Fixtures, Washrooms and Change Rooms](#);
- (b) Have a *clear floor space*, centered on the *PDO*, that is 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach;
- (c) Have the International Symbol of Access (ISA);
- (d) Have a matte, honed, flamed, or brushed surface from adjacent surfaces;
- (e) Have *tactile* features; and
- (f) Are operable using a closed fist;
- (g) Be between 600 mm to 1500 mm beyond the door swing when the door opens toward the control, or from any inside corner, measured from the centreline of the control to the edge of the door frame, [Figure 2.2.4-A](#);
- (h) Be installed on a wall, or a pedestal that is adjacent to an *accessible path of travel*;
- (i) Where provided, an elongated-type (preferred), [Figure 2.2.4-B](#), that:
  - (i) Be 150 mm minimum wide by 725 mm minimum long; and
  - (ii) Extend from 200 mm maximum to 900 mm minimum *A.F.F.*; or

- (j) Where provided, a circular-type, [Figure 2.2.4-C](#), [R-2.2.5. (1)(k)], that:
  - (i) Be 150 mm minimum diameter; and
  - (ii) Be mounted on centre 900 mm to 1050 mm A.F.F.; or
- (k) Where provided, a proximity scanning device, [Figure 2.2.4-D](#) and [Figure 2.2.4-E](#), that:
  - (i) Is only located at sliding doors;
  - (ii) Is located at *high-use area entrances*;
  - (iii) Has panic hardware;
  - (iv) Where doors into a vestibule are in a series, have coordinated opening times for both sets of doors; and
  - (v) Should keep doors open for a period of 20 seconds minimum before the doors start to close.

## (2) Door Opening Devices:

Doors should have door opening devices that:

- (a) Are mounted on centre 900 mm to 1050 mm A.F.F.;
- (b) Have D-type hardware, [Figure 2.2.4-F](#), for closets or sliding doors that are 75 mm to 100 mm long, or lever-type hardware, [Figure 2.2.4-G](#);
- (c) Have panic hardware;
- (d) Have *colour/brightness contrast* from adjacent surfaces;
- (e) Have *tactile* features;
- (f) Are operable using a closed fist;
- (g) Are operable using a force of 22 N maximum at doors that connect to interior *accessible paths of travel*;

- (h) Are operable using a force of 38 N maximum at doors that connect to exterior *accessible paths of travel*; and
- (i) Include electric hold-open devices on required fire and smoke *barrier doors* so that the doors only close when the fire alarm is activated.

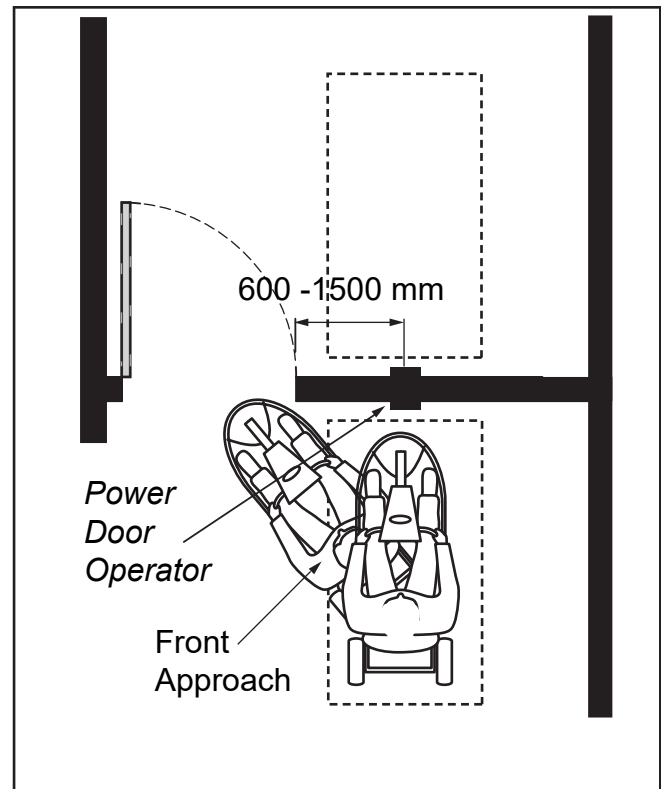


Figure 2.2.4-A Power Door Operator - Plan View

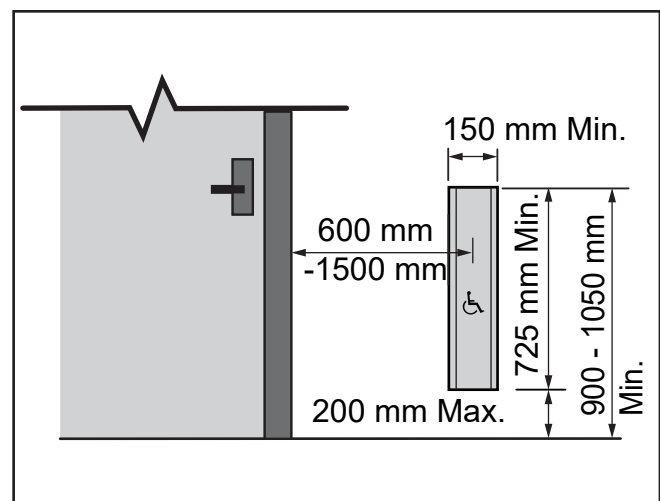


Figure 2.2.4-B Elongated Power Door Operator

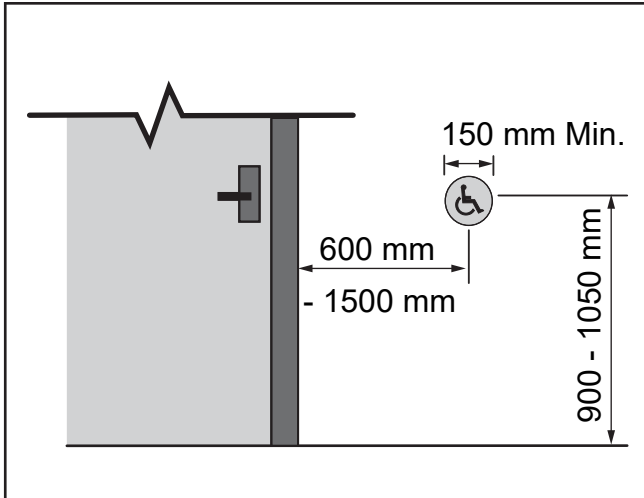


Figure 2.2.4-C Circular Power Door Operator

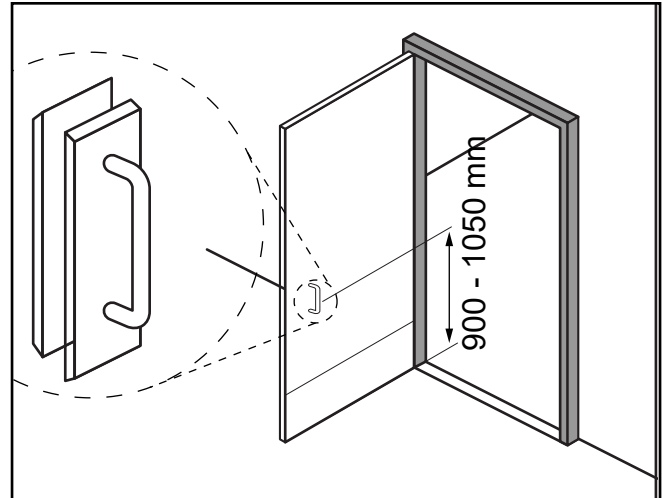


Figure 2.2.4-F Door Opening Device - D-Type

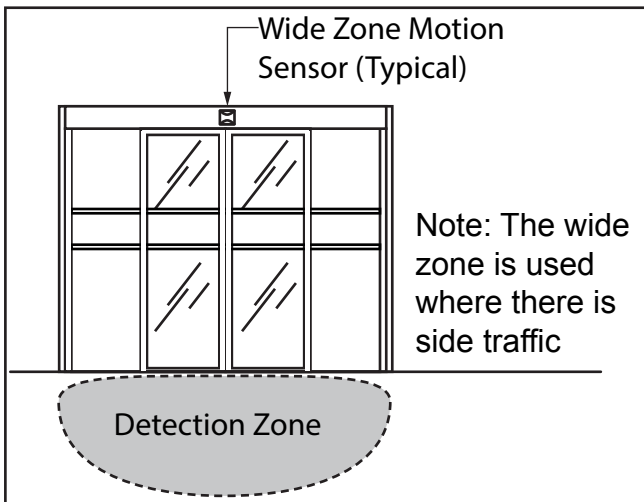


Figure 2.2.4-D Wide Detection Zone

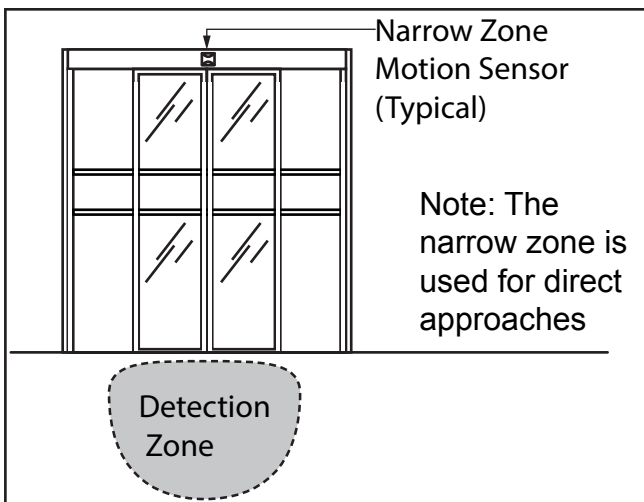


Figure 2.2.4-E Narrow Detection Zone

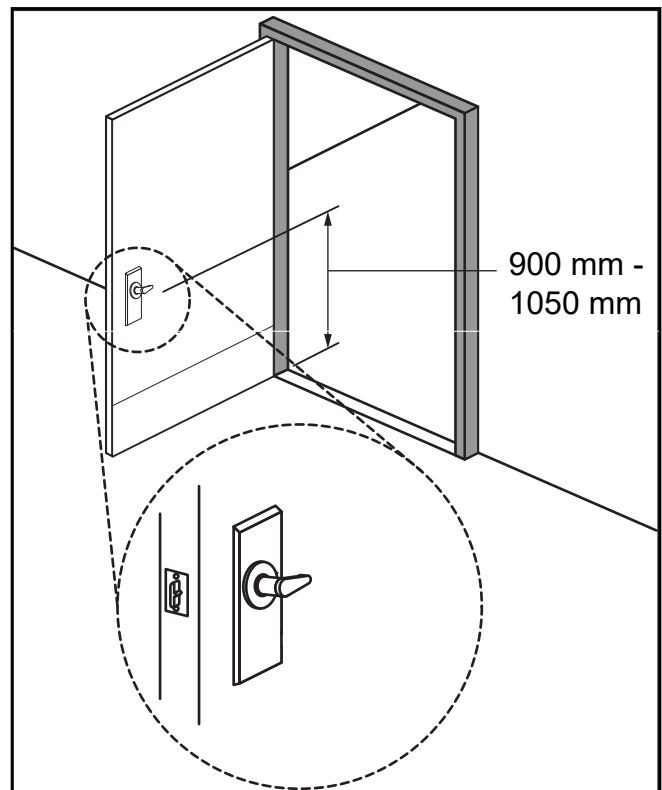


Figure 2.2.4-G Door Opening Device - Lever-Type

## 2.2.5. Vision Panels and Strips

### Rationale

Vision panels and vision strips are *accessible* elements that enhance the visibility of glazing and glass from doorways for all individuals.



### Related Sections

- [Reserved]

### Related References

- [Reserved]

### Key Considerations

#### Vision Panels

Vision panels (and sidelights) should be located at doors to allow for security and clear sight lines between interior spaces for persons with low vision and persons using *mobility devices*. They provide visibility and reduce the risk of hazard from swinging doors into *accessible paths of travel*.

#### Vision Strips

Vision strips should be located at etched or patterned glazed screens, fully glazed transparent doors, sidelights and panels. They help to enhance the visibility of glazing or glass from doorways and help reduce the risk of hazard for individuals, especially persons with low vision.

### Requirements

#### (1) Vision Panels:

Vision panels (and sidelights), [Figure 2.2.5-A](#), at doors should:

- (a) Be 75 mm minimum wide; and
- (b) Be located so that:
  - (i) The bottom of the panel (sill) is 900 mm maximum *A.F.F.*; and
  - (ii) The vertical edge of the panel closest to the latch is 250 mm maximum from the latch side of the door.



**(2) Vision Strips:**

Vision strips, Figure 2.2.5-B, should:

(a) Be located at:

- (i) Etched or patterned glazed screens;
- (ii) Fully glazed transparent doors; and
- (iii) Fully glazed transparent sidelights and panels with widths greater than 300 mm; and

(b) Have two continuous opaque strips that:

- (i) Have *colour/brightness contrast* to the background of the surface;
- (ii) Are 50 mm minimum wide;
- (iii) Extend across the width of the surface on centre 1350 mm to 1500 mm A.F.F.; and
- (iv) Extend across the width of the surface on centre 750 mm to 950 mm A.F.F.

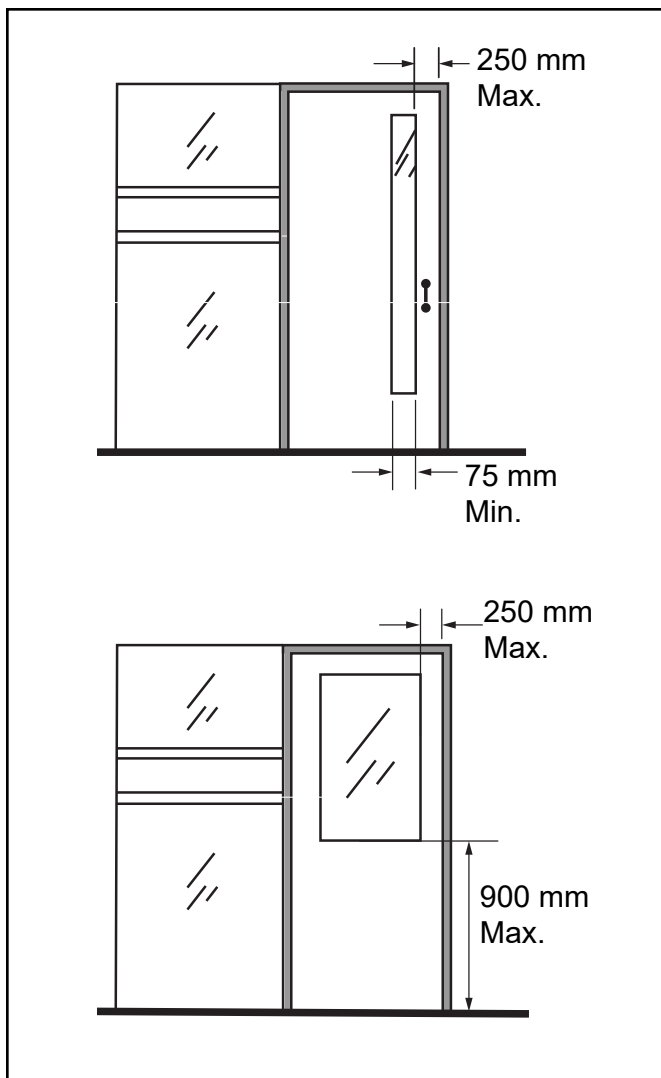


Figure 2.2.5-A Vision Panels

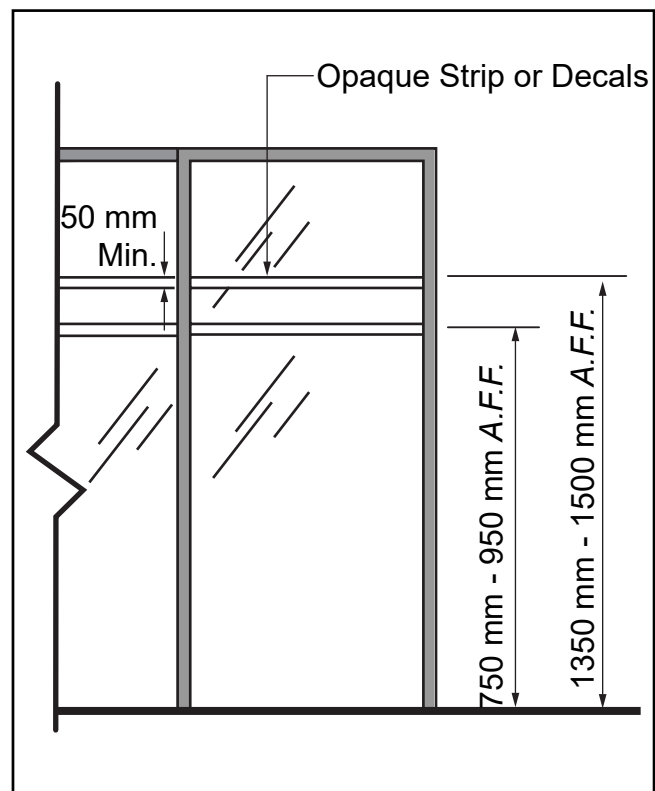


Figure 2.2.5-B Vision Strips

## 2.2.6. Accessible Control Gates

### Rationale

*Accessible* control gates that connect interior or exterior *accessible paths of travel* can create *barriers* for individuals. It is important for designers to consider eliminating gates where they are not required for safety or programming. Where turnstiles are provided, they should be adjacent to *accessible* control gates.



### Related Sections

- “2.2.5. Vision Panels and Strips”
- 3.3.3. Controls and Operating Mechanisms

### Related References

- [Reserved]

### Key Considerations

#### Clear Width

The clear door width at *accessible* control gates, when the gate is in the open position, should be provided with unobstructed entry and egress to interior or exterior *accessible paths of travel*. The location of door controls and devices should not obstruct the clear width.

#### Gate Controls and Devices

Door opening devices (hardware), such as handles, locks, or latches should be provided at *accessible* control gates. They should be designed to have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist. They should have *colour/brightness contrast* from adjacent surfaces so that persons with low vision can easily find and operate *accessible* control gate opening devices. They should also have a break-away design to allow for a safe means of egress during an emergency.

## Requirements

### (1) Clear Width:

Accessible control gates should provide a clear width, Figure 2.2.6-A and Figure 2.2.6-B, that:

- (a) Is 950 mm minimum.

### (2) Gate Controls and Devices:

Accessible control gates should provide gate control and devices that:

- (a) Have a break-away design;
- (b) Meet the criteria in section "2.2.5. Vision Panels and Strips"; and
- (c) Meet the criteria in section 3.3.3. Controls and Operating Mechanisms.

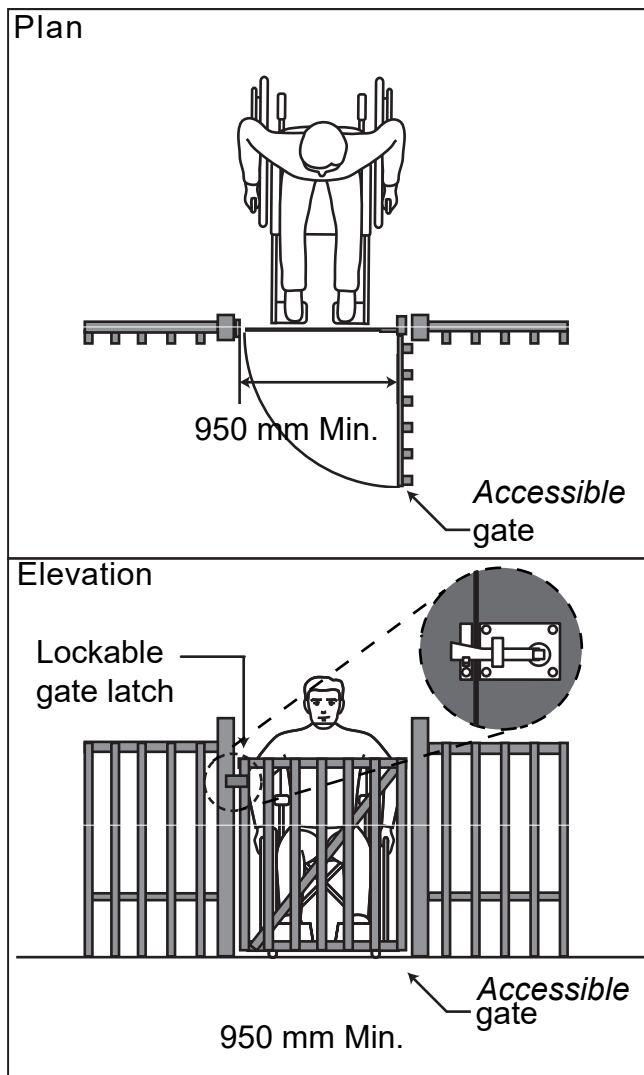


Figure 2.2.6-A Clear Width

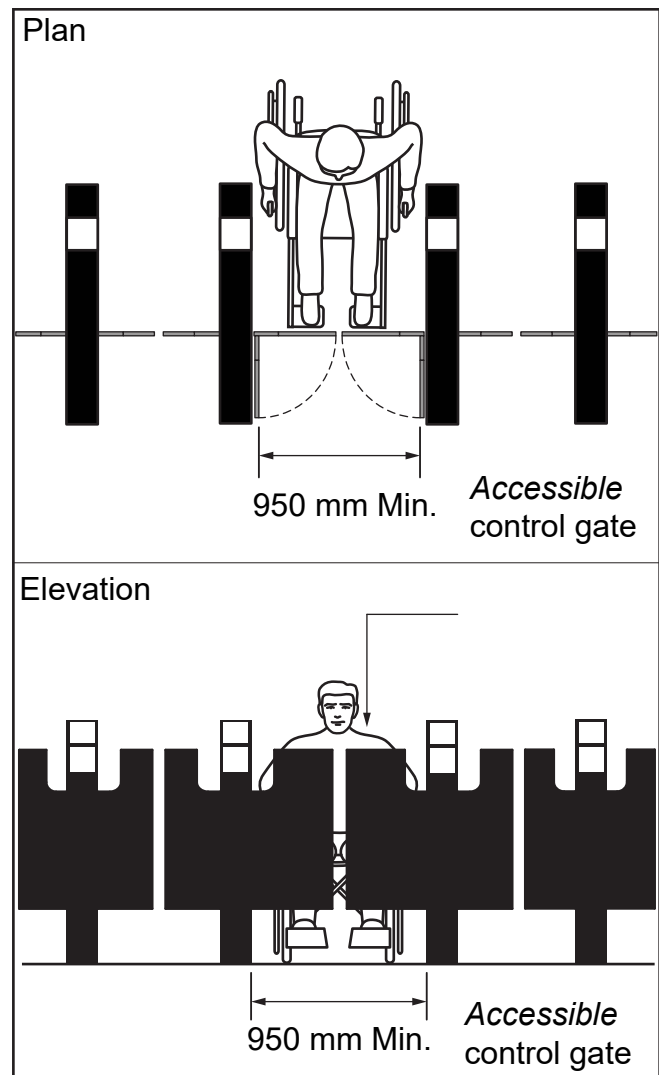


Figure 2.2.6-B Clear Width



# 2.3. Plumbing Fixtures, Washrooms and Change Rooms

## Section Summary

This section reviews the *accessible* design requirements for plumbing fixtures, washrooms and change rooms intended for use by the public and City staff. Plumbing fixtures, washrooms and change rooms should be connected to *accessible paths of travel* and provided with *accessible* elements to enhance the usability for all individuals.

## Contents in Section

- 2.3.1. Multi-Stall Washrooms**
- 2.3.2. Accessible Water Closet Stalls and Enclosures**
- 2.3.3. Ambulatory Water Closet Stalls and Enclosures**
- 2.3.4. Accessible Water Closets**
- 2.3.5. Accessible Urinals**
- 2.3.6. Accessible Lavatories**
- 2.3.7. Washroom and Change Room Accessories**
- 2.3.8. Universal Washrooms**
- 2.3.9. Accessible Showers**
- 2.3.10. Accessible Change Rooms**
- 2.3.11. Accessible Change Room Stalls**
- 2.3.12. Universal Change Rooms**
- 2.3.13. Interior Water Bottle Filling Stations and Drinking Fountains**

## 2.3.1. Multi-Stall Washrooms

### Rationale

Multi-stall washrooms are a basic health and accessibility requirement of a building and should be designed for all individuals. Integrating *accessible* elements, such as *accessible water closet stalls and enclosures, water closets, lavatories* and accessories, to enhance the usability of multi-stall washrooms will help to ensure that all individuals are provided with independent, equitable and dignified access.

Typically multi-stall washrooms are gender-specific in staff and public areas. However, in high-use public facilities consideration for the use of gender-neutral multi-stall washrooms may be appropriate because they allow an individual providing assistance (parent or caregiver) to assist their companion without feeling awkward or discriminated.

### Application

The scope of this section applies to single occupancy washrooms in a group, as well as, washrooms that have more than one *water closet* stall or enclosure per washroom.



### Related Sections

- "2.1.1. Interior Accessible Paths of Travel"
- "2.2.3. Doors and Doorways"
- "2.3.2. Accessible Water Closet Stalls and Enclosures"
- "2.3.4. Accessible Water Closets"
- "2.3.5. Accessible Urinals"
- "2.3.6. Accessible Lavatories"
- "2.3.7. Washroom and Change Room Accessories"
- "2.7.1. Floor, Wall and Ceiling Surfaces"
- "3.2.1. Signage and Wayfinding Systems"

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be provided throughout multi-stall washrooms to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Doors and Doorways

Doors and doorways should be provided at multi-stall washrooms to connect interior *accessible paths of travel*. It is important for designers to consider eliminating doors and vestibules where they are not required for acoustic or physical privacy.

### Accessible Water Closet Stalls and Enclosures

*Accessible water closet stalls* should be provided within multi-stall washrooms to enhance the usability and help to ensure that all individuals, including persons using *mobility devices*, are provided with independent, equitable and dignified access to the available facility.

### Plumbing Fixtures

Plumbing fixtures should be provided within multi-stall washrooms such as *water closets*, urinals and *lavatories* that can be used by all individuals, including persons using *mobility devices*, or persons with limited mobility and dexterity.

### Accessories

Accessories should be provided within multi-stall washrooms that have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

### Signage

*Signage* should be provided at multi-stall washrooms that incorporates the International Symbol of Access (ISA) and clearly identifies the type of facility available. If multi-stall washrooms with accessible stalls are not visible from the common areas or are adjacent to other non-*accessible* public washrooms, directional *signage* should be provided to direct persons to the location of the *accessible* washroom.

### Materials and Finishes

Materials and finishes should be provided within multi-stall washrooms that consider risk factors associated with the circumstance of which they are being used.

For example, the use of slip resistant and low *glare* materials will prevent fall/vision hazards and outward swinging stall doors will prevent entrapment, which will allow access for emergency responders to aid persons in need. The overall selection of design features and appropriate choice of materials will increase the usability and safety of all multi-stall washrooms.

## Requirements

### (1) Accessible Path of Travel:

Multi-stall washrooms should provide an interior *accessible path of travel* that:

- (a) Has a clear width, "[Figure 2.3.1-A Multi-Stall Washroom Layout](#)", that:
  - (i) Is 1400 mm minimum, between the outside face of the stall partition and nearest obstruction; and
  - (ii) Is 1700 mm minimum, between the outside of the stall face and the face of an in-swinging washroom door;
- (b) Has a *clear turning space* in front of the stall or enclosure that is 1500 mm minimum in diameter; and
- (c) Meets the criteria in section "[2.1.1. Interior Accessible Paths of Travel](#)".

### (2) Doors and Doorways:

Multi-stall washrooms should provide doors and doorways that:

- (a) Meet the criteria in section "[2.2.3. Doors and Doorways](#)".

**(3) Accessible Water Closet Stalls and Enclosures:**

Multi-stall washrooms should provide *accessible water closet stalls and enclosures*, "[R-2.3.1. (3)]", that:

- (a) Meet the criteria in section "2.3.2. Accessible Water Closet Stalls and Enclosures".

**(4) Plumbing Fixtures:**

Multi-stall washrooms should provide plumbing fixtures that include:

- (a) *Water closets* that meet the criteria in section "2.3.4. Accessible Water Closets";
- (b) Urinals that meet the criteria in section "2.3.5. Accessible Urinals"; and
- (c) *Lavatories* that meet the criteria in section "2.3.6. Accessible Lavatories".

**(5) Accessories:**

Multi-stall washrooms should provide accessories that:

- (a) Have at least one:
  - (i) Baby change table;
  - (ii) Hand drying equipment or towel dispenser;
  - (iii) Waste receptacle;
  - (iv) Shelf; and
- (b) Have coat hooks; and
- (c) Meet the criteria in section "2.3.7. Washroom and Change Room Accessories".

**(6) Signage:**

Multi-stall washrooms should provide *signage* that:

- (a) Identifies the type of facility available; and
- (b) Meets the criteria in section "3.2.1. Signage and Wayfinding Systems".

**(7) Materials and Finishes:**

Multi-stall washrooms should provide materials and finishes that:

- (a) Meet the criteria in section "2.7.1. Floor, Wall and Ceiling Surfaces".



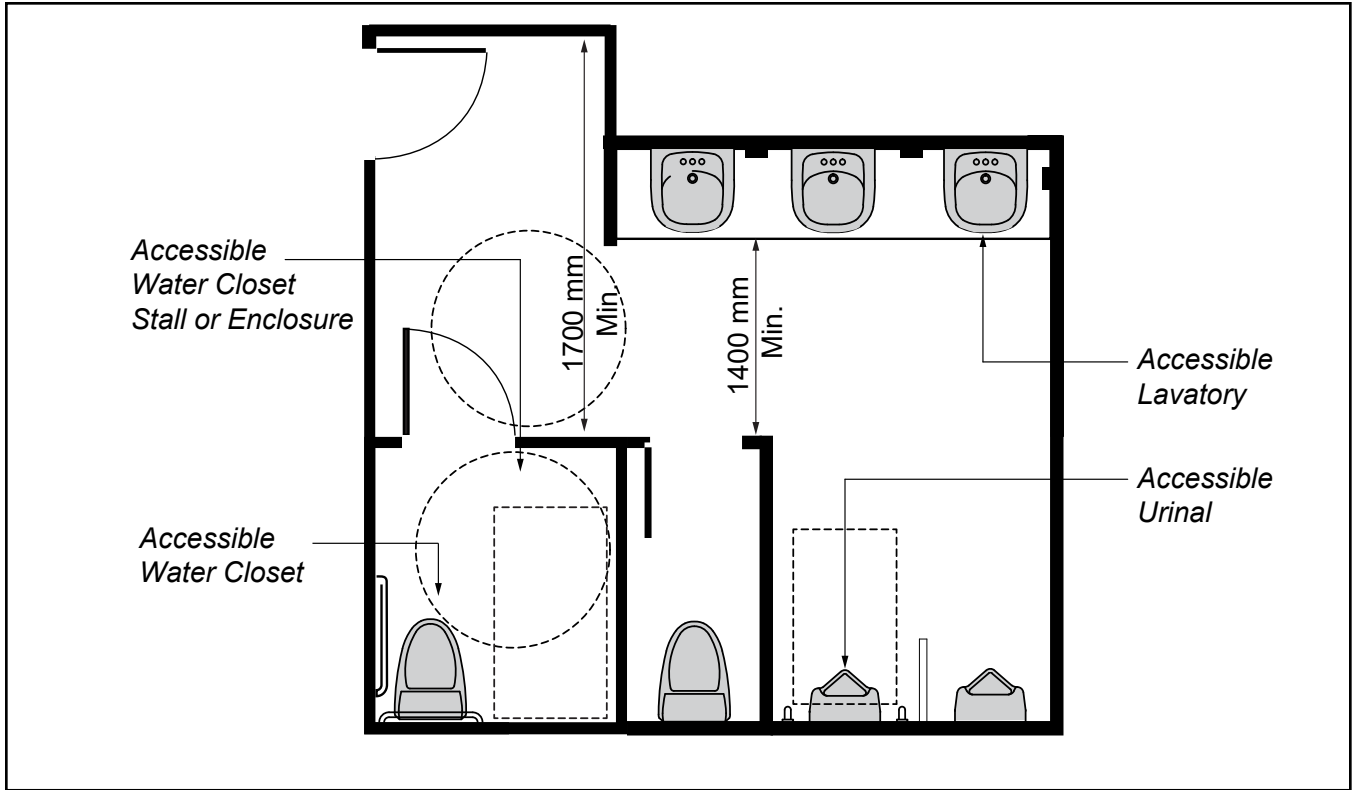


Figure 2.3.1-A Multi-Stall Washroom Layout

## 2.3.2. Accessible Water Closet Stalls and Enclosures

### Rationale

*Accessible water closet stalls and enclosures* should be provided at multi-stall washrooms to enhance the usability and help to ensure that all individuals, including persons using *mobility devices*, are provided with independent, equitable and dignified access to the available facility.



### Related Sections

- "2.3.4. Accessible Water Closets"
- "2.3.7. Washroom and Change Room Accessories"

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of *accessible water closet stalls and enclosures* provided within multi-stall washrooms should consider the use of its facilities and the needs of all individuals. Additional stalls should be provided in facilities or areas where a greater number of individuals will require *accessible water closet stalls*. This will ensure that persons are not waiting for extended periods of time to use the facility.

#### Doors

Doors should be provided at *accessible water closet stalls and enclosures* to connect interior *accessible paths of travel*, and to ensure privacy, independent, equitable and dignified access. The clear width at doors should be provided with unobstructed entry and egress that is the same as the door to the multi-stall washroom. This will ensure that if a person is able to enter the multi-stall washroom they will also be able to enter the *accessible water closet stall*.

#### Clear Turning Spaces

Clear turning spaces should be provided within *accessible water closet stalls and enclosures* to create space for persons using *mobility devices* to make a 360° turn.

### Clear Floor Spaces

*Clear floor space* should be provided within *accessible water closet stalls and enclosures*, adjacent to the *water closets*, to create an unobstructed, level floor area that is sized to provide the space for persons using *mobility devices* to side transfer.

### Water Closets

*Water closets* should be provided within *accessible water closet stalls and enclosures* to allow individuals, including persons using *mobility devices*, to side transfer to the *water closet* and reach accessories.

### Accessories

Accessories should be provided within *accessible water closet stalls and enclosures* that have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

### Requirements

#### (1) Amount:

*Accessible water closet stalls and enclosures* should, "[R-2.3.2. (1)]", provide:

- (a) A minimum amount that meets the criteria in "Table 2.3.2-A Number of Accessible Water Closet Stalls".

#### (2) Doors:

*Accessible water closet stalls and enclosures* should provide a door that:

- (a) Has a clear width that is 950 mm minimum, "[R-2.3.2. (2)(a)]";
- (b) Has 600 mm minimum latch side clearance on the pull side of a swinging door;

- (c) Has 300 mm minimum latch side clearance on the push side of a swinging door;
- (d) Swings outward, unless a *clear floor space* that is 900 mm by 1500 mm minimum for a front approach is provided within the stall to permit the door to be closed without interfering with the *mobility device*;
- (e) Is self-closing so that, when at rest, the door remains open not more than 50 mm beyond the jamb;
- (f) Have a horizontal, D-shaped, door pulls, "Figure 2.3.2-A Accessible Stall Door Hardware", that:
  - (i) Have *colour/brightness contrast*;
  - (ii) Are located on both sides of the door;
  - (iii) Are mounted on the vertical centre line of the door;
  - (iv) Are located at a height between 800 mm to 1000 mm *A.F.F.*;
  - (v) Are 140 mm minimum long; and
  - (vi) Have 30 mm to 50 mm clearance from face of stall and enclosure door;
- (g) Is aligned with a *clear floor space*;
- (h) Is capable of having the latch released from the outside in case of an emergency; and
- (i) Have locks with *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

**(3) Clear Turning Spaces:**

*Accessible water closet stalls and enclosures* should provide a clear turning space, "Figure 2.3.2-B Accessible Water Closet Stall", that:

- (a) Is 1500 mm minimum in diameter for 360° turns.

**(4) Clear Floor Spaces:**

*Accessible water closet stalls and enclosures* should provide a *clear floor space* that:

- (a) Meets the criteria in section "2.3.4. Accessible Water Closets".

**(5) Water Closets:**

*Accessible water closet stalls and enclosures* should provide a *water closet* that:

- (a) Meets the criteria in section "2.3.4. Accessible Water Closets".

**(6) Accessories:**

*Accessible water closet stalls and enclosures* should provide accessories that:

- (a) Includes at least one shelf that is 650 mm minimum *A.F.F.* and clear of any grab bars;
- (b) Have coat hooks; and
- (c) Meet the criteria in section "2.3.7. Washroom and Change Room Accessories".

Table 2.3.2-A Number of Accessible Water Closet Stalls

Number of <i>Water Closets</i> per Washroom	Number of <i>Accessible Water Closet Stalls and Enclosures</i> per Washroom
1-9	1
10-16	2
17-20	3
21-30	4
Over 30	5, plus 1 for each additional increment of 10 <i>water closets</i> per washroom in excess of 30 <i>water closets</i> per washroom

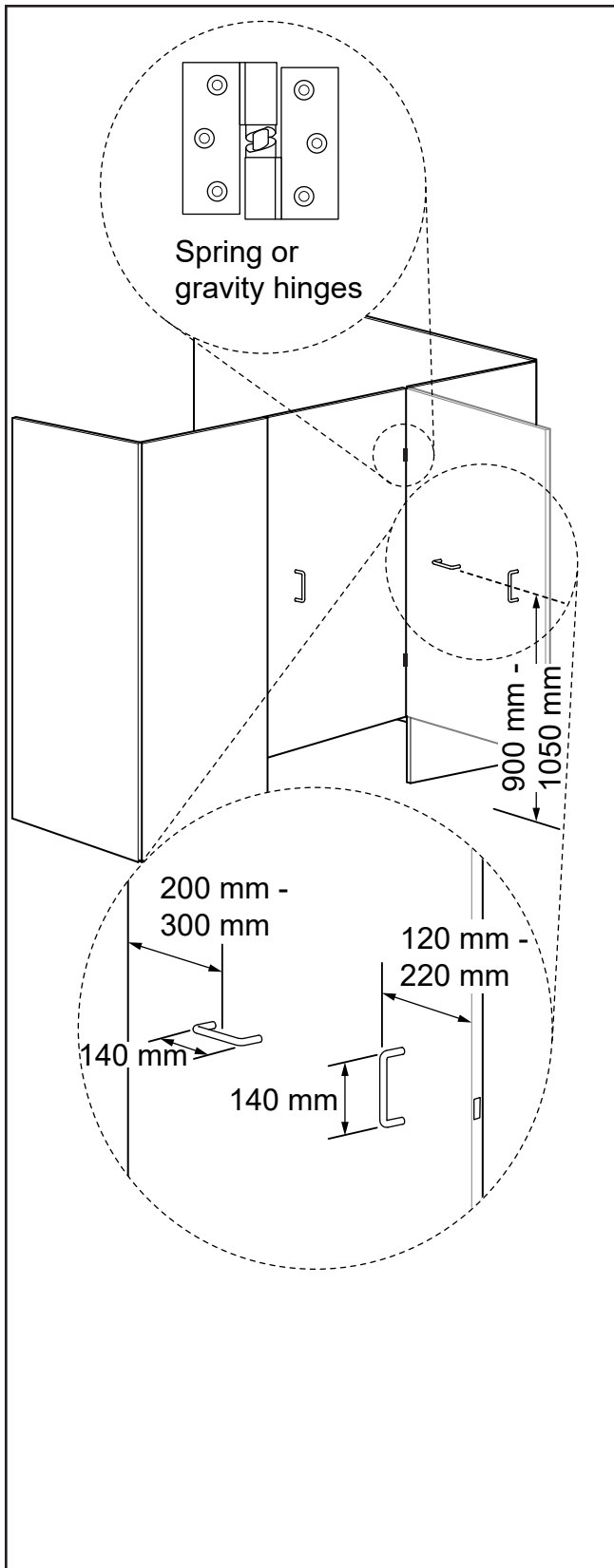


Figure 2.3.2-A Accessible Stall Door Hardware

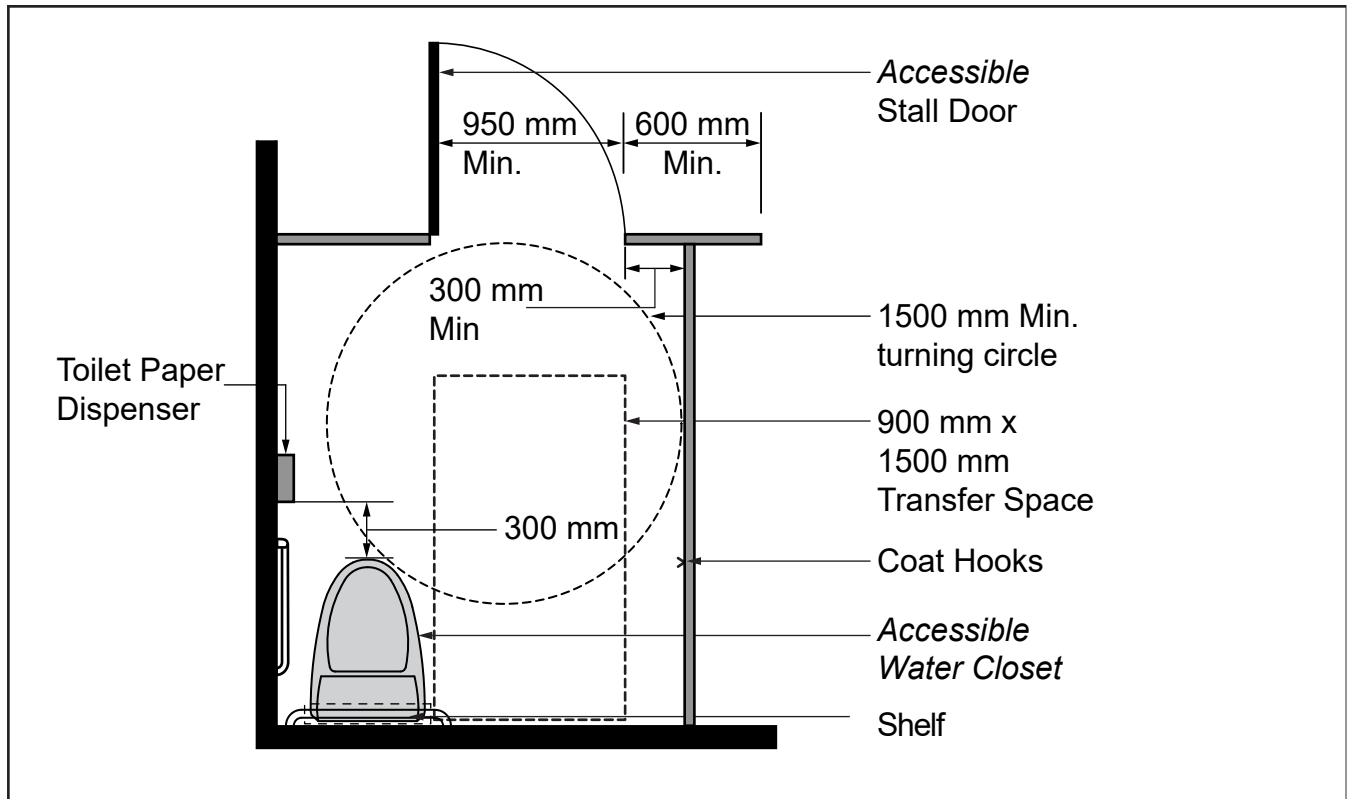


Figure 2.3.2-B Accessible Water Closet Stall

## 2.3.3. Ambulatory Water Closet Stalls and Enclosures

### Rationale

Multi-stall washrooms may include a combination of *accessible water closet stalls*, *ambulatory water closet stalls* and *enclosures* and/or standard *water closet stalls*. *Ambulatory water closet stalls and enclosures* help individuals with limited mobility, who may have balance, strength, pain, or other limitations that would benefit from grab bars to help them sit and rise.



### Related Sections

- "2.3.4. Accessible Water Closets"
- "2.3.7. Washroom and Change Room Accessories"
- "3.2.1. Signage and Wayfinding Systems"

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of *ambulatory water closet stalls and enclosures* provided within multi-stall washrooms should consider the use of its facilities and the needs of all individuals. Additional stalls should be provided in facilities or areas where a greater number of individuals will require *ambulatory water closet stalls*. This will ensure that persons are not waiting for extended periods of time to use the facility.

#### Doors

Doors should be provided at *ambulatory water closet stalls and enclosures* to connect interior *accessible paths of travel*, and to ensure privacy, independent, equitable and dignified access.

#### Design

The design of *ambulatory water closet stalls and enclosures* should be sized to allow individuals with limited mobility, who might have balance, strength, pain, or other limitations to help them sit and stand.

### Water Closets

*Water closets* should be provided within *ambulatory water closet stalls and enclosures* to allow individuals with limited mobility, who might have balance, strength, pain, or other limitations to sit and rise from the *water closet* and reach accessories.

### Grab Bars

Grab bars should be provided within *ambulatory water closet stalls and enclosures* to allow individuals with limited mobility, who might have balance, strength, pain, or other limitations to safely support themselves while sitting and standing. Where grab bars are installed on stall partitions, they should be provided with reinforcement to bear the anticipated load.

### Accessories

Accessories should be provided within *ambulatory water closet stalls and enclosures* that have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

### Signage

*Signage* should be provided at *ambulatory water closet stalls and enclosures* that incorporates a pictogram of a person using a cane and/or crutches, and identifies the suitability of the stall or enclosure for individuals who may require grab bar assistance.

### Requirements

#### (1) Amount:

*Ambulatory water closet stalls and enclosures* should provide:

- (a) A minimum of one per multi-stall washroom.

#### (2) Doors:

*Ambulatory water closet stalls and enclosures* should provide a door that:

- (a) Has a clear width that is 860 mm minimum;
- (b) Swings outward, unless 1500 mm minimum in depth and 900 mm in width, are not located within the door swing;
- (c) Is self-closing so that, when at rest, the door remains open not more than 50 mm beyond the jamb;
- (d) Have two D-shaped door pulls that:
  - (i) Have *colour/brightness contrast*;
  - (ii) Are located on both sides of the door, near the latch side of the door;
  - (iii) Are at a height between 900 mm to 1050 mm *A.F.F.*;
  - (iv) Are 140 mm minimum long; and
  - (v) Have 30 mm to 50 mm clearance from face of stall and enclosure door;
- (e) Is capable of having the latch released from the outside in case of an emergency; and
- (f) Have locks with *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.



**(3) Design:**

*Ambulatory water closet stalls and enclosures* should be designed, "Figure 2.3.3-A Ambulatory Water Closet Stall", so that:

- (a) It is 1500 mm minimum deep; and
- (b) It is 890 mm to 940 mm wide.

**(4) Water Closets:**

*Ambulatory water closet stalls and enclosures* should provide a *water closet* that:

- (a) Meets the criteria in section "2.3.4. Accessible Water Closets".

**(5) Grab Bars:**

*Ambulatory water closet stalls and enclosures* should provide grab bars that:

- (a) Includes two L-shaped, "[R-2.3.3. (5) (a)]", that:
  - (i) Are located on both sides of the stall; and
  - (ii) Meet the criteria in section "2.3.4. Accessible Water Closets", excluding horizontal grab bar and optional fold-down grab bars.

**(6) Accessories:**

*Ambulatory water closet stalls and enclosures* should provide accessories that:

- (a) Includes at least one shelf that is 650 mm minimum *A.F.F.* and clear of any grab bars;
- (b) Have coat hooks; and
- (c) Meet the criteria in section "2.3.7. Washroom and Change Room Accessories".

**(7) Signage:**

*Ambulatory water closet stalls and enclosures* should provide *signage* that:

- (a) Incorporates a pictogram of a person using a cane and/or crutches;
- (b) Identifies the stalls suitability for individuals who may require grab bar assistance; and
- (c) Meets the criteria in section "3.2.1. Signage and Wayfinding Systems".

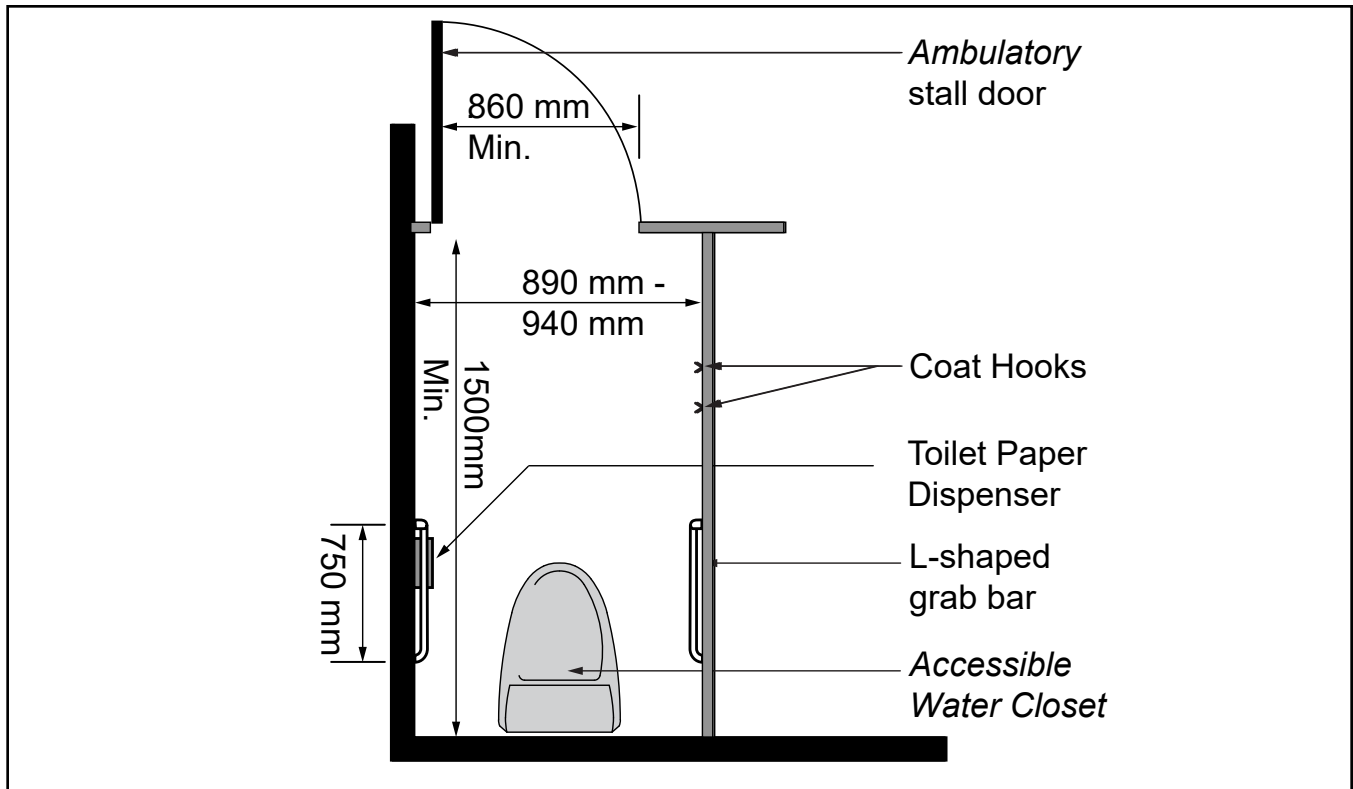


Figure 2.3.3-A Ambulatory Water Closet Stall

## 2.3.4. Accessible Water Closets

### Rationale

*Accessible water closets within accessible water closet stalls* should be designed to allow individuals, including persons using *mobility devices* to side transfer from their *mobility device* to the *accessible water closet* and reach accessories.



### Related Sections

- [Reserved]

### Related References

- [Reserved]

### Key Considerations

#### Design

The design of *accessible water closets* should allow individuals, including persons using *mobility devices* to side transfer to the *water closet* and reach accessories. Wall mounted *water closets* are preferred compared to floor surface mounted fixtures. *Accessible water closets* should provide clearance from walls and other accessories.

#### Clear Floor Spaces

*Clear floor space* (clear transfer space) should be provided adjacent to *accessible water closets* to create an unobstructed, level floor area that is sized to provide the space for persons using *mobility devices* to side transfer. Designers should consider alternating the *clear floor space* where multiple *accessible water closet stalls* are provided in the same multi-stall washroom to allow for left or right-handed side transfers.

#### Flush Controls

Flush controls should be provided at *accessible water closets* that are automatic, such as infra-red or touch-less actuators, and are connected directly to a constant power source that does not require *replacement* components such as batteries. Where flush controls are not automatic, such as a manual lever-type or push button actuator, they should have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

### Toilet Paper Dispensers

Toilet paper dispensers should be provided at *accessible water closets* that have a sufficient supply of toilet paper rolls within reach, such as single loose rolls or double stacking single rolls. Jumbo commercial toilet paper rolls can be difficult to reach and should not be provided.

### Grab Bars

Grab bars should be provided at *accessible water closets* to allow individuals, including persons using *mobility devices*, to safely support themselves while side transferring. Where grab bars are installed on stall partitions, they should be provided with reinforcement to bear the anticipated load.

## Requirements

### (1) Design:

*Accessible water closets* should be designed, "Figure 2.3.4-A Location and Clear Floor Space", to:

- (a) Have a non-spring activated seat that is 430 mm to 485 mm *A.F.F.*;
- (b) Have the centre line of the *water closet* between 460 mm 480 from one side wall;
- (c) Have a wall or floor mounted fixture, provided that there is wall reinforcement to support the anticipated loading; and
- (d) Have back support, where there is no seat lid or tank.

### (2) Clear Floor Spaces:

*Accessible water closets* should provide a *clear floor space* that:

- (a) Is located on one side of the *water closet*, or on both sides of the *water closet*; and
- (b) Is 900 mm by 1500 mm minimum for a front approach.

### (3) Flush Controls:

*Accessible water closets* should provide flush controls that:

- (a) Flush automatically (infra-red or touch-less) actuators that are connected directly to a constant power source, or be equipped with a manual flushing control (lever-type or push button) that:
  - (i) Is located between 500 mm to 900 mm *A.F.F.*;
  - (ii) Is operable from the transfer side; and
  - (iii) Is operable using a closed fist and with a force of 22.2 N maximum.

### (4) Toilet Paper Dispensers:

*Accessible water closets* should provide toilet paper dispensers that:

- (a) Is wall mounted, adjacent to the *water closet*, and
- (b) Is located below the L-shaped grab bar at 600 mm *A.F.F.*, so that the closest edge of the dispenser is 300 mm from the front of the *water closet* seat.

**(5) Grab Bars:**

Accessible water closets should provide grab bars that:

- (a) Include one horizontal grab bar, "Figure 2.3.4-B Water Closet Front Elevation", that:
  - (i) Is 600 mm minimum long; and
  - (ii) Is wall mounted, behind the *water closet*, between 840 mm to 920 mm A.F.F., or where the *water closet* has a water tank, be wall mounted 150 mm above the tank;
- (b) Include one continuous L-shaped grab bar, "Figure 2.3.4-C Water Closet Side Elevation", that:
  - (i) Has a 750 mm long horizontal and vertical components;
  - (ii) Is wall mounted, adjacent to the *water closet*, with the horizontal component 750 mm A.F.F., and the vertical component 150 mm in front of the *water closet*; and
- (c) Includes optional fold-down grab bars that:
  - (i) Are provided on the side of the *water closet* where a *clear floor space* is provided, typically opposite the L-shaped grab bar;
  - (ii) Is wall mounted, behind the *water closet*, on the side that has a *clear floor space*, with the horizontal component 750 mm A.F.F.;
  - (iii) Is between 390 mm to 410 mm from the centre line of the *water closet*;
  - (iv) Requires a force of 22 N maximum to pull it down; and
  - (v) Is 750 mm long;

- (d) Is between 30 mm to 40 mm in diameter, "Figure 2.3.4-D Grab Bar Characteristics";
- (e) Is installed to bear a load of 1.3 kN (300 lbs) minimum applied vertically or horizontally.

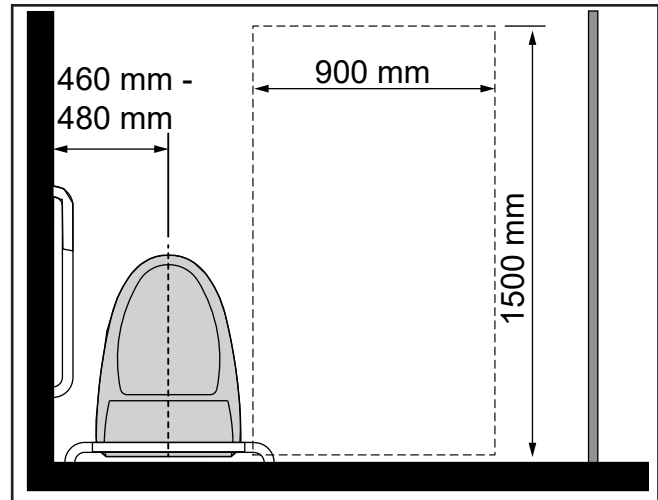


Figure 2.3.4-A Location and Clear Floor Space

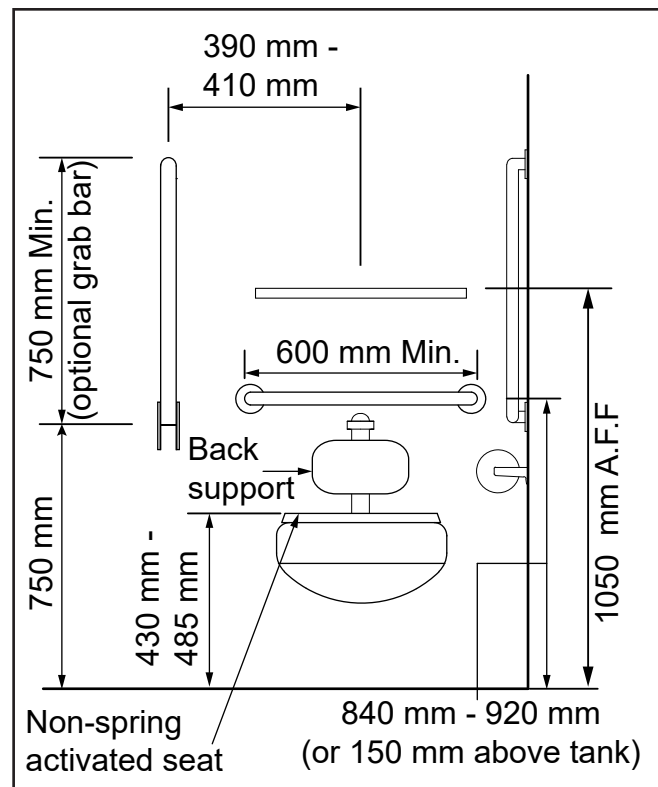


Figure 2.3.4-B Water Closet Front Elevation

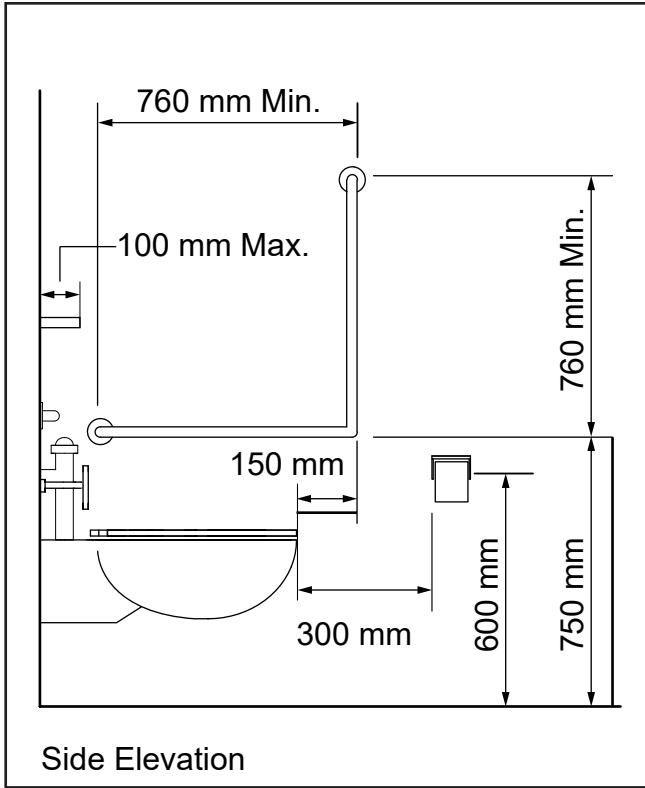


Figure 2.3.4-C Water Closet Side Elevation

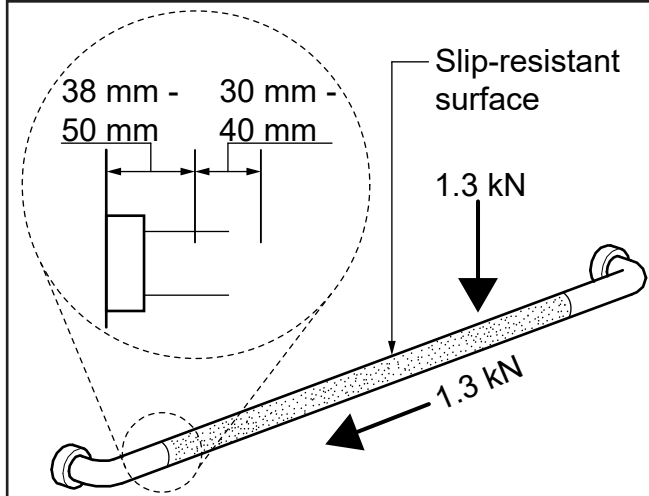


Figure 2.3.4-D Grab Bar Characteristics

## 2.3.5. Accessible Urinals

### Rationale

*Accessible* urinals should be designed to have lower rim heights. They should provide accessories such as grab bars to enhance the usability for all persons including persons with an unstable gait or limited mobility.

### Application

The scope of this section applies to *accessible* urinals. Where urinals are used in multi-stall washrooms in lieu of non-*accessible* washroom stalls and enclosures, then all of the urinals provided should meet the criteria this section. In retrofit applications, the criteria in this section should apply to the maximum extent possible with at least one (1) *accessible* urinal where it is *technically infeasible* to make them all *accessible*.



### Related Sections

- "3.3.3. Controls and Operating Mechanisms"

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of *accessible* urinals provided should consider the use of its facilities and the needs of all individuals. Additional *accessible* urinals should be provided in facilities or areas where the intended individuals will include a greater number persons with limited mobility or strength, persons of short stature or children.

#### Design

The design of *accessible* urinals should allow individuals, including persons using *mobility devices*, persons of short stature, persons with limited mobility, who might have balance, strength, pain, or other limitations to use the fixture. Urinals should be designed to offer a certain level of privacy to the user so that they can be comfortable and outside of clear sight lines.

#### Clear Floor Spaces

*Clear floor space* should be provided at *accessible* urinals that are perpendicular to, and centered on, the urinal that is unobstructed by privacy screens.

#### Flush Controls

Flush controls should be provided at *accessible* urinals that are automatic, such as infra-red or touch-less actuators, and are connected directly to a constant power source that does not require *replacement* components such as batteries.

Where flush controls are not automatic, such as a manual lever-type or push button actuator, they should have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

### Grab Bars

Grab bars should be provided at *accessible* urinals to allow persons using *mobility devices*, persons with limited mobility, who might have balance, strength, pain, or other limitations to stand or remain seated while using the fixture. The design of the grab bars should give all individuals the confidence and security that they are safe while bearing their weight on the supports.

## Requirements

### (1) Amount:

*Accessible* urinals should provide:

- (a) A minimum of one, where one or more is provided; and
- (b) In *high-use* public multi-stall washrooms that are gender-specific with more than three (3) urinals, at least one urinal should be provided for children or persons of short stature.

### (2) Design:

*Accessible* urinals should be designed, "Figure 2.3.5-A Urinal Design Front Elevation" and "Figure 2.3.5-B Urinal Design Side Elevation", to:

- (a) Be mounted:
  - (i) On the floor, with its rim level with the floor; or
  - (ii) With the rim located not more than 430 mm *A.F.F.*;
- (b) Be *cane detectable*;

(c) Have privacy screens that:

- (i) Are mounted 460 mm minimum from the centre line of the urinal; and
- (ii) Have a clearance of 50 mm minimum from the grab bars.

### (3) Clear Floor Spaces:

*Accessible* urinals should provide *clear floor space* that:

- (a) Is located perpendicular to, and centred on, the urinal, and unobstructed by privacy screens;
- (b) Has no step in front of it; and
- (c) Is 900 mm by 1500 mm minimum for a front approach.

### (4) Flush Controls:

*Accessible* urinals should provide flush controls that:

- (a) Flush automatically (infra-red or touch-less) actuators that are connected directly to a constant power source, and be equipped with a manual flushing control (lever-type or push button) that:
  - (i) Is located between 900 mm to 1050 mm *A.F.F.*;
  - (ii) Is operable using a closed fist and with a force of 22.2 N maximum; and
  - (iii) Is located within a reach range that meet the criteria in section "3.3.3. Controls and Operating Mechanisms".



**(5) Grab Bars:**

Accessible urinals should provide grab bars, "[R-2.3.5. (5)]", that:

- (a) Include two vertical grab bars that:
- (i) Are installed on each side of the urinal;
  - (ii) Are 600 mm minimum long;
  - (iii) Are wall mounted, behind the urinal, with their centre line 1000 mm A.F.F.; and
  - (iv) Are located 380 mm maximum from the centre line of the urinal.

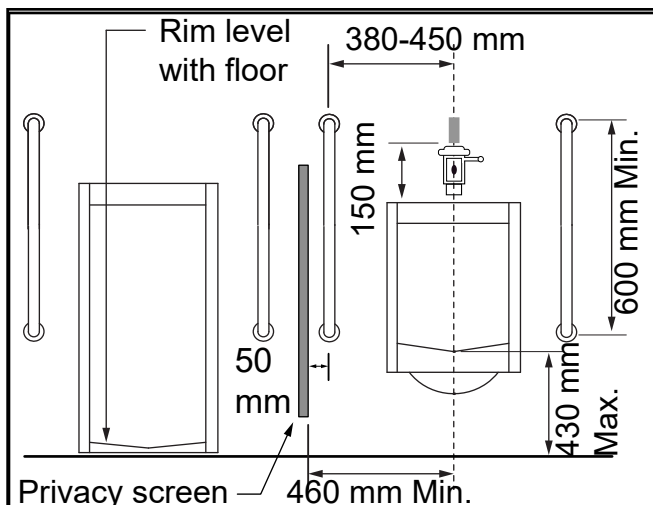


Figure 2.3.5-A Urinal Design Front Elevation

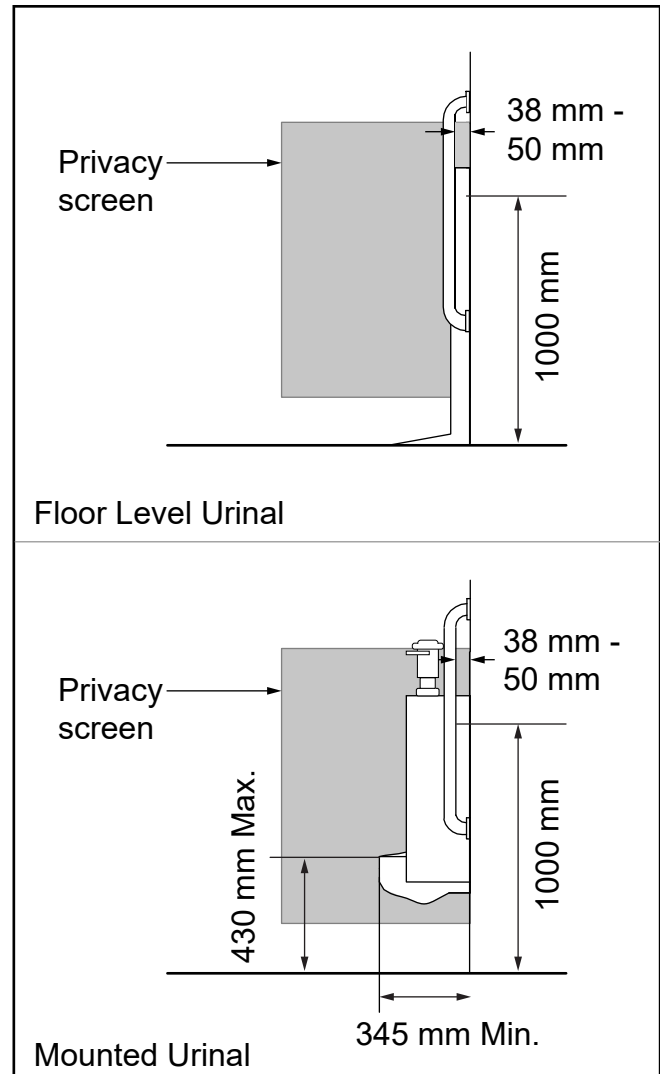


Figure 2.3.5-B Urinal Design Side Elevation

## 2.3.6. Accessible Lavatories

### Rationale

*Accessible lavatories* should be designed to allow all individuals, including persons using *mobility devices*, to have clearances to reach controls, soap and paper towel dispensers.



### Related Sections

- "3.3.3. Controls and Operating Mechanisms"
- "2.3.7. Washroom and Change Room Accessories"

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of *accessible lavatories* provided within multi-stall washrooms should consider the use of its facilities and the needs of all individuals. Additional *accessible lavatories* should be provided in facilities or areas where a greater number of individuals will require *accessible lavatories*. This will ensure that persons are not waiting for extended periods of time to use the facility.

#### Design

The design of *accessible lavatories* should allow all individuals, including persons using *mobility devices*, to have knee and toe space, to reach controls and accessories, such as soap and paper towel dispensers. They should be clear of walls, and other obstacles such as fixtures or accessories.

#### Accessories

Where accessories are provided at *accessible lavatories*, they should be located consistently and predictably throughout a facility.

Accessories should include a soap dispenser, a towel dispenser or other hand drying equipment, a shelf, a mirror or other dispensing or hand-operated washroom accessories that have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

## Requirements

### (1) Amount:

*Accessible lavatories* should provide:

- (a) A minimum of one per washroom.

### (2) Design:

*Accessible lavatories* should be designed, "Figure 2.3.6-A Lavatory - Design", to:

- (a) Be located so that the distance between the centre line of the fixture and the side wall:
  - (i) Is 460 mm to 600 mm; or
  - (ii) Is 600 mm minimum, at residential facilities;
- (b) Have a rim height 860 mm maximum *A.F.F.*;
- (c) Have insulated pipes, or a water supply temperature limited to 43°C; and
- (d) Have a faucet that:
  - (i) Operates automatically (running for 15 seconds minimum), or have a manual control that, has a lever type handle or is otherwise operable using a closed fist, and does not require the application of continuous force to maintain water flow; and

- (ii) Is located so that the distance from the centre line of the faucet to the edge of the *lavatory* or, where the *lavatory* is mounted in a vanity, to the front edge of the vanity is 485 mm maximum;

- (e) Have knee and toe space, "Figure 2.3.6-B Lavatory - Clearances", that:

- (i) Is beneath the *lavatory*;
- (ii) Is 920 mm wide by 1500 mm deep, to allow for front approach, of which 500 mm maximum depth can be located under the *lavatory*;
- (iii) Is 735 mm high at the front edge;
- (iv) Is 685 mm high at a point 200 mm back from the front edge; and
- (v) Is 350 mm high over the distance from a point 280 mm to a point 430 mm back from the front edge; and

- (f) Have *operable portions or controls* that meet the criteria in section "3.3.3. Controls and Operating Mechanisms".

### (3) Accessories:

*Accessible lavatories* should provide accessories that:

- (a) Include:
  - (i) A soap dispenser;
  - (ii) A recessed, "[R-2.3.6. (3)(a)(ii)]", towel dispenser or other hand drying equipment;
  - (iii) A shelf; and
  - (iv) A mirror;
- (b) Meet the criteria in section "2.3.7. Washroom and Change Room Accessories".

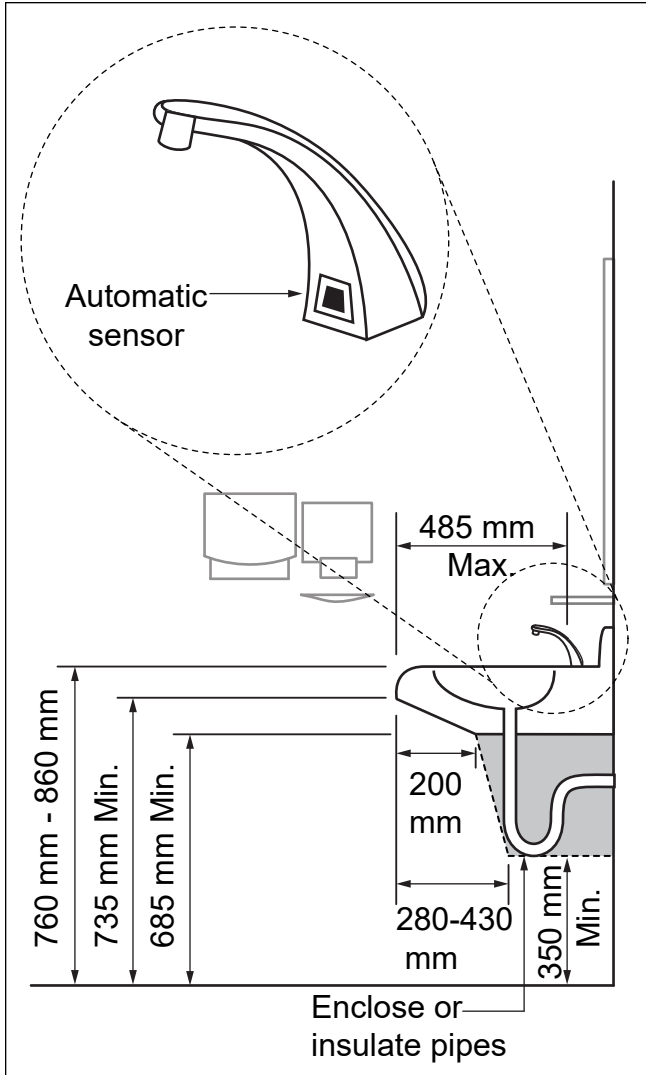


Figure 2.3.6-A Lavatory - Design

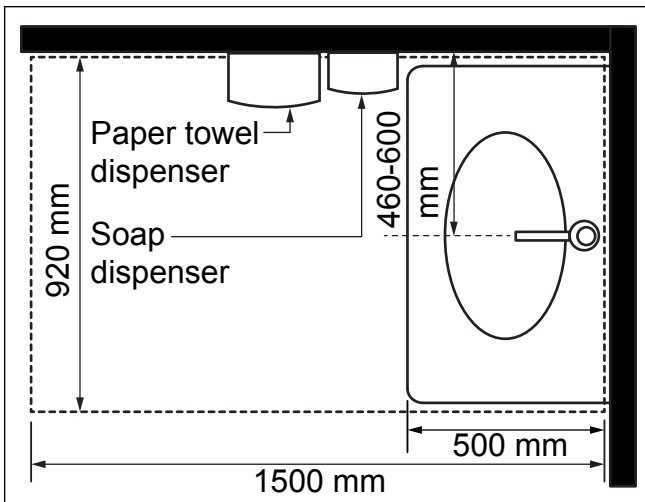


Figure 2.3.6-B Lavatory - Clearances

## 2.3.7. Washroom and Change Room Accessories

### Rationale

Where dispensing or hand-operated washroom and change room accessories are provided, they should be located consistently and predictably throughout a facility, and have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.



### Related Sections

- "1.5.2. Waste Receptacles and Recycling Bins"
- "2.3.8. Universal Washrooms"
- "2.3.11. Accessible Change Room Stalls"

### Related References

- [Reserved]

### Key Considerations

#### Soap Dispensers

Where soap dispensers are provided, they should be designed to have space and reach range dimensions to be usable by all individuals. Soap dispensers should have soap collectors below the dispenser when they are not located above a counter or vanity to prevent soap from creating a slip hazard or dripping on *service animals*.

#### Hand Drying Equipment and Towel Dispensers

Where hand drying equipment and towel dispensers are provided, they should be designed to have space and reach range dimensions to be usable by all individuals. Accessories that allow persons to dry their hands help to promote hygiene and sanitation reducing the spread of germs.

#### Shelves

Where shelves are provided, they should be designed to have space and reach range dimensions to be usable by all individuals. Shelves provide a dry zone for individuals and help to temporarily store items, such as personal devices and medication, while using washroom facilities.

### Mirrors

Where mirrors are provided, they should be designed to be usable by all individuals. Mirrors located above *lavatories* allow individuals to view their upper body while full-length mirrors allow individuals to view their whole body. All mirrors help to reflect views and light. Tilted or inclined mirrors can be stigmatizing and disorienting and should not be provided.

### Baby Change Tables

Where baby change tables are provided, they should be designed to be usable by all individuals. Baby change tables allow a parent or caregiver to safely and securely change and clean up a baby while on the move in public spaces. They should be easy to use, and located in close proximity to *lavatories* to enhance hygiene and sanitation within washroom facilities.

### Adult Change Tables

Where *adult change tables* are provided, they should be designed to be usable by all individuals, including persons using *mobility devices*. *Adult change tables* allow a user with or without a personal support worker or caregiver to safely and securely change and clean up while on the move in public spaces with dignity. Without *adult change tables*, individuals who require the accessory are forced to risk their own health and safety by changing on the floor or elsewhere.

### Coat Hooks

Where coat hooks are provided, they should be designed to be usable by all individuals. Coat hooks provide a dry zone for individuals and help to temporarily store items, such as coats and bags, while using washroom facilities. It is important to provide accessories that meet individuals needs to reduce the risk of hazards.

### Waste Receptacles

Where waste receptacles are provided, they should be designed to consider the needs of the intended individuals, the proximity to available plumbing fixtures and accessories when determining the design and placement within a washroom and change room facility.

### Benches and Seats

Where benches and seats are provided, they should be designed to have a variety of *accessible* options that include seating with and without back support and armrests depending on the type of facility. Where open ended benches are provided, they should have space to allow persons using *mobility devices* to side transfer. Where armrests are provided, they should have rounded edges, be easily graspable, and free from obstructions.

### Grab Bars

Where grab bars are provided, they should be designed to allow all individuals to be able to support themselves while using a plumbing fixture or accessory. The design of the grab bars should give all individuals the confidence and security that they are safe while bearing their weight on the supports.

### Controls and Operating Mechanisms

Controls and operating mechanisms should be provided for washroom and change room accessories and be located consistently and predictably throughout a facility, have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

## Requirements

### (1) Soap Dispensers:

Where provided, washroom and change room accessories should include soap dispensers, "Figure 2.3.7-A Accessories - Lavatory", that:

- (a) Operate automatically or is operable using a closed fist with a force of 22.2 N maximum;
- (b) Are located 1050 mm maximum *A.F.F.*, within 500 mm maximum from the front of a *lavatory*;
- (c) Are wall mounted, adjacent to or behind a *lavatory*; and
- (d) Have soap collectors below the dispenser when not located above the counter to prevent soap from creating a slip hazard.

### (2) Hand Drying Equipment and Towel Dispensers:

Where provided, washroom and change room accessories should include hand drying equipment and towel dispensers that:

- (a) Are wall mounted, and recessed into a wall;
- (b) Are located 1050 mm maximum *A.F.F.*;
- (c) Operate automatically or manually with one hand;
- (d) Are 610 mm maximum, measured horizontally, from the edge of the *lavatory*; and
- (e) Consider acoustics.

### (3) Shelves:

Where provided, washroom and change room accessories should include shelves that:

- (a) Are located 200 mm maximum above the top of a *lavatory*, or are wall mounted 1050 mm *A.F.F.*; and
- (b) Projects 100 mm maximum from the wall, or mounting surface.

### (4) Mirrors:

Where provided, washroom and change room accessories should include mirrors that:

- (a) Are wall mounted, with its bottom edge 1000 mm maximum *A.F.F.* that:
  - (i) Are located above a *lavatory*; and
  - (ii) Are located clear of plumbing fixtures and other accessories, where full-length.

### (5) Baby Change Tables:

Where provided, washroom and change room accessories should include baby change tables, "Figure 2.3.7-B Baby Change Table", that:

- (a) Have a surface height of 860 mm *A.F.F.*;
- (b) Have *operable portions or controls* that are mounted 900 mm to 1050 mm;
- (c) Are designed to support a 0.22 KN (50 lbs) load applied to it; and
- (d) Have *colour/brightness contrast* edge from the back wall and at the portion to open the baby change table.

**(6) Adult Change Tables:**

Where provided, washroom and change room accessories should include *adult change tables* that:

- (a) Meet the criteria in section "2.3.8. Universal Washrooms".

**(7) Coat Hooks:**

Where provided, washroom and change room accessories should include coat hooks that:

- (a) Have at least two collapsible-type;
- (b) Are wall mounted 1050 mm maximum *A.F.F.*; and
- (c) Project 50 mm maximum from the wall, or mounting surface.

**(8) Waste Receptacles:**

Where provided, washroom and change room accessories should include waste receptacles that:

- (a) Have openings that are 900 mm to 1050 mm *A.F.F.*;
- (b) Are recessed or surface mounted that project 100 mm maximum;
- (c) Where a lid is provided, requires a force of 22 N maximum; and
- (d) Meet the criteria in section "1.5.2. Waste Receptacles and Recycling Bins".

**(9) Benches and Seats:**

Where provided, accessories should include a bench or seat, "Figure 2.3.7-C Bench and Mirror Installation", that:

- (a) Has a seat height that is 460 mm height *A.F.F.*;
- (b) Is 510 mm minimum deep;
- (c) Has at least one bench that is 2500 mm minimum long;

- (d) Provide 50% minimum, rounding up to the nearest whole number, with back support that is 760 mm *A.F.F.* or be located against a wall;

- (e) Has an arm rest that is 600 mm *A.F.F.*, or has grab bars that meet the criteria in section "2.3.11. Accessible Change Room Stalls"; and

- (f) Has a *clear floor space* that is 900 mm wide by 1500 mm minimum long for a front approach.

**(10) Grab Bars:**

Where provided, accessories should include grab bars that:

- (a) Are between 30 mm to 40 mm in diameter;
- (b) Have clearance that is 38 mm to 50 mm from the wall, or mounting surface; and
- (c) Are installed to bear a load of 1.3 kN (300 lbs) minimum applied vertically or horizontally.

**(11) Controls and Operating Mechanisms:**

Accessories should provide controls and operating mechanisms that:

- (a) Have a dispensing height, "Figure 2.3.7-D Accessories Dispensing Heights", that is 900 mm to 1050 mm *A.F.F.*;
- (b) Have *operable portions or controls* that are mounted 900 mm to 1050 mm;
- (c) Have a *clear floor space* that is 900 mm by 1500 mm minimum for front approach, or 900 mm by 2200 mm minimum for side approach; and
- (d) Have *colour/brightness contrast* from adjacent surfaces.



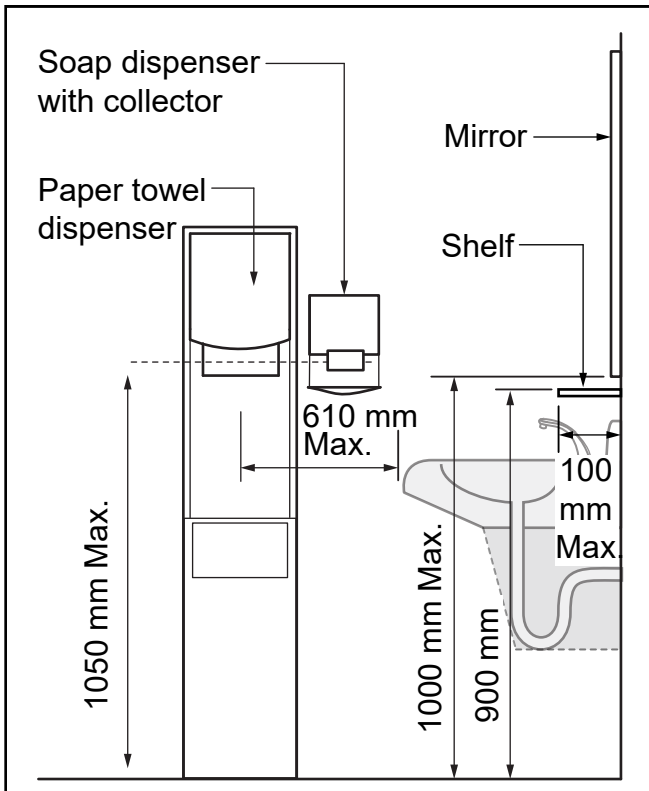


Figure 2.3.7-A Accessories - Lavatory

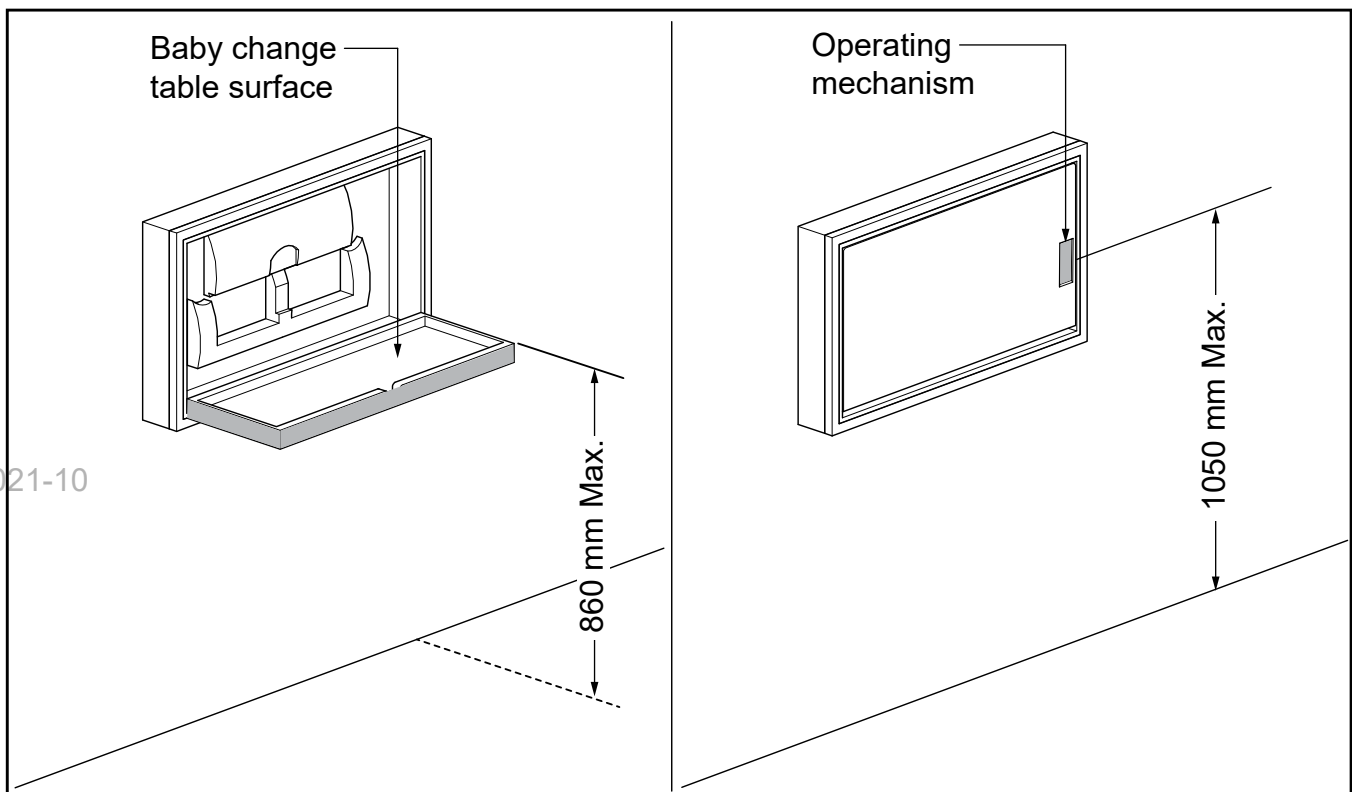


Figure 2.3.7-B Baby Change Table

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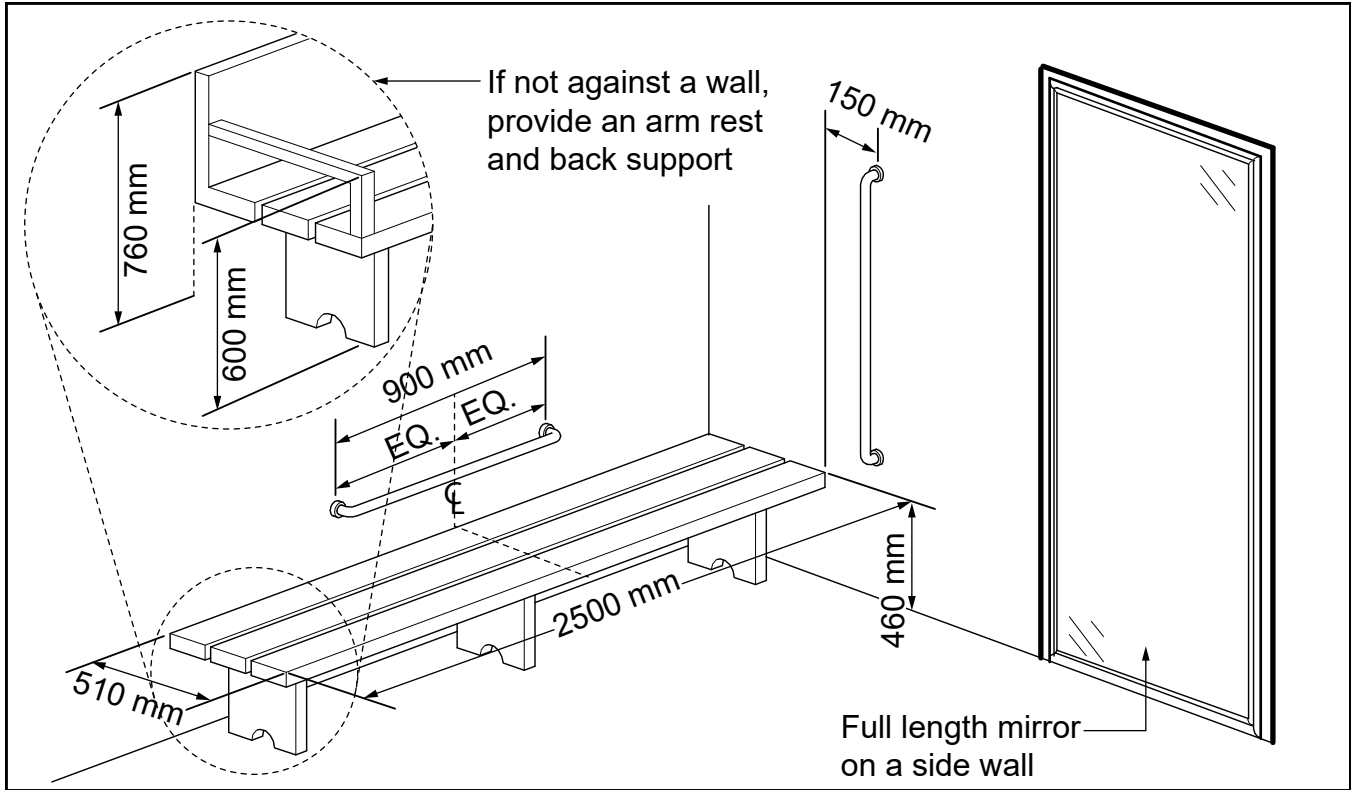


Figure 2.3.7-C Bench and Mirror Installation

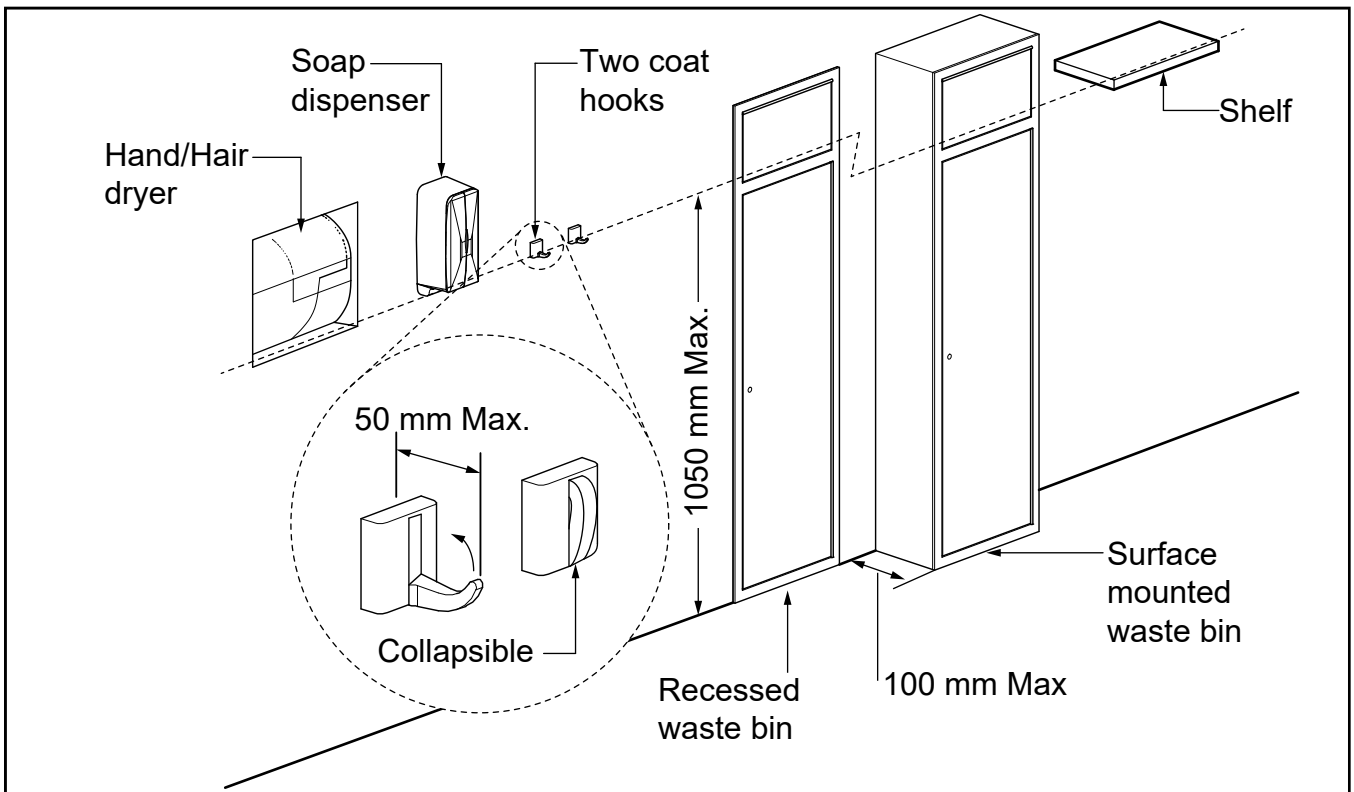


Figure 2.3.7-D Accessories Dispensing Heights

## 2.3.8. Universal Washrooms

### Rationale

*Universal washrooms* provide the space required for persons using larger *mobility devices*, individuals being assisted by a personal support worker of the opposite gender, and the space required for privacy to use the *adult change table*. *Universal washrooms* also provide an alternative choice to using gender-specific multi-stall washrooms. They are typically equipped with more accessories that can be used by all individuals.



### Related Sections

- "1.4.5. Public Pools and Spas"
- "2.1.1. Interior Accessible Paths of Travel"
- "2.2.3. Doors and Doorways"
- "2.2.5. Vision Panels and Strips"
- "2.3.1. Multi-Stall Washrooms"
- "2.3.4. Accessible Water Closets"
- "2.3.6. Accessible Lavatories"
- "2.3.7. Washroom and Change Room Accessories"
- "3.1.1. Interior Lighting"
- "3.2.1. Signage and Wayfinding Systems"

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of *universal washrooms* should consider the use and occupancy of its facilities and the needs of all individuals on every floor level or storey, as well as, throughout a building.

#### Location

The location of *universal washrooms* should be distributed throughout a building as appropriate to the building design and operation. They should be located in publicly accessed areas so that individuals are provided with independent, equitable and dignified access to *universal washrooms*.

### Accessible Path of Travel

An interior *accessible path of travel* should be connected to *universal washrooms* to allow for a continuous, unobstructed route providing interior access to elements and spaces.

### Doors

Doors should be provided at *universal washrooms* to connect interior *accessible paths of travel*. They should have *power door operators*.

### Clear Turning Spaces

Clear turning spaces should be provided within *universal washrooms* to create space for persons using *mobility devices* to make a 360° turn. They should be designed with space for larger *mobility devices* (i.e., scooters) and adequate space for a personal support worker(s) assisting a user who requires the assistance. Clearances such as the clear transfer space beside the *accessible water closet*, or the *clear floor space* at the *accessible lavatory*, provided within *universal washrooms* may overlap the clear turning space.

### Plumbing Fixtures

Plumbing fixtures should be provided at *universal washrooms* such as a *water closet* and a *lavatory* that can be used by all individuals, including persons using *mobility devices*, or persons with limited mobility and dexterity.

### Accessories

Accessories, such as lighting controlled by motion sensor, should be provided within *universal washrooms* to enhance the usability and help to ensure that all individuals, including persons using *mobility devices*, are provided with independent, equitable and dignified access to the available facility.

Accessories should have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

### Emergency Call Systems

An emergency call system should be provided within *universal washrooms*. Emergency call systems provide a safeguard to allow individuals, personal support workers or caregivers to request help if required. Audible and visual signal devices are essential in *universal washrooms* and should be connected to a central monitoring system within a building.

### Adult Change Tables

*Adult change tables* should be provided within *universal washrooms*. They should be designed to be usable by all individuals, including persons using *mobility devices*. *Adult change tables* allow a user with or without a personal support worker or caregiver to safely and securely change and clean up while on the move in public spaces with dignity. Without *adult change tables*, individuals who require the accessory are forced to risk their own health and safety by changing on the floor or else where.

In some facilities movable *adult change tables* that have locking wheels should be used because they provide more flexibility. Where *adult change tables* are not installed, clearances and wall reinforcement should be provided for the future installation of *adult change tables*.

### Signage

*Signage* should be provided at *universal washrooms* that incorporates the International Symbol of Access (ISA) and clearly, positively, and inclusively identifies the function of the space over the identity of individuals.

## Requirements

### (1) Amount:

*Universal washrooms* should provide:

- (a) A minimum of one per floor in a building; and
- (b) A minimum of two per floor on levels where *public pools* and *public spas* are provided that meet the criteria in section "1.4.5. Public Pools and Spas".

### (2) Location:

*Universal washrooms* should be located:

- (a) A distance of 45 meters maximum from a multi-stall washroom that meets the criteria section "2.3.1. Multi-Stall Washrooms";
- (b) At least one per floor per building; and
- (c) At least two per floor with direct access to *public pools* and *public spas* that meet the criteria in "1.4.5. Public Pools and Spas".

### (3) Accessible Path of Travel:

*Universal washrooms* should be connected to an interior *accessible path of travel* that:

- (a) Meets the criteria in section "2.1.1. Interior Accessible Paths of Travel".

### (4) Doors:

*Universal washrooms* should provide a door, "Figure 2.3.8-A Universal Washroom", that:

- (a) Has a graspable latch-operating mechanism that:
  - (i) Is operable using a closed fist and with a force of 22.2 N maximum; and

- (ii) Is located between 900 mm to 1050 mm *A.F.F.*;

- (b) Is capable of being locked from the inside and released from the outside in case of an emergency;
- (c) Meets the criteria in section "2.2.3. Doors and Doorways"; and
- (d) Is equipped with a *power door operator* that meets the criteria in section "2.2.5. Vision Panels and Strips".

### (5) Clear Turning Spaces:

*Universal washrooms* should provide a clear turning space, "[R-2.3.8. (5)]", that:

- (a) Is 2500 mm minimum in diameter.

### (6) Plumbing Fixtures:

*Universal washrooms* should provide plumbing fixtures that include:

- (a) *Water closets* that meet the criteria in section "2.3.4. Accessible Water Closets"; and
- (b) *Lavatories* that meet the criteria in section "2.3.6. Accessible Lavatories".

### (7) Accessories:

*Universal washrooms* should provide accessories that:

- (a) Include a baby change table in facilities that are used by parent/caregivers with children;
- (b) Include lighting controlled by motion sensor that:
  - (i) Is 100 lux minimum, measured on the floor surface;
  - (ii) Has an emergency power source; and
  - (iii) Meets criteria in section "3.1.1. Interior Lighting"; and

- (c) Have audible and visual signaling components of a fire alarm that meet the local building code requirements; and
- (d) Meet the criteria in section "2.3.7. Washroom and Change Room Accessories".

#### (8) Emergency Call Systems:

*Universal washrooms* should provide an emergency call system, "[R-2.3.8. (8)]", "Figure 2.3.8-B Emergency Call System Signage", that:

- (a) Consists of audible and visual signal devices;
- (b) Is located inside and outside the *universal washroom*;
- (c) Is activated by a control device inside the *universal washroom*;
- (d) Has an emergency sign that:
  - (i) Is posted above the *operable portions or controls* of the emergency button; and
  - (ii) Contains the words IN THE EVENT OF AN EMERGENCY PUSH EMERGENCY BUTTON AND AN AUDIBLE AND VISUAL SIGNAL WILL ACTIVATE in letters at least 25 mm high with a 5 mm stroke;
- (e) Is connected to a central monitoring system within a building, or in remote facilities such as parks that are not monitored by a central monitoring system or staff, the emergency call system should be equipped with an additional feature to release the privacy door locking hardware so that emergency responders or public can access the washroom and provide help;

- (f) Is within reach from the *water closet* and from a supine position on the floor surface if a person has fallen; and
- (g) Has *operable portions or controls* consisting of a vertical emergency push strip extending between 200 mm to 1050 mm *A.F.F.* and located within 500 mm of the *water closet*.

#### (9) Adult Change Tables:

*Universal washrooms* should provide *adult change tables* that:

- (a) Have a clear space that is 810 mm wide and 1830 mm long for an *adult change table*;
- (b) Have reinforcement in the wall to permit the future installation of the *adult change table*; and
- (c) Where installed, "[R-2.3.8. (9)(c)]" should:
  - (i) Be wall mounted, and is a fold-down table that does not encroach into a *clear floor space*;
  - (ii) When fully loaded, have an adjustable surface height, "Figure 2.3.8-C Adult Sized Change Table", that is between 450 mm and 500 mm *A.F.F.* at the low range, and 850 mm and 900 mm *A.F.F.* at the high range;
  - (iii) Be designed to carry a 1.78 kN (400 lbs) minimum load;
  - (iv) Have a *clear floor space* that is parallel to the long side of the table, and is 900 mm wide and 1830 mm long minimum for a side approach;
  - (v) Have *operable portions or controls* that are 1050 mm maximum *A.F.F.*; and

- (vi) Have an electrical power source for plug-in hydraulic power assisted models which are preferred; and
- (d) Where a movable *adult change table* is installed, should:
  - (i) Be a free standing mobile unit on wheels with locking brakes; and
  - (ii) Allow for clearances needed for caregivers to maneuver on both sides.

#### (10) Signage:

*Universal washrooms* should provide *signage* that:

- (a) Identifies the function of the space over the identity of individuals;
- (b) Is wall mounted and clearly communicates how to use:
  - (i) Door controls and devices, such as privacy locking door hardware and the *power door operator*; and
  - (ii) The hydraulic adult change table; and
- (c) Meets the criteria in section "3.2.1. Signage and Wayfinding Systems".

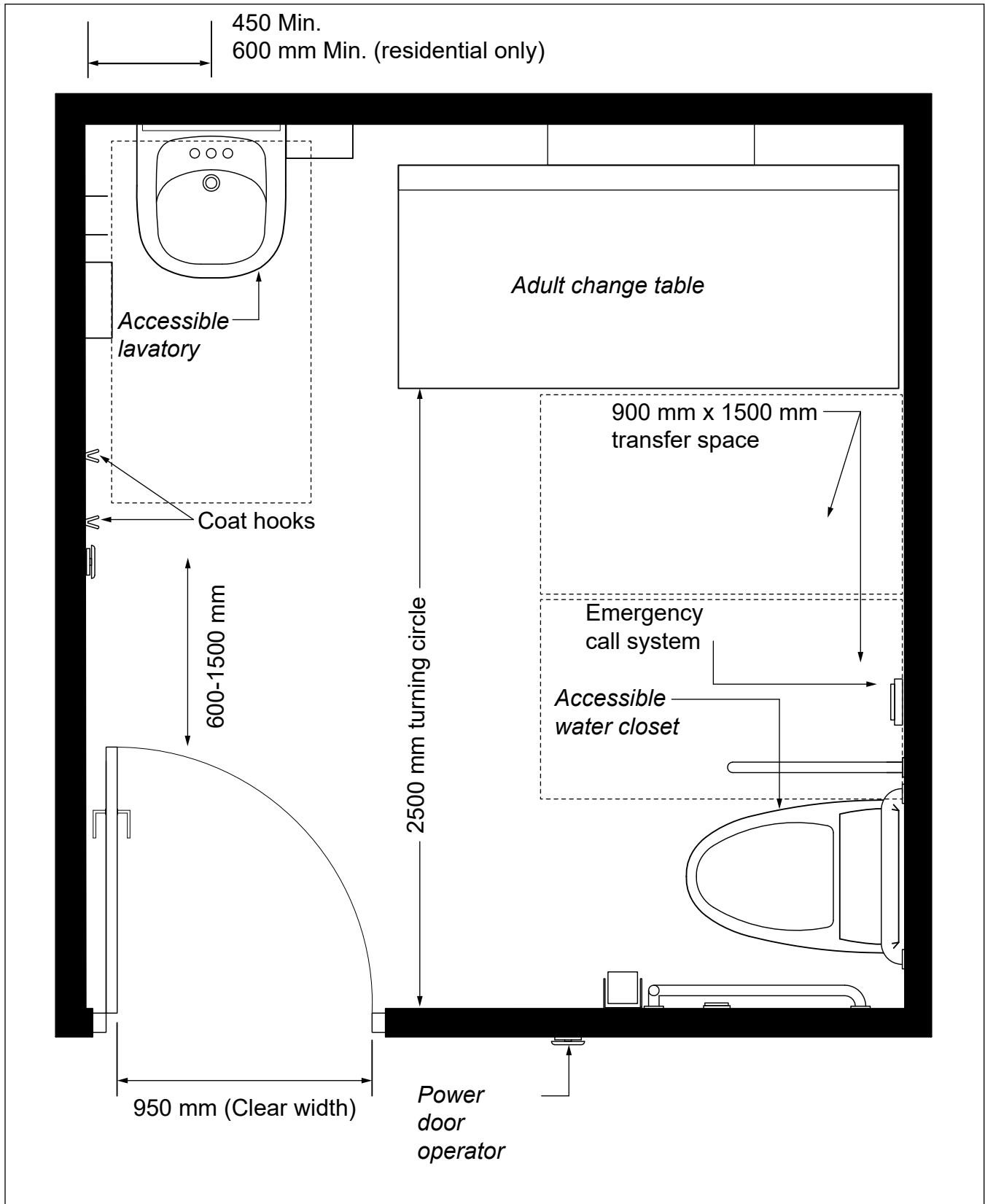


Figure 2.3.8-A Universal Washroom



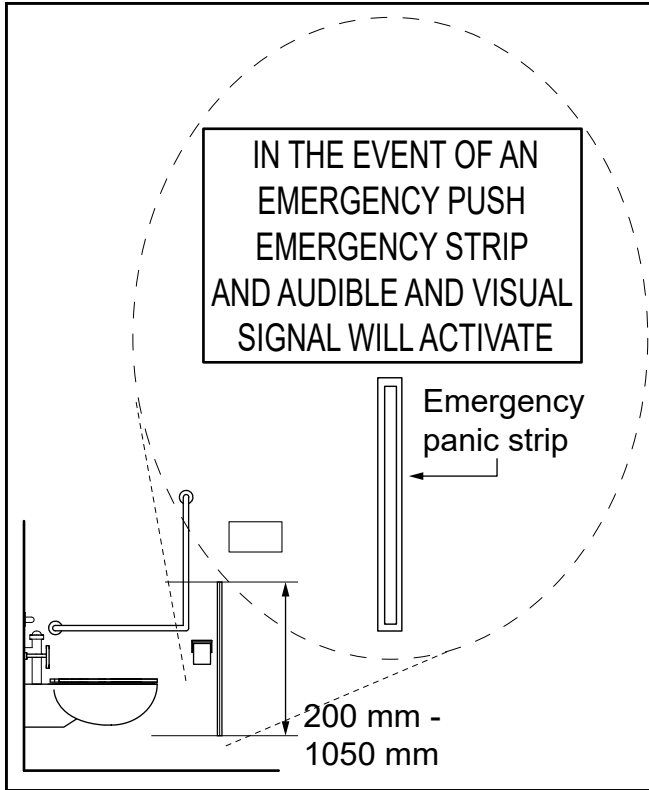


Figure 2.3.8-B Emergency Call System Signage

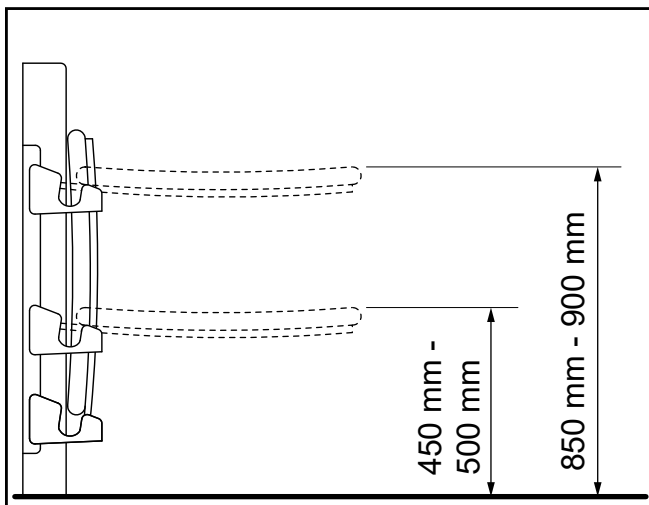


Figure 2.3.8-C Adult Sized Change Table

## 2.3.9. Accessible Showers

### Rationale

*Accessible* showers provide the space for persons using *mobility devices* to side transfer to the hinged seat and reach accessories. Accessories, such as grab bars and a hand-held shower head, should be provided to enhance the usability and help to ensure that all individuals are provided with independent, equitable and dignified access.

### Application

The scope of this section applies to *accessible* showers provided within public washroom and change room facilities, recreation and interior specialized facilities.



### Related Sections

- "1.4.5. Public Pools and Spas"

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of *accessible* showers should consider the use of its facilities and the needs of all individuals. They should be provided where public showers are provided to ensure that the facility can be used by all individuals.

#### Floor Surfaces

Floor surfaces should be designed to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices*. Where gratings and grilles, such as drainage tiles, scuppers or trenches are provided the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

#### Thresholds

Where thresholds are provided at *accessible* showers they should have a minimal transition to allow for a level floor surface and *accessible path of travel*. Raised thresholds can create *barriers* for individuals including persons using *mobility devices*.

#### Design

The design of *accessible* showers should provide the space for persons using *mobility devices* to side transfer to the hinged seat and reach accessories.

### Accessories

Accessories should be provided within *accessible* showers that have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist. Accessories should include a hinged seat, grab bars, shower controls, such as a pressure-equalizing or thermostatic mixing valve, and a hand-held shower head, as well as, fully recessed soap holders and lighting.

### Requirements

#### (1) Quantity:

*Accessible* showers should provide:

- (a) A minimum of 20%, rounding up to the nearest whole number, but never less than one; and
- (b) A minimum of two at *public pools* and *public spas* that meet the criteria in section "1.4.5. Public Pools and Spas".

#### (2) Floor Surfaces:

*Accessible* showers should provide floor surfaces that:

- (a) Are firm, stable, and slip-resistant, non-abrasive (smooth), easy-to-clean, and have rounded edges; and
- (b) Allow for drainage using tiles, scuppers or trenches.

#### (3) Thresholds:

*Accessible* showers should provide thresholds that:

- (a) Are level;
- (b) Have a 0 mm to 6 mm maximum vertical rise; or

- (c) Have a 6.1 mm to 13 mm maximum vertical rise with a *beveled* edge of 1:2 (50%) maximum.

#### (4) Design:

*Accessible* showers should be designed, "Figure 2.3.9-A Shower Stall and Transfer Space", to:

- (a) Be 900 mm deep by 1500 mm wide minimum;
- (b) Have a *clear floor space* that:
  - (i) Is at the *entrance* to the shower; and
  - (ii) Is 900 mm deep and the same width as the shower (1500 mm minimum); and
- (c) Have no doors (curtains or fully glazed doors) that obstruct the shower controls or the *clear floor space*.

#### (5) Accessories:

*Accessible* showers should provide accessories, "Figure 2.3.9-B Accessible Shower", that:

- (a) Include a hinged seat that:
  - (i) Is 450 mm wide by 400 mm deep minimum;
  - (ii) Is mounted on the same side wall as the vertical grab bar between 460 mm and 480 mm *A.F.F.*;
  - (iii) Is designed to carry a 1.3 kN minimum load;
  - (iv) Is located so that the edge of the seat is within 500 mm of the shower controls;
  - (v) Has a smooth and slip-resistant surface and no rough edges; and
  - (vi) Allows water to drain;

- (b) Include one vertical grab bar that:
- Is 1000 mm long;
  - Is located on the side wall between 50 mm and 80 mm from the adjacent *clear floor space*; and
  - Is mounted with the lower end between 600 mm and 650 mm *A.F.F.*;
- (c) Include one continuous L-shaped grab bar that:
- Is located on the wall opposite the *entrance* to the shower;
  - Has a 1000 mm long horizontal component, and is mounted between 750 mm to 870 mm *A.F.F.*; and
  - Has a 750 mm long vertical component, and is mounted between 400 mm to 500 mm *A.F.F.* from the side wall on which the vertical grab is mounted;
- (d) Include one horizontal grab bar that:
- Is 750 mm long;
  - Is located on the side wall without the hinged seat; and
  - Is mounted between 750 mm to 870 mm *A.F.F.*;
- (e) Include a pressure-equalizing or thermostatic mixing valve that:
- Is operable using a closed fist and with a force of 22.2 N maximum;
  - Is mounted on the wall opposite the *entrance* to the shower at 1050 mm *A.F.F.*; and
  - Is located within reach of the seat;
- (f) Include a hand-held shower head that:
- Has 1800 mm minimum of flexible hose;
  - Is located so it can be reached from a seated position;
  - Can be used in a fixed position at a height of 1200 mm and 2030 mm *A.F.F.*; and
  - It does not obstruct the use of the grab bars;
- (g) Includes fully recessed soap holders that can be reached within 500 mm from the seated position; and
- (h) Includes lighting that:
- Is waterproof; and
  - Has a lux level that is at least 100 lux greater than that provided at the remaining floor surface.

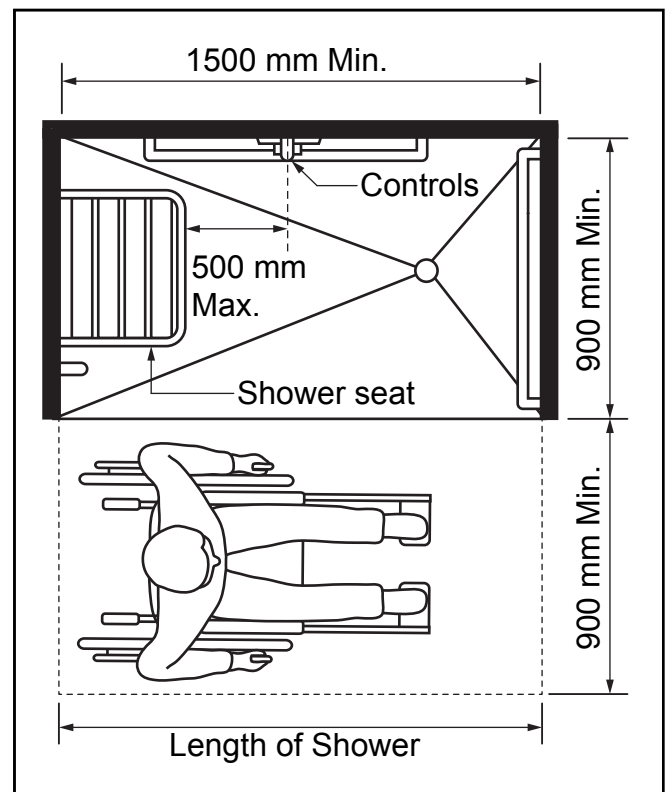


Figure 2.3.9-A Shower Stall and Transfer Space

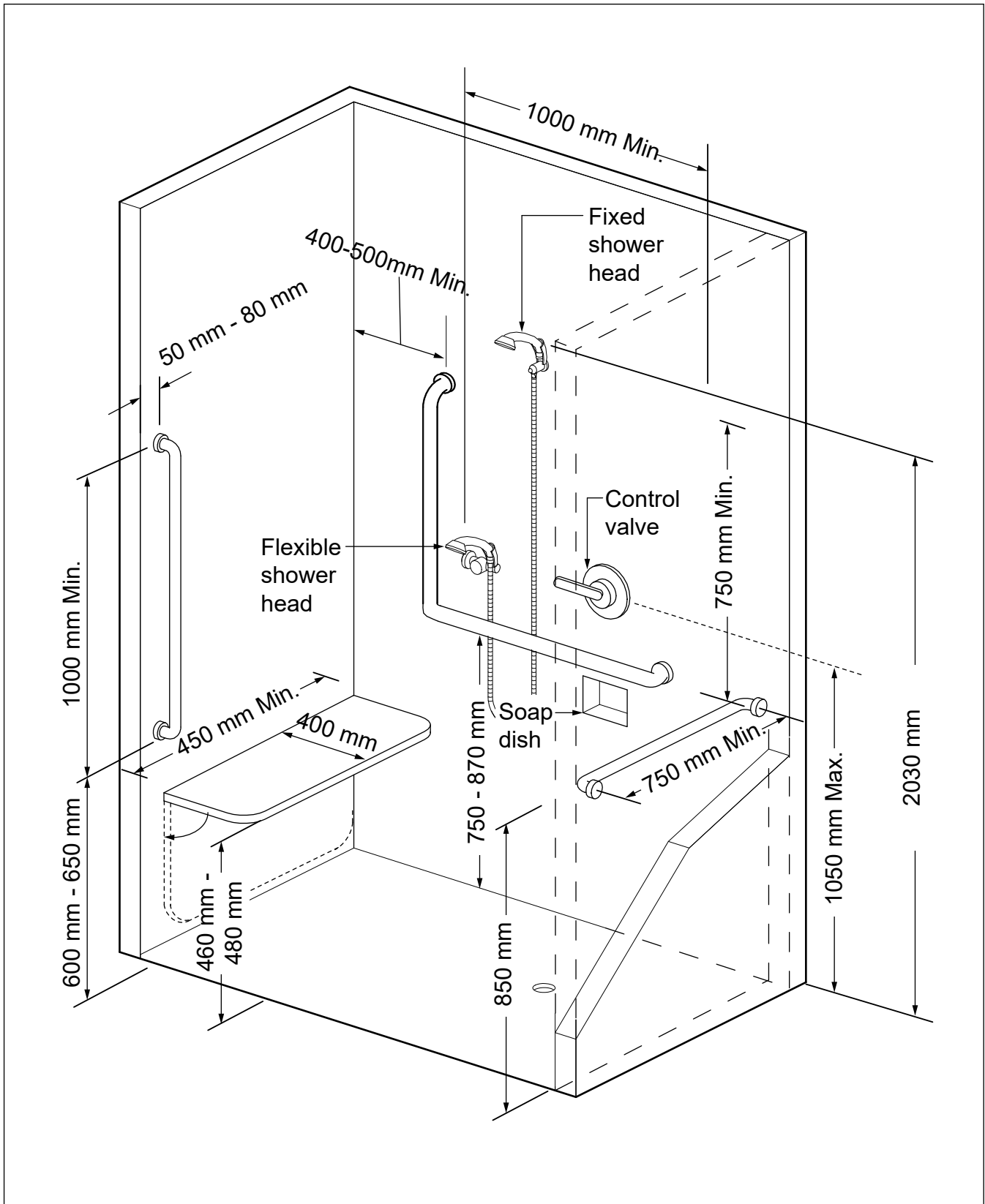


Figure 2.3.9-B Accessible Shower

## 2.3.10. Accessible Change Rooms

### Rationale

*Accessible* change rooms should be designed for all individuals to have a safe, hygienic and dignified changing experience. They should include *accessible* washrooms, showers, *accessible* change room stalls and accessories.

### Application

The scope of this section applies to *accessible* change rooms such as public team dressing rooms or locker rooms, and dressing rooms or fitting rooms.



### Related Sections

- "2.1.1. Interior Accessible Paths of Travel"
- 2.2.3. Doors and Doorways
- "2.3.1. Multi-Stall Washrooms"
- "2.3.7. Washroom and Change Room Accessories"
- "2.3.9. Accessible Showers"
- "2.3.11. Accessible Change Room Stalls"
- "2.4.6. Lockers and Baggage Storage Areas"
- "3.2.1. Signage and Wayfinding Systems"

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be provided throughout *accessible* change rooms to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Doors and Doorways

Doors and doorways should be provided at *accessible* change rooms, but it is important for designers to consider eliminating doors and vestibules where they are not required for acoustic or physical privacy. Where doors are provided at *accessible* change room facilities they should have *power door operators*.

#### Multi-Stall Washrooms

Multi-stall washrooms should be provided within *accessible* change rooms. They are a basic health and accessibility requirement of a building and should be designed for all individuals.

## Showers

*Accessible* showers should be provided within *accessible* change rooms. They should be designed to provide space for persons using *mobility devices* to side transfer to the hinged seat and reach accessories.

## Accessible Change Room Stalls

*Accessible* change room stalls should be provided within *accessible* change rooms to enhance the usability and help to ensure that all individuals, including persons using *mobility devices*, are provided with independent, equitable and dignified access to the available facility.

## Accessories

Accessories should be provided within *accessible* change rooms that have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist. Accessories, such as handrails, that are provided along the walls from pool decks to main areas within change rooms so that persons with low stamina can be supported and safely navigate the change room.

## Signage

*Signage* should be provided at *accessible* change rooms that incorporates the International Symbol of Access (ISA) and clearly, positively, and inclusively identifies the function of the space over the identity of individuals.

## Requirements

### (1) Accessible Path of Travel:

*Accessible* change rooms should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section "2.1.1. Interior Accessible Paths of Travel".

### (2) Doors and Doorways:

*Accessible* change rooms should provide doors and doorways that:

- (a) Meet the criteria in section 2.2.3. *Doors and Doorways*.

### (3) Multi-stall Washrooms:

*Accessible* change rooms should provide multi-stall washrooms that:

- (a) Meet the criteria in section "2.3.1. Multi-Stall Washrooms".

### (4) Showers:

*Accessible* change rooms should provide *accessible* showers that:

- (a) Include at least two, where showers are provided in a group; and
- (b) Meet the criteria in section "2.3.9. Accessible Showers".

### (5) Accessible Change Room Stalls:

*Accessible* change rooms should provide *accessible* change room stalls that:

- (a) Meet the criteria in section "2.3.11. Accessible Change Room Stalls".

**(6) Accessories:**

*Accessible* change rooms should provide accessories that:

(a) Include handrails that:

- (i) Are mounted at 865 mm to 965 mm *A.F.F.*; and
- (ii) Are located along the walls from pool decks to main areas within change rooms;

(b) Include lockers that:

- (i) Are designed to distinguish upper and lower units for persons who are blind or have low vision; and
- (ii) Meet the criteria in section "2.4.6. [Lockers and Baggage Storage Areas](#)"; and

(c) Include at least one of each accessory that meets the criteria in section "2.3.7. [Washroom and Change Room Accessories](#)".

**(7) Signage:**

*Accessible* change rooms should provide *signage* that:

- (a) Identifies the function of the space over the identity of individuals; and
- (b) Meets the criteria in section "3.2.1. [Signage and Wayfinding Systems](#)".



## 2.3.11. Accessible Change Room Stalls

### Rationale

*Accessible* change room stalls should be provided within *accessible* change room facilities to enhance the usability and help to ensure that all individuals are provided with independent, equitable and dignified access to the available facility. *Accessible* change rooms stalls should be designed to provide space and clearances, as well as, integrate *accessible* elements and accessories.



### Related Sections

- "2.3.2. Accessible Water Closet Stalls and Enclosures"
- "2.3.7. Washroom and Change Room Accessories"

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of *accessible* change room stalls provided within *accessible* change room facilities should consider the use of its facilities and the needs of all individuals.

#### Doors

Doors should be provided at *accessible* change room stalls to connect interior *accessible paths of travel*. The clear width at doors should be provided with unobstructed entry and egress that is the same as the door to the *accessible* change room facility. This will ensure that if a person is able to enter the *accessible* change room facility they will also be able to enter the *accessible* change room stall.

#### Clear Turning Spaces

Clear turning spaces should be provided within *accessible* change room stalls to create space for persons using *mobility devices* to make a 360° turn.

#### Accessories

Accessories should be provided within *accessible* change room stalls that have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

## Requirements

### (1) Amount:

*Accessible* change room stalls should provide:

- (a) A minimum of 20% of the total in a group, rounding up to the nearest whole number, but never less than one.

### (2) Doors:

*Accessible* change room stalls should provide a door, "[Figure 2.3.11-A Accessible Change Room Stalls](#)", that:

- (a) Meets the criteria in section "[2.3.2. Accessible Water Closet Stalls and Enclosures](#)".

### (3) Clear Turning Spaces:

*Accessible* change room stalls should provide a clear turning space, "[\[R-2.3.11. \(3\)\]](#)", that:

- (a) Is 2500 mm minimum in diameter for 360° turns.

### (4) Accessories:

*Accessible* change room facilities should provide accessories that:

- (a) Include a mirror that:
  - (i) Is full-length; and
  - (ii) Does not reflect the door;
- (b) Include a bench;
- (c) Include one horizontal grab bar that:
  - (i) Is 900 mm long;
  - (ii) Is mounted 750 mm *A.F.F.*; and
  - (iii) Has its centre line aligned with the middle of the bench;
- (d) Include one vertical grab bar that:
  - (i) Is 1000 mm long;

- (ii) Is mounted with the lower end at 750 mm *A.F.F.*; and

- (iii) Is 150 mm from the edge of the bench;

- (e) Include coat hooks; and

- (f) Meets the criteria in section "[2.3.7. Washroom and Change Room Accessories](#)".

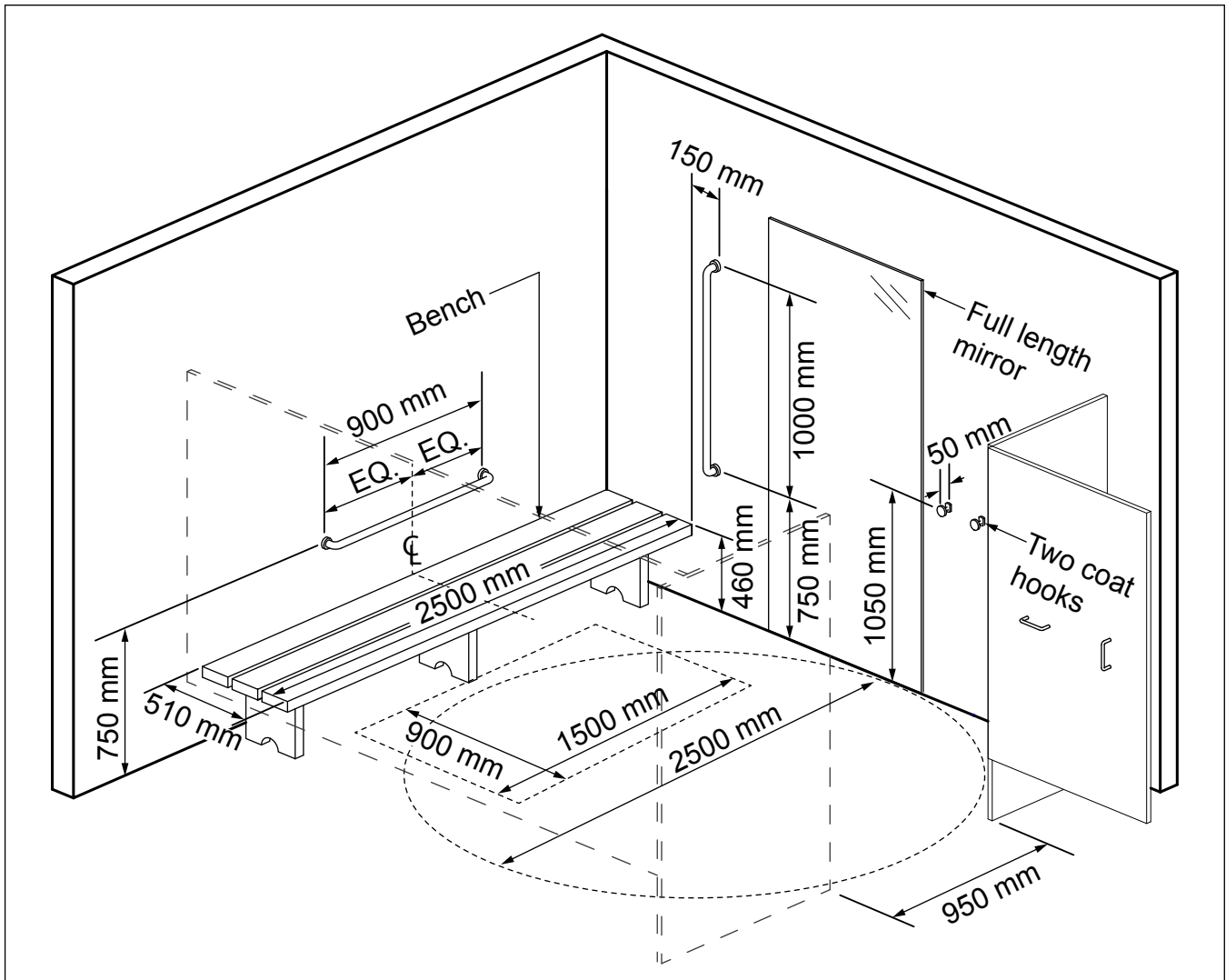


Figure 2.3.11-A Accessible Change Room Stalls

## 2.3.12. Universal Change Rooms

### Rationale

*Universal change rooms* combine the function of *universal washrooms* and *accessible* showers into a single room to provide additional privacy and space when compared to *accessible* change room facilities. Where provided, they should be located in close proximity to multi-stall washrooms and *accessible* change rooms.

### Application

The scope of this section applies to *universal change rooms* adjacent to *accessible* change room facilities such as public team dressing rooms or locker rooms, and gender specific dressing rooms or fitting rooms.

### Related Sections

- "2.1.1. Interior Accessible Paths of Travel"
- 2.2.3. Doors and Doorways
- "2.3.7. Washroom and Change Room Accessories"
- "2.3.8. Universal Washrooms"
- "2.3.9. Accessible Showers"
- "3.2.1. Signage and Wayfinding Systems"

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be provided throughout *universal change rooms* to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Doors and Doorways

Doors and doorways should be provided at *universal change rooms*, but it is important for designers to consider eliminating doors and vestibules where they are not required for acoustic or physical privacy. Where doors are provided at *accessible* change room facilities they should have *power door operators*.

#### Showers

*Accessible* showers should be provided within *universal change room*. They should be designed to provide space for persons using *mobility devices* to side transfer to the hinged seat and reach accessories.



**Accessories**

Accessories should be provided within universal change room that have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

**Signage**

*Signage* should be provided at universal change room facilities that incorporates the International Symbol of Access (ISA) and clearly, positively, and inclusively identifies the function of the space over the identity of individuals.

**Universal Washrooms**

*Universal washrooms* should be provided within universal change room. They should provide the space required for persons using larger *mobility devices*, persons being assisted by a personal support worker(s) of the opposite gender, and the space required for privacy to use the *adult change table*.

**Requirements****(1) Accessible Path of Travel:**

*Universal change rooms* should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section "2.1.1. Interior Accessible Paths of Travel".

**(2) Doors and Doorways:**

*Universal change rooms* should provide doors and doorways that:

- (a) Meet the criteria in section 2.2.3. *Doors and Doorways*.

**(3) Showers:**

*Universal change rooms* should provide *accessible showers* that:

- (a) Meet the criteria in section "2.3.9. Accessible Showers".

**(4) Accessories:**

*Universal change rooms* should provide accessories that:

- (a) Meet the criteria in section "2.3.7. Washroom and Change Room Accessories"; and
- (b) Meet the criteria in section "2.3.8. Universal Washrooms".

**(5) Signage:**

*Universal change rooms* should provide *signage* that:

- (a) Identifies the function of the space over the identity of individuals; and
- (b) Meets the criteria in section "3.2.1. Signage and Wayfinding Systems".

**(6) Universal Washrooms:**

*Universal change rooms*, "Figure 2.3.12-A Universal Change Rooms", should provide *universal washrooms* that:

- (a) Meet the criteria in section "2.3.8. Universal Washrooms".

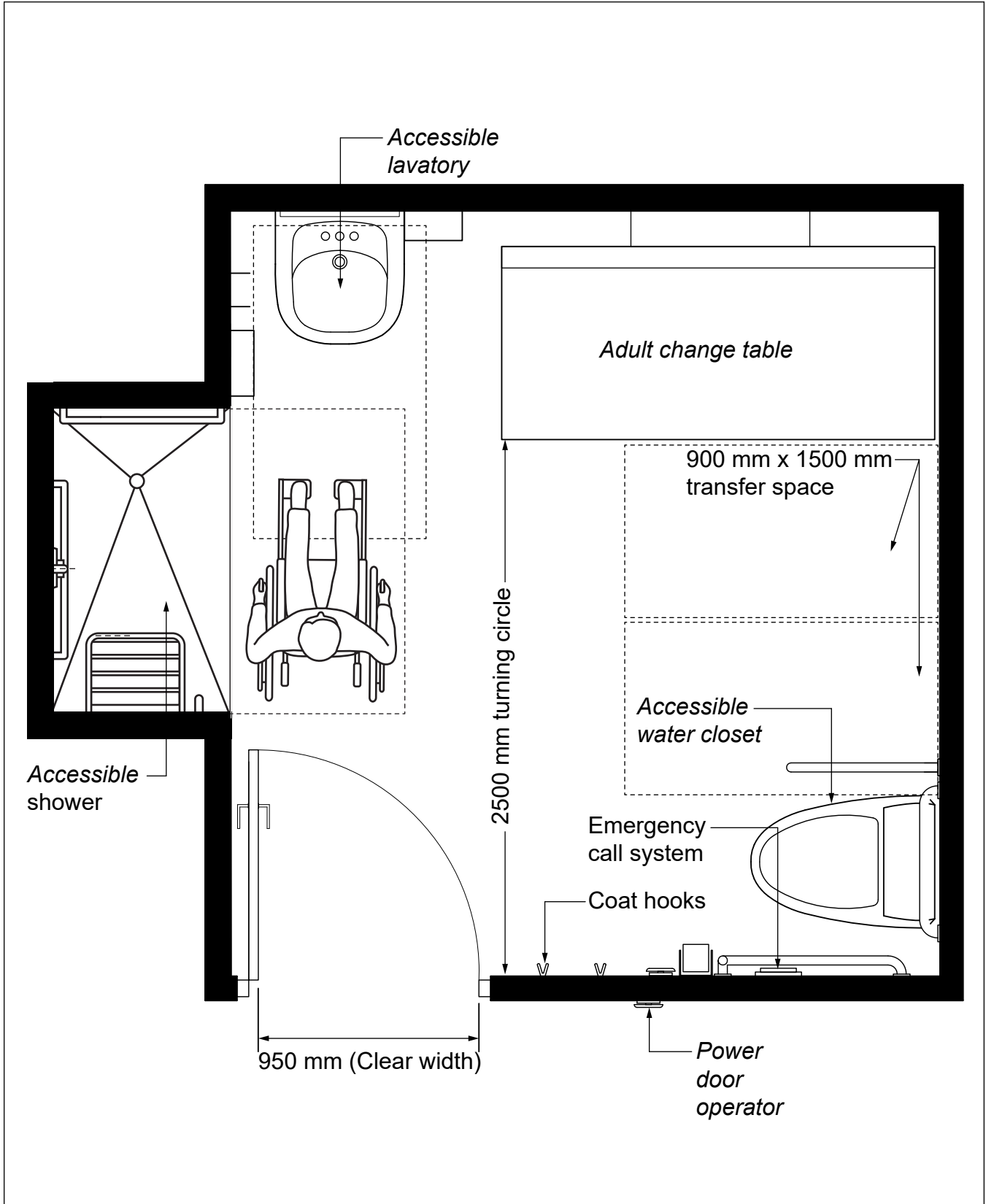


Figure 2.3.12-A Universal Change Rooms

## 2.3.13. Interior Water Bottle Filling Stations and Drinking Fountains

### Rationale

Water bottle filling stations and drinking fountains should be connected to *accessible paths of travel* and be located at *high-use areas*. They should be designed to be recessed in a wall so not to obstruct or protrude into the interior *accessible path of travel*. Water bottle filling stations are preferred over drinking fountains, however, where space permits the use of a combination plumbing fixture is permitted.

### Related Sections

- "1.1.1. Exterior Accessible Paths of Travel"
- "1.6.2. Tactile Attention Indicators"
- "1.6.3. Tactile Direction Indicators"
- "2.1.1. Interior Accessible Paths of Travel"
- "2.1.2. Obstacles"
- "3.3.3. Controls and Operating Mechanisms"

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of *accessible* water bottle filling stations and drinking fountains provided should consider the use of its facilities and the needs of all individuals.

#### Accessible Path of Travel

An interior or exterior *accessible path of travel* should be connected to water bottle filling stations and drinking fountains to allow for a continuous, unobstructed route providing interior or exterior access to elements.

#### Water Bottle Filling Stations

Water bottle filling stations should be designed to be used by all individuals and have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.



### Drinking Fountains

Drinking fountains should be designed to be used by all individuals and have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist.

### Requirements

#### (1) Amount:

Interior water bottle filling stations and drinking fountains should provide:

- (a) All *accessible* units, "[R-2.3.13. (1) (a)]"; and
- (b) A minimum of one *accessible* unit per floor in multi-unit facilities.

#### (2) Accessible Path of Travel:

Interior water bottle filling stations and drinking fountains should be connected to interior or exterior *accessible paths of travel* that:

- (a) Meet the criteria in section "2.1.1. Interior Accessible Paths of Travel", or "1.1.1. Exterior Accessible Paths of Travel"; and
- (b) Where *tactile walking surface indicators* are provided to water bottle filling stations and drinking fountains, meet the criteria in section "1.6.2. Tactile Attention Indicators" and "1.6.3. Tactile Direction Indicators".

#### (3) Water Bottle Filling Stations:

Interior water bottle filling stations should be designed to:

- (a) Be a pedestal style, "Figure 2.3.13-A Pedestal Style Unit", that is securely mounted on a hard floor surface, or a wall mounted style, "Figure 2.3.13-B Wall Mounted Unit", that is recessed, so that it is flush with the adjacent wall surface; and
- (b) Have a bottle rest platform that is 900 mm to 915 mm *A.F.F.*;
- (c) Have *operable portions or controls* that:
  - (i) Are located on the front face of the unit;
  - (ii) Are 686 mm to 762 mm *A.F.F.*; and
  - (iii) Meet the criteria in section "3.3.3. Controls and Operating Mechanisms";
- (d) Have rounded corners, with no burrs or sharp edges;
- (e) Be *cane detectable* that:
  - (i) Is at or below 680 mm; and
  - (ii) Meet the criteria in section "2.1.2. Obstacles";
- (f) Have *colour/brightness contrast* from adjacent surfaces; and
- (g) Have a *clear floor space* that is 900 mm by 1500 mm for front approach, or 900 mm by 2200 mm for side approach.



**(4) Drinking Fountains:**

Interior drinking fountains should be designed to:

- (a) Have a spout that:
  - (i) Provides a water stream at a vertical angle of 30°, where it is located less than 75 mm from the front edge, or a water stream at a vertical angle of 15°, where it is located 75 mm to 125 mm from the front edge;
  - (ii) Is 915 mm maximum *A.F.F.*; and
  - (iii) Projects water minimum 100 mm high;
- (b) Have knee and toe space that:
  - (i) Is under the fountain;
  - (ii) Is 735 mm minimum high *A.F.F.* at the front edge, 500 mm minimum deep, and 900 mm minimum wide; and
  - (iii) Is 350 mm high *A.F.F.* from a point 300 mm back from the front edge to the wall;
- (c) Have *operable portions or controls* that:
  - (i) Are located on the front face of the unit;
  - (ii) Are 686 mm to 762 mm *A.F.F.*;
  - (iii) Are easily operated from a *mobility device* using one hand with a force of 22 N maximum or operate automatically; and
  - (iv) Meet the criteria in section "3.3.3. Controls and Operating Mechanisms";
- (d) A rounded corner design with no burrs or sharp edges;

- (e) Be *cane detectable*, "[R-2.3.13. (4) (e)]", that:
  - (i) Is at or below 680 mm; and
  - (ii) Meet the criteria in section "2.1.2. Obstacles";
- (f) Have *colour/brightness contrast* from adjacent surfaces; and
- (g) Have a *clear floor space* that is 900 mm by 1500 mm for front approach, or 900 mm by 2200 mm for side approach.

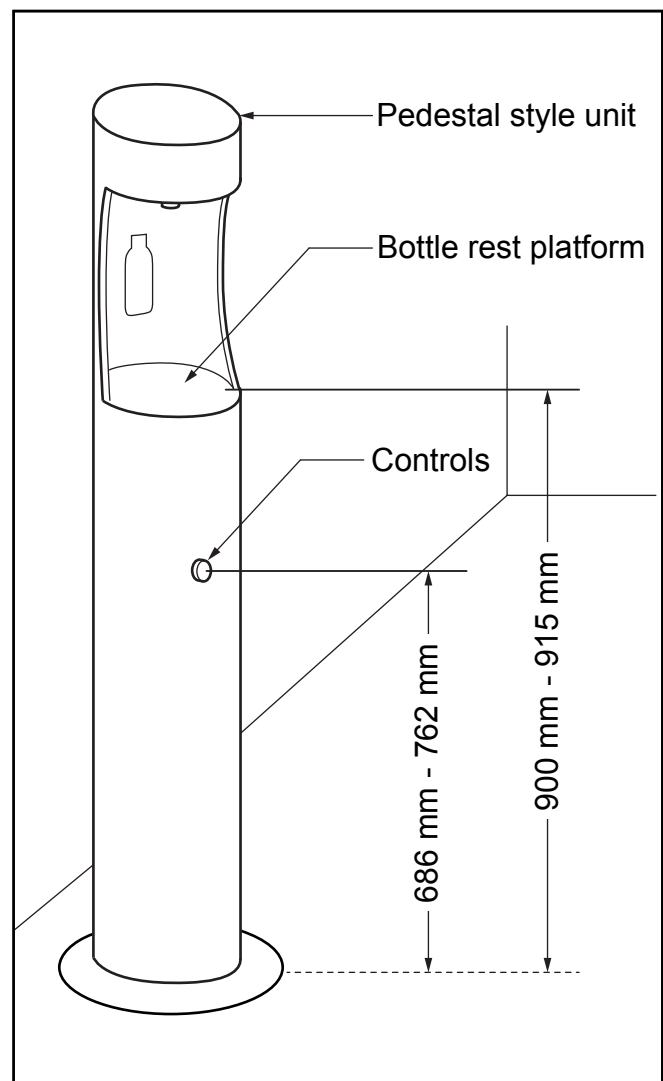


Figure 2.3.13-A Pedestal Style Unit

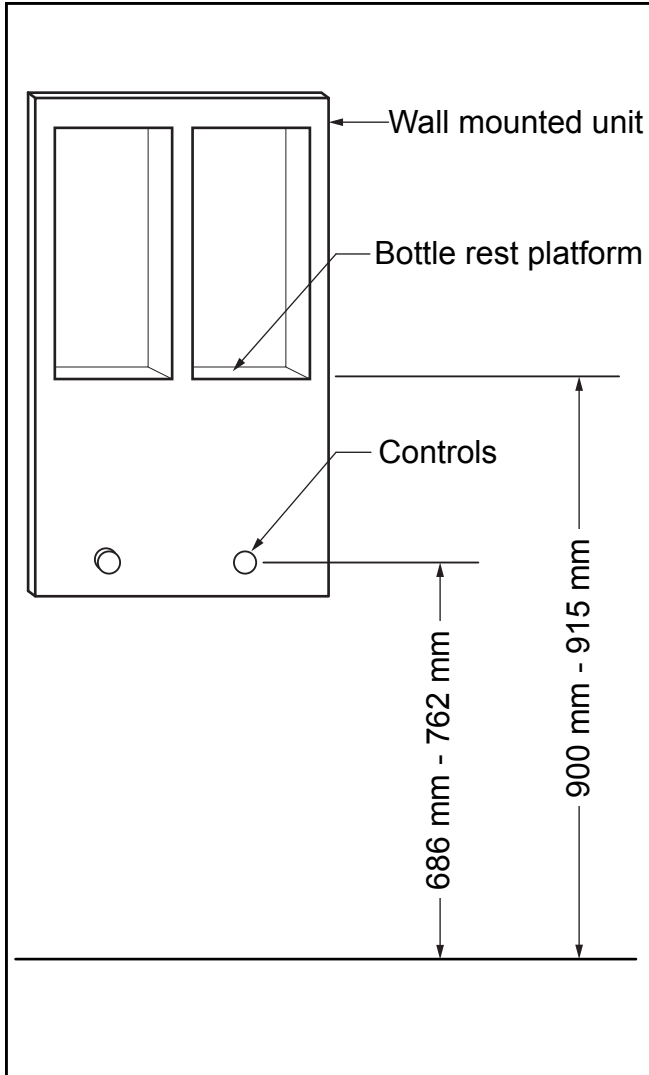


Figure 2.3.13-B Wall Mounted Unit

# 2.4. Interior Rooms and Areas

## Section Summary

This section reviews the *accessible* design requirements for interior rooms and areas intended for use by the public and City staff. An interior *accessible path of travel* should be provided into and throughout interior rooms and areas to ensure that all individuals can safely navigate throughout a building.

## Contents in Section

- 2.4.1. Offices and Work Areas**
- 2.4.2. Meeting and Conference Rooms**
- 2.4.3. Service Counters**
- 2.4.4. Queuing Guides and Waiting Areas**
- 2.4.5. Mobility Device Storage Areas**
- 2.4.6. Lockers and Baggage Storage Areas**
- 2.4.7. Stages and Platforms**
- 2.4.8. Kitchens and Kitchenettes**
- 2.4.9. Eating and Dining Areas**
- 2.4.10. Areas of Rescue Assistance**

## 2.4.1. Offices and Work Areas

### Rationale

Offices and work areas should be designed to allow all individuals to work within a job with a sense of belonging. Physical *barriers* within the work environment should not be a limiting factor on whether a person is able to engage in specific work environments. Space requirements and assistive technologies should be provided to allow persons with a range of abilities to work directly within offices and work areas amongst the other individuals. These design decisions will facilitate equal opportunities for participation and enhance the usability for all individuals.



### Related Sections

- 2.1.1. Interior Accessible Paths of Travel
- 2.2.3. Doors and Doorways
- 2.6.3. Furniture and Equipment
- 2.7.1. Floor, Wall and Ceiling Surfaces
- 3.1.1. Interior Lighting
- 3.2.1. Signage and Wayfinding Systems
- 3.3.1. Acoustics

### Related References

- [City of Toronto Workplace Design Standards](#)
- [Ergonomic Resources](#)
- [Office Design Guidelines](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to offices and work areas to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Doors and Doorways

Doors and doorways should be provided at offices and work areas, but it is important for designers to consider eliminating doors and vestibules where they are not required for acoustic or physical privacy.

#### Furniture, Fixtures and Equipment

Furniture, fixtures and equipment (FFE), whether purchased or leased, should be provided within offices and work areas that are flexible, adaptable and usable by all individuals.

Depending on the use of offices and work areas, workstations and *amenities* should be provided, throughout open and private office layouts, that meet the needs of all individuals. Where smaller rooms, such as telephone rooms, are provided within offices and work areas, FFE should be usable by all individuals. Where provided, photocopiers, fax machines, printers, scanners, refrigerators, microwaves, garbage and recycling stations, stationary rooms, water dispensers/coolers, and health and safety stations should be *accessible*.

### Materials and Finishes

Materials and finishes should be provided within offices and work areas that are designed to be durable and safe for all individuals. They should be used to identify primary and secondary interior *accessible paths of travel*. Floor surfaces should provide textural cues, such as *tactile walking surface indicators*, that are *canes detectable* to help with navigation and *wayfinding* for persons with low or no vision. Wall surfaces should be smooth and non-abrasive.

*Colour/brightness contrast* should be provided on surfaces to assist in identifying key elements in the built environment and aid in *wayfinding*. Colour selection should be carefully considered to meet the needs of persons with cognitive diversity. Neutral colours are preferred in comparison with bright colours, which should only be used to accent or highlight an element or space. Designers should consider both the positive and negative impact bright colours can have on all individuals.

### Lighting

Lighting should be provided within offices and work areas that minimize *glare* and brightness on all surfaces. Lighting should allow all individuals to navigate the space safely, but consideration should be made for individuals who may be sensitive to *glare*. Direct or indirect lighting sources should utilize diffused lenses or filters and be adjustable to meet the needs of all individuals, as well as, the function of the space.

### Signage and Wayfinding Systems

*Signage* and *wayfinding* systems should be provided within offices and work areas. They should be designed to communicate necessary information effectively to all individuals and be easy to understand.

### Acoustics

Acoustics should be provided within offices and work areas. Ambient noise should be controlled to help improve concentration for all individuals who are engaged in tasks.

## Requirements

### (1) Accessible Path of Travel:

Offices and work areas should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section 2.1.1. [Interior Accessible Paths of Travel](#).

### (2) Doors and Doorways:

Offices and work areas should provide doors and doorways that:

- (a) Meet the criteria in section 2.2.3. [Doors and Doorways](#).

**(3) Furniture, Fixtures and Equipment:**

Offices and work areas should provide furniture, fixtures and equipment that:

- (a) Is flexible and adaptable;
- (b) Include workstations, [Figure 2.4.1-A](#), [Figure 2.4.1-B](#), and [Figure 2.4.1-C](#), that:
  - (i) Have a surface height that is 860 mm maximum *A.F.F.*, where fixed; and
  - (ii) Have knee and toe space for a front approach that is 735 mm minimum high *A.F.F.* at the front edge, 500 mm minimum deep, and 900 mm minimum wide; and
- (c) Meet the criteria in section [2.6.3. Furniture and Equipment](#).

**(4) Materials and Finishes:**

Offices and work areas should provide materials and finishes that:

- (a) Have *colour/brightness contrast*:
  - (i) From adjacent surfaces that define boundaries including the junction between walls and floors, doorway recesses and interior *accessible paths of travel* intersections; and
  - (ii) That identifies key spaces throughout offices and work areas, and most notably in buildings with multiple floors with offices and work areas; and
- (b) Meet the criteria in section [2.7.1. Floor, Wall and Ceiling Surfaces](#).

**(5) Lighting:**

Offices and work areas should provide lighting that:

- (a) Is direct, or in-direct;
- (b) Utilizes diffused lenses, or filters;

- (c) Is adjustable;
- (d) Is natural; and
- (e) Meets the criteria in section [3.1.1. Interior Lighting](#).

**(6) Signage and Wayfinding Systems:**

Offices and work areas should provide *signage* and *wayfinding* systems that:

- (a) Compliments the surrounding environment allowing for easy navigation and identification of key elements and spaces; and
- (b) Meet the criteria in section [3.2.1. Signage and Wayfinding Systems](#).

**(7) Acoustics:**

Offices and work areas should provide acoustics that:

- (a) Meet the criteria in section [3.3.1. Acoustics](#).

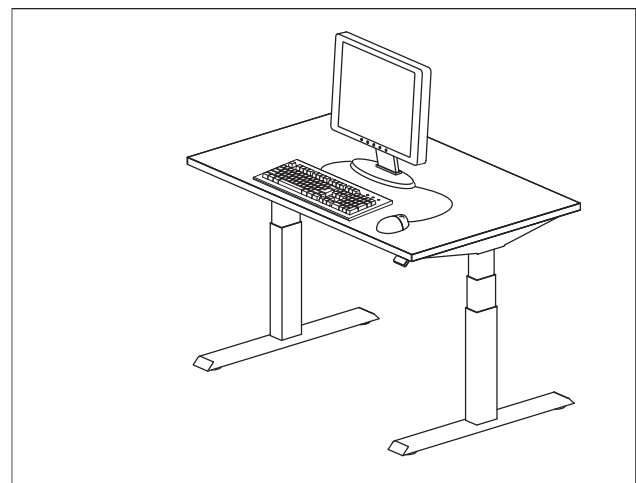


Figure 2.4.1-A Adjustable Desk

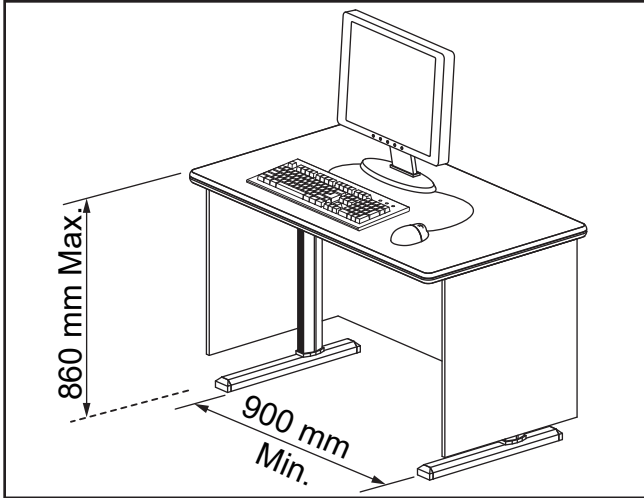


Figure 2.4.1-B Fixed Height Desk

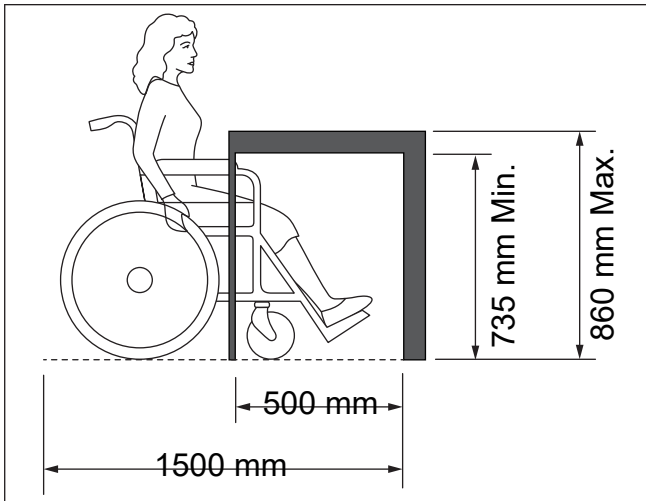


Figure 2.4.1-C Knee and Toe Space at Desk

## 2.4.2. Meeting and Conference Rooms

### Rationale

Meeting and conference rooms should be designed to be flexible, *accessible* and adaptable to meet the needs of a wide range of individuals and group sizes. The functional needs of the participants the meeting and conference rooms are intended, for example, large training rooms with flexible seating and tables or movable partitions, should be provided. of each room should be provided. Interior *accessible paths of travel* should be connected to elements and spaces within meeting and conference rooms.

### Application

The scope of this section applies to large meeting rooms, training rooms, multi-purpose rooms with an occupant load of 16 or more persons and/or in meeting rooms for 10 to 16 persons in civic buildings and recreation centres that are bookable by the public. In offices and work areas with multiple meeting rooms, should meet the criteria in the most recent version of the City's office modernization standards and be reviewed with corporate City staff for compliance.



### Related Sections

- 1.4.2. Spectator Areas
- 2.1.1. Interior Accessible Paths of Travel
- 2.2.3. Doors and Doorways
- 2.4.5. Mobility Device Storage Areas
- 2.4.7. Stages and Platforms
- 2.6.3. Furniture and Equipment
- 3.1.1. Interior Lighting
- 3.2.1. Signage and Wayfinding Systems
- 3.2.5. Assistive Listening Devices
- 3.3.1. Acoustics

### Related References

- [City of Toronto Workplace Design Standards](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to meeting and conference rooms to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Doors and Doorways

Doors and doorways should be provided at meeting and conference rooms, but it is important for designers to consider eliminating doors and vestibules where they are not required for acoustic or physical privacy. Where movable partitions are provided that have doors, an interior *accessible path of travel* should be provided to connect both rooms and areas. Glazed screen partitions should be durable, low *glare*, provide privacy by using a frosted finish or window coverings, and also limit the amount of distraction.



### Furniture, Fixtures and Equipment

Furniture, fixtures and equipment, whether purchased or leased, should be provided within meeting and conference rooms that are flexible, *accessible*, adaptable and usable by all individuals. Depending on the use of meeting rooms and conference areas, furniture such as seating, tables, self-service stations, stages or platforms, lecterns, podiums, or dias, *mobility device* storage areas and *amenities* should be provided throughout that meet the needs of all individuals. Where fixed seating is provided, *accessible* benches, seats, designated *clear floor spaces* and companion seating should be provided.

### Lighting

Lighting should be provided within meeting and conference rooms that suites the function of the room, and minimizes *glare* and brightness on all surfaces. Lighting should allow all individuals to navigate the space safely, but consideration should be made for individuals who may be sensitive to *glare*. Rooms and spaces should have multi-zoned lighting and options for spot lighting. Where there is natural light through exterior glazing, window shades that can reduce light, and *glare*, and that have *accessible operable portions or controls* should be provided.

### Communication and Information Systems

Communication and information systems, such as *assistive listening devices*, should be provided within meeting and conference rooms that extend throughout the entire seating area. *Assistive listening devices* should be designed to be used with a person's hearing aid to enhance their listening experience and provide extra help in challenging listening situations. Audio and visual signals should include speakers and voice uplift systems, as well as, equipment that will allow for video conferencing, and closed captioning.

Digital display panels that are visible to all individuals should have *accessible operable portions or controls*.

### Signals and Controls

Audible and visible signals, such as the audio and visual components of a fire alarm, should be provided within meeting and conference rooms.

Acoustics, should be provided within meeting and conference rooms. Ambient noise should be controlled to help improve concentration for all individuals who are engaged in tasks. Acoustics can impact the clarity of spoken word, speech privacy from adjoining offices and work areas and adjacent interior *accessible paths of travel*.

Consideration for the insulation of ductwork and the selection of air distribution grilles that are acoustically lined should be made. Sound absorbing and/or masking materials should be used if appropriate. Rooms that have advanced audio and visual signals should be located by the core without the interference of natural sunlight or external sounds coming through the windows.

### Requirements

#### (1) Accessible Path of Travel:

Meeting and conference rooms should provide interior *accessible paths of travel* that:

- (a) Has clear aisle space that is 1100 mm minimum;
- (b) Has a clear turning space that:
  - (i) Is 1675 mm minimum in diameter at large meeting rooms; and

- (ii) Is 2500 mm minimum in diameter at conference rooms that are intended for 50 persons or greater;
- (c) Extend to stages and platforms, where provided; and
- (d) Meet the criteria in section 2.1.1. [Interior Accessible Paths of Travel](#).

### (2) Doors and Doorways:

Meeting and conference rooms should provide doors and doorways that:

- (a) Have *power door operators* at:
  - (i) Entrance doors to large and highly used rooms; and
  - (ii) Where double leaf doors or a cluster of doors are provided, one door minimum;
- (b) Have vision panels or sidelights that:
  - (i) Have a frosted finish; or
  - (ii) Have window coverings; and
- (c) Meet the criteria in section 2.2.3. [Doors and Doorways](#).

### (3) Furniture, Fixtures and Equipment:

Meeting and conference rooms should provide furniture, fixtures and equipment that:

- (a) Is flexible, *accessible*, adaptable;
- (b) Maintains clear sight lines to the main event or speakers;
- (c) Include:
  - (i) Movable seating equipped with and without arm rests;

- (ii) Tables that provide *clear floor space* that is 915 mm wide and 1370 mm deep, and knee and toe space, [\[R-2.4.2. \(3\)\(c\)\(ii\)\]](#), for a front approach that is 735 mm minimum high *A.F.F.* at the front edge, 500 mm minimum deep, and 900 mm minimum wide;

- (iii) Serveries or sideboards that provide *clear floor space* that is 915 mm wide and 1370 mm deep, and that have space and reach range requirements;

- (iv) Podiums, lecterns, or dias that are height adjustable and with a movable base;

- (v) *Mobility device* storage areas that meets the criteria in section 2.4.5. [Mobility Device Storage Areas](#);

- (vi) Stages or platforms that meet the criteria in section 2.4.7. [Stages and Platforms](#); and

- (vii) *Amenities*;

- (d) Where fixed seating is provided, meet the criteria in section 1.4.2. [Spectator Areas](#); and

- (e) Meet the criteria in section 2.6.3. [Furniture and Equipment](#).

### (4) Lighting:

Meeting and conference rooms should provide lighting that:

- (a) Is adjustable;
- (b) Is multi-zoned;
- (c) Has spot lighting options;
- (d) Where natural light is provided, have window shades; and
- (e) Meets the criteria in section 3.1.1. [Interior Lighting](#).

**(5) Communications and Information Systems:**

Meeting and conference rooms should provide communications and information systems that:

- (a) Include *signage* and *wayfinding* systems that meet the criteria in section 3.2.1. [Signage and Wayfinding Systems](#);
- (b) Include *assistive listening devices* that meet the criteria in section 3.2.5. [Assistive Listening Devices](#); and
- (c) Includes audio and visual that:
  - (i) Has speakers;
  - (ii) Voice up-lift systems;
  - (iii) Video conferencing equipment; and
  - (iv) Display panels with adjustable *operable portions and controls*; and
- (d) Meet the criteria in section 3.3.3. [Controls and Operating Mechanisms](#).

**(6) Signals and Controls:**

Meeting and conference rooms should provide signals and controls that:

- (a) Include audible and visible signals that:
  - (i) Audio and visual components of a fire alarm; and
  - (ii) Meet the criteria in section 3.3.7. [Audible and Visible Signals](#);
- (b) Include acoustics that:
  - (i) Are adjustable; and
  - (ii) Meet the criteria in section 3.3.1. [Acoustics](#).

## 2.4.3. Service Counters

### Rationale

Service counters should have *accessible* portions that are integrated into the design. Counter-top heights should be usable by all individuals, including persons using *mobility devices*, children, and persons of short stature. Communication and information systems, such as *assistive listening devices*, should be provided to help persons who are deaf, deafened or hard of hearing. Where there are multiple queuing guides, service counters should be identified by *signage*.

### Application

The scope of this section applies to various types of service counters (desks, wickets, booths) including reception, registration, security, information, ticket, payment or food services. Every service counter is purpose built and designers should consult with City staff and conduct an activity analysis on the counters use and purpose for both public and staff.



### Related Sections

- 2.1.1. Interior Accessible Paths of Travel
- 3.2.1. Signage and Wayfinding Systems
- 3.2.5. Assistive Listening Devices

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of service counters that have *accessible* portions that are integrated into the design should consider the use of its facilities and the needs of all individuals. Additional *accessible* portions should be provided in *high-use areas* where a greater number of individuals will require them. This will ensure that persons using *mobility devices* or who rely on assistive technology are not waiting for extended periods of time to obtain services.

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to service counters to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Furniture, Fixtures and Equipment

Furniture, fixtures and equipment at service counters should be usable by all individuals. They should provide a variety of counter-top heights, including *accessible* portions that have *clear floor space* and sufficient knee and toe space to allow space for front and side approach to obtain services. Where *accessible* portions are provided on both sides of service counters for customers and City staff, they should be diagonal from each other to provide comfortable reach ranges across the shared counter for transactions.

Additional service counters for specialized activities related to the service, such as information booths, writing counters for forms to be filled out by individuals should also provide *accessible* portions.

### Communication and Information Systems

Communication and information systems, such as *signage* and *wayfinding* and *assistive listening devices*, should be provided at service counters. They should be designed to communicate necessary information effectively to all individuals and be easy to understand.

### Requirements

#### (1) Amount:

Service counters should provide:

- (a) A minimum of one *accessible* portion per each type of service interaction; and
- (b) A minimum of two *accessible* portions in *high-use areas*.

#### (2) Accessible Path of Travel:

Service counters should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section 2.1.1. [Interior Accessible Paths of Travel](#).

#### (3) Furniture, Fixtures and Equipment:

Service counters should provide furniture, fixtures and equipment that:

- (a) Have a *clear floor space*, [Figure 2.4.3-A](#), that is 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach;
- (b) Have a counter-top that is 860 mm maximum *A.F.F.*;

- (c) Have knee and toe space, [Figure 2.4.3-B](#), for a front approach that is 735 mm minimum high *A.F.F.* at the front edge, 500 mm minimum deep, and 900 mm minimum wide; and
- (d) Have glazed screens for security, where required, that allow for speech clarity, lip reading and signing, or have voice ports.

#### (4) Communications and Information Systems:

Service counters should provide communications and information systems that:

- (a) Include *signage and wayfinding* that:
  - (i) Indicated the type of assistive listening devices available; or
  - (ii) How to request accommodation for accessibility needs; and
  - (iii) Meet the criteria in section 3.2.1. [Signage and Wayfinding Systems](#);
- (b) Include two-way communication systems that:
  - (i) Have a keyboard, such as Ubi Duo, to facilitate communication with persons who are deaf, deafened or hard of hearing; and
  - (ii) Meet the criteria in section 3.2.2. [Two-Way Communication Systems](#);
- (c) Include *assistive listening devices* that:
  - (i) Where voice ports are provided that are 1050 mm maximum *A.F.F.*;
  - (ii) Have signage to notify individuals of its availability; and
  - (iii) Meet the criteria in section 3.2.5. [Assistive Listening Devices](#); and
- (d) Include adaptable and adjustable microphones, where required.

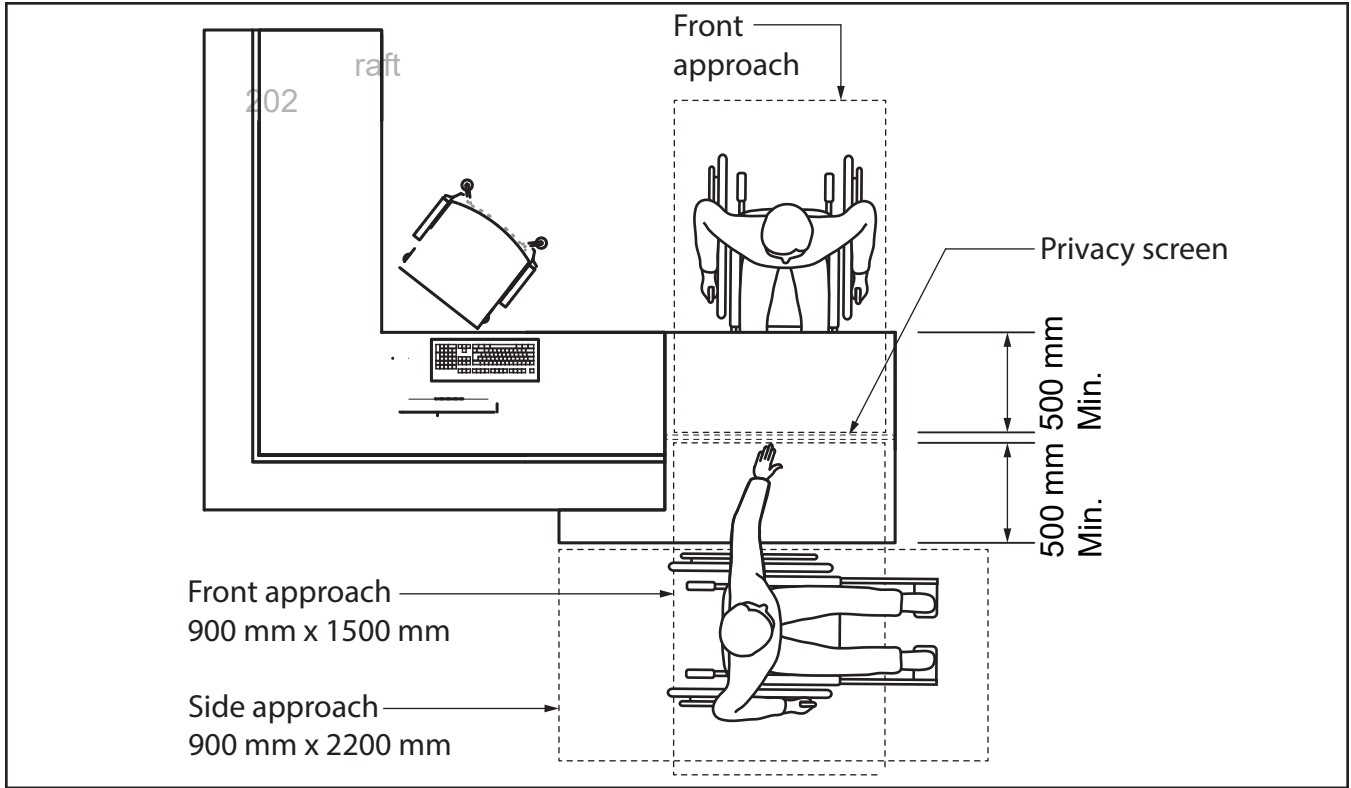


Figure 2.4.3-A Clear Floor Space

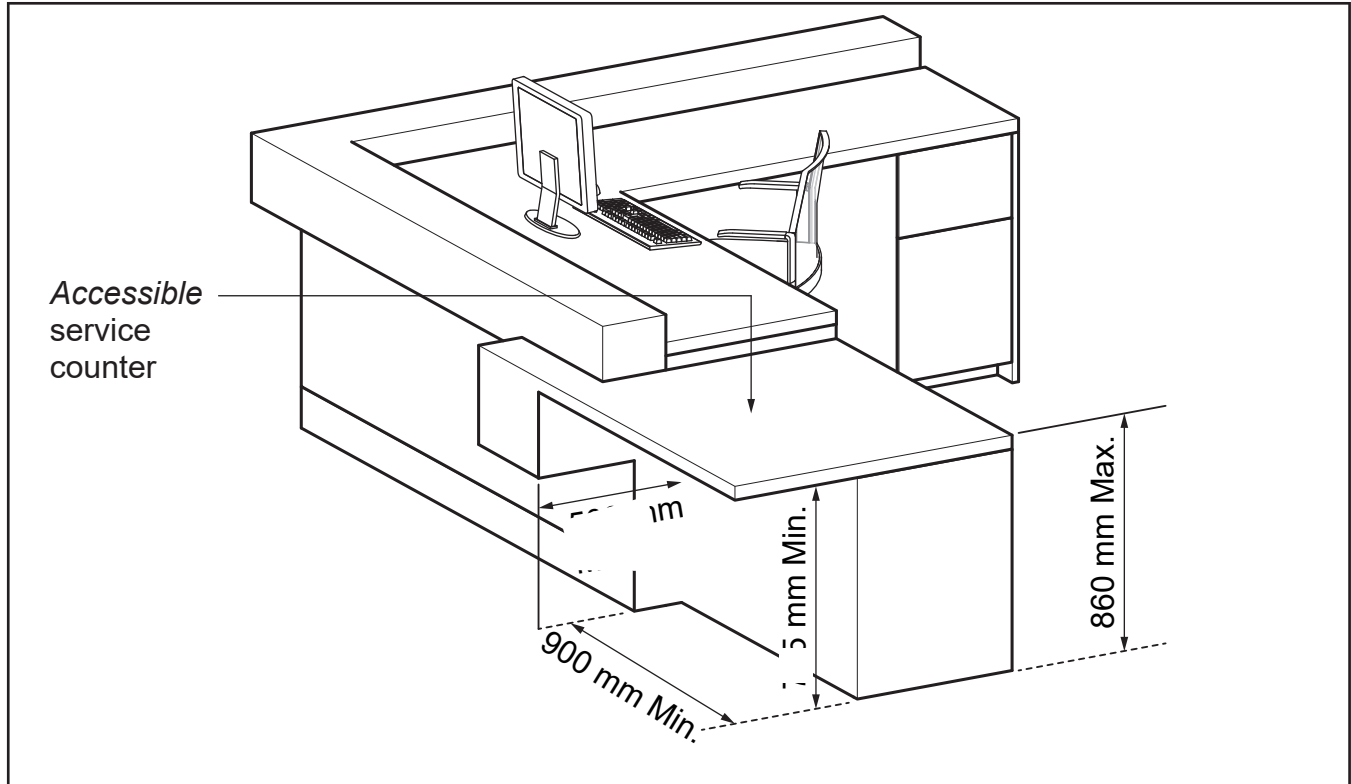


Figure 2.4.3-B Knee and Toe Space

## 2.4.4. Queuing Guides and Waiting Areas

### Rationale

Queuing guides and waiting areas should be designed to be fixed, or non-fixed. They should be usable and safe to navigate for all individuals, including persons using *mobility devices* and persons with low or no vision. Queuing guides and waiting areas may be located where individuals obtain services, such as at service counters. Queuing guides should be *cane detectable* to reduce the risk of tripping hazards.



### Related Sections

- 1.5.1. Benches and Seats
- 1.6.3. Tactile Direction Indicators
- 2.1.1. Interior Accessible Paths of Travel
- 2.4.5. Mobility Device Storage Areas
- 3.2.1. Signage and Wayfinding Systems
- 3.2.6. Public Telephones

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to queuing guides and waiting areas to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Communication and Information Systems

Communication and information systems, such as *signage* and *wayfinding*, and public telephones, should be provided at queuing guides and waiting areas. They should be designed to communicate necessary information effectively to all individuals and be easy to understand. Call buttons that have *accessible operable portions or controls* should be provided within waiting areas to allow individuals to request assistance. Audio and visual signals should be provided to communicate and inform persons who are deaf, deafened or hard of hearing, and persons with low to no vision, which service counter is available to obtain services at.

### Furniture, Fixtures and Equipment

Furniture, fixtures and equipment, such as *accessible* benches, seats, designated *clear floor spaces* and companion seating should be provided at waiting areas. Clear sight lines from benches and seats to queuing guides and service counters should be provided. Where fixed benches and seats are provided, the number of *accessible* furniture should consider the use of its facilities and the needs of all individuals. Additional *accessible* furniture should be provided in *high-use areas* where a greater number of individuals will require them.

### Mobility Device Storage Spaces

*Mobility device* storage should be provided at waiting areas to allow individuals to charge their electric *mobility devices*.

## Requirements

### (1) Accessible Path of Travel:

Queuing guides and waiting areas should provide interior *accessible paths of travel* that:

- (a) Have a clear width that is 1100 mm minimum;
- (b) Have a clear turning space that is 2500 mm minimum in diameter, [R-2.4.4. (1)(b)], that is located at 180° turns and 90° turns, and the start and end of the queue;
- (c) Have *tactile direction indicators* that meet the criteria in section 1.6.3. *Tactile Direction Indicators*; and
- (d) Meet the criteria in section 2.1.1. *Interior Accessible Paths of Travel*.

### (2) Communication and Information Systems:

Queuing guides and waiting areas should provide communication and information systems that:

- (a) Include *signage and wayfinding* that:
  - (i) Identifies the start of queuing guides;
  - (ii) Identifies companion and priority seating; and
  - (iii) Meets the criteria in section 3.2.1. *Signage and Wayfinding Systems*;
- (b) Include public telephones that meet the criteria in section 3.2.6. *Public Telephones*;
- (c) Include audio and visual signals that communicate and inform service counter availability; and
- (d) Include call buttons that:
  - (i) Request assistance;
  - (ii) At the start and end of the line;
  - (iii) Are located consistently and predictably;
  - (iv) Are connected to Wi-Fi signals to allow for automation; and
  - (v) Have *accessible operable portions or controls*.

### (3) Furniture, Fixtures and Equipment:

Queuing guides and waiting areas should provide furniture, fixtures and equipment that:

- (a) Are fixed, or non-fixed;
- (b) Are located adjacent to interior *accessible paths of travel*;
- (c) Include *accessible* benches or seats;



- (d) Include minimum 5% *adaptable seating*, rounding up to the nearest whole number, but never less than one;
- (e) Include *clear floor space*, [Figure 2.4.4-A](#), that:
  - (i) Is minimum 3%, rounding up to the nearest whole number, but never less than two; and
  - (ii) Is 900 mm wide by 1500 mm long minimum for a front approach;
- (f) Include companion seating;
- (g) Have clear sight lines to service counters;
- (h) Are *cane detectable* at or below 680 mm maximum *A.F.F.*;
- (i) Meet the criteria in section [1.5.1. Benches and Seats](#); and
- (j) Meet the criteria in section [2.6.3. Furniture and Equipment](#).

**(4) Mobility Device Storage:**

Waiting areas should provide *mobility device* storage spaces that:

- (a) Meets the criteria in section [2.4.5. Mobility Device Storage Areas](#).

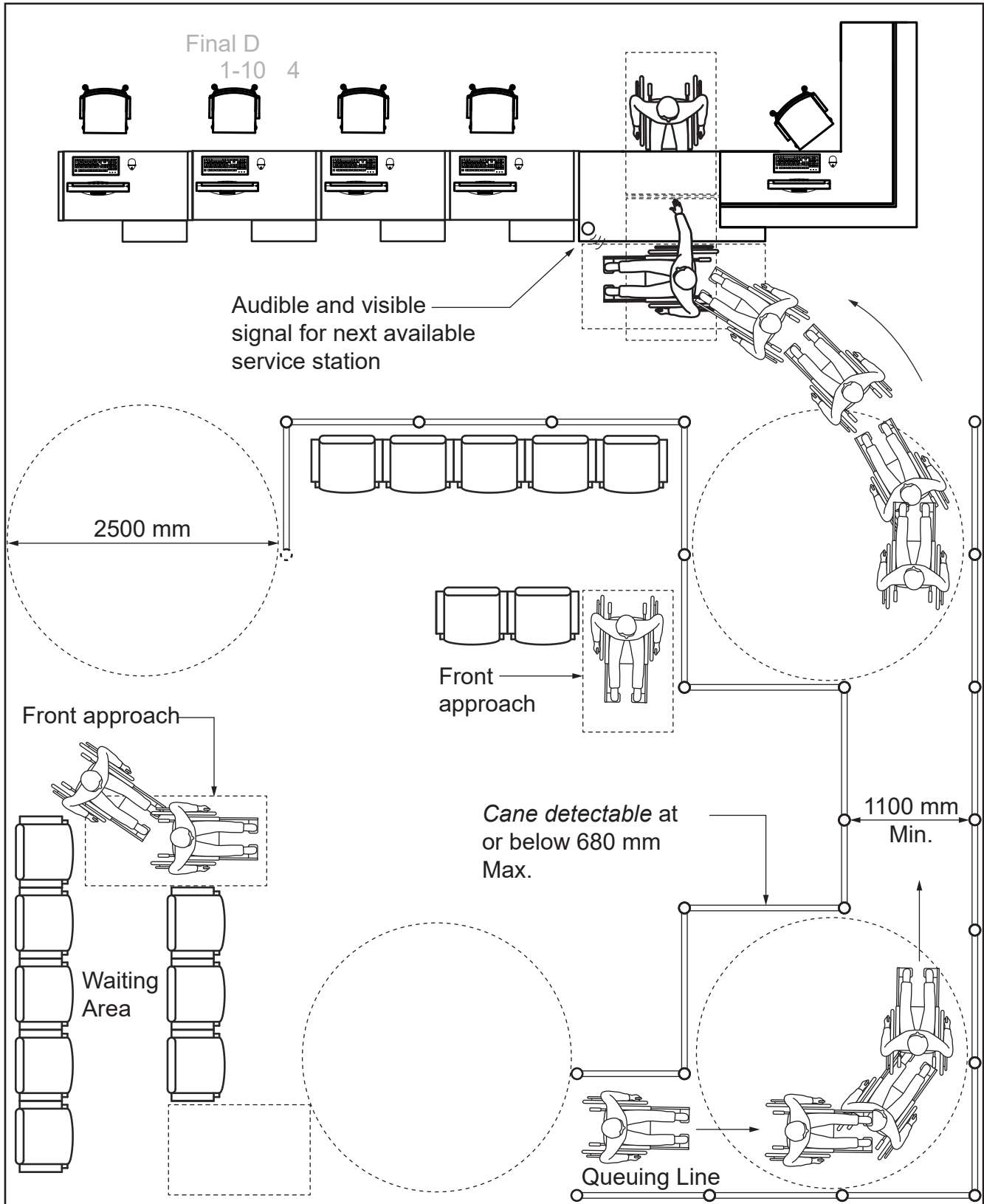


Figure 2.4.4-A Queuing Guides and Waiting Areas

## 2.4.5. Mobility Device Storage Areas

### Rationale

*Mobility device* storage areas should be provided in all buildings to allow individuals to safely stow away their *mobility device* as needed and also have the opportunity to charge their electric *mobility devices*.

### Application

The scope of this section applies to interior *mobility device* storage spaces. The application to provide exterior *mobility device* storage spaces should be evaluated on a case-by-case basis.



### Related Sections

- 2.1.1. Interior Accessible Paths of Travel
- 3.2.1. Signage and Wayfinding Systems
- 3.3.4. Emergency Power

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of *mobility device* storage areas should consider the use of its facilities and the needs of all individuals. Additional storage spaces should be provided in *high-use areas* where a greater number of individuals will require them. This will ensure that persons using *mobility devices* or who rely on electric power are not waiting for extended periods of time to obtain access.

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to *mobility device* storage areas to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Clear Floor Spaces

*Mobility device* storage areas should provide *clear floor spaces* that allows a variety of *mobility devices* to be stored to enhance the usability.

#### Signage and Wayfinding Systems

*Signage and wayfinding*, should be provided at *mobility device* storage areas. They should be designed to communicate necessary information effectively to all individuals and be easy to understand.

**Electrical Power**

Electrical power should be provided at *mobility device* storage areas to allow individuals to charge their electric *mobility devices*.

**Requirements****(1) Amount:**

*Mobility device* storage areas, Figure 2.4.5-A, should provide:

- (a) A minimum of two per area.

**(2) Accessible Path of Travel:**

*Mobility device* storage areas should provide interior and exterior *accessible paths of travel* that:

- (a) Meet the criteria in section 2.1.1. [Interior Accessible Paths of Travel](#), or 1.1.1. [Exterior Accessible Paths of Travel](#).

**(3) Clear Floor Spaces:**

*Mobility device* storage areas should provide *clear floor spaces* that:

- (a) Are located adjacent to interior and exterior *accessible paths of travel*; and
- (b) Are 900 mm by 1500 mm minimum for front approach, or 900 mm by 2200 mm minimum for side approach.

**(4) Signage and Wayfinding Systems:**

*Mobility device* storage areas should provide *signage* and *wayfinding* systems that:

- (a) Identify the use and designated space; and
- (b) Meets the criteria in section 3.2.1. [Signage and Wayfinding Systems](#).

**(5) Electrical Power:**

*Mobility device* storage areas should provide electrical power that:

- (a) Is between 460 mm to 1050 mm *A.F.F.*; and
- (b) Meets the criteria in section 3.3.4. [Emergency Power](#).

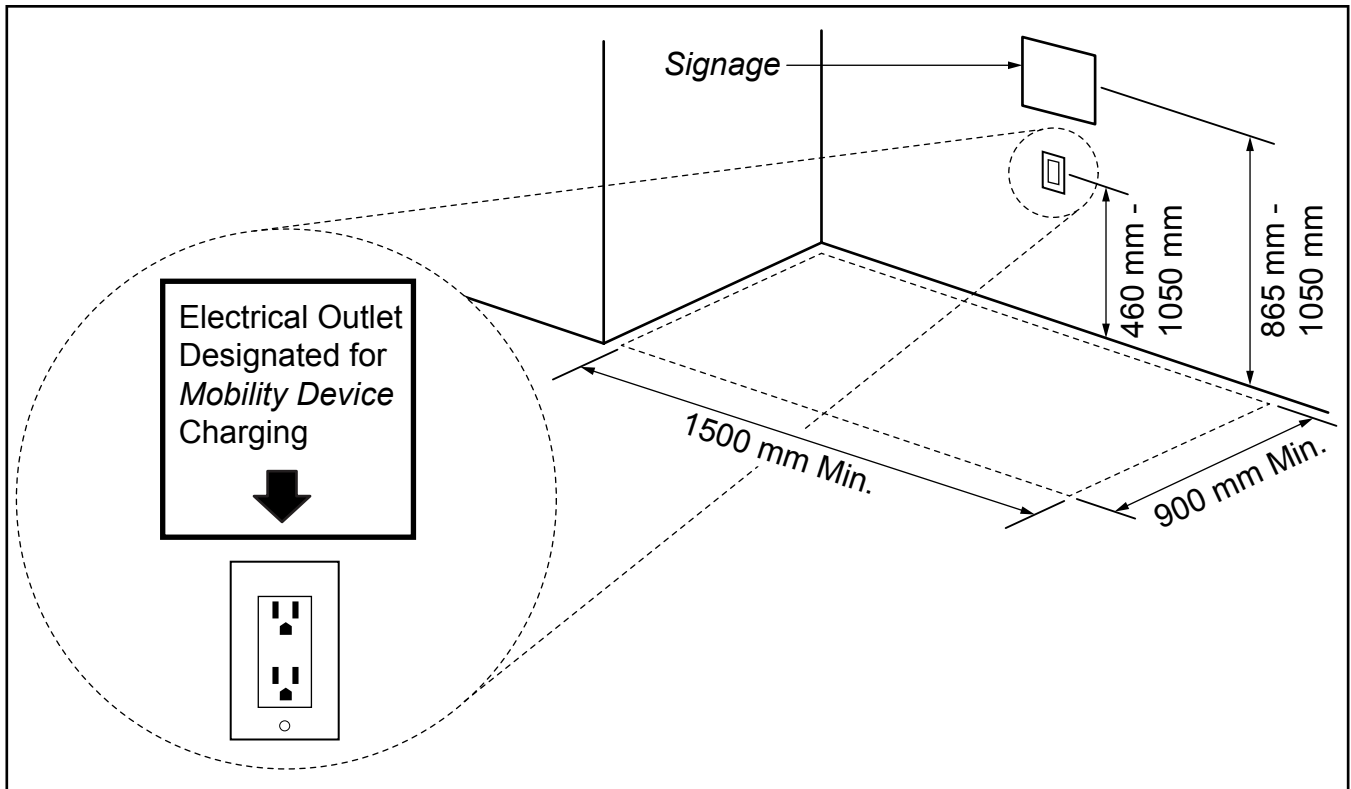


Figure 2.4.5-A Mobility Device Storage Areas

## 2.4.6. Lockers and Baggage Storage Areas

### Rationale

Lockers and baggage storage areas should be designed to have *accessible* space and reach range dimensions, as well as, accessories such as shelves and coat hooks that are usable by all individuals.



### Related Sections

- 1.3.3. Public Transit Areas
- 1.4.5. Public Pools and Spas
- 2.1.1. Interior Accessible Paths of Travel
- 2.3.10. Accessible Change Room Facilities
- 2.4.1. Offices and Work Areas
- 2.5.6. Shelters
- 2.5.7. Child Care Facilities
- 3.3.3. Controls and Operating Mechanisms

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of lockers and baggage storage areas should consider the use of its facilities and the needs of all individuals. Additional lockers should be provided in *high-use areas* where a greater number of individuals will require them.

#### Location

The location of lockers and baggage storage areas should be provided at recreation and specialized areas or facilities.

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to lockers and baggage storage areas to allow for a continuous, unobstructed route providing interior access to elements and spaces.

## Design

The design of lockers and baggage storage areas should provide *accessible* space and reach range dimensions, as well as, accessories such as shelves and coat hooks. Lockers should be provided in a variety of sizes to provide individuals with options to store belongings that may require more space. A combination of half-height and full-height door lockers will ensure that there are enough lockers at different sizes.

Controls and operating mechanisms should be designed to be usable by all individuals and have *accessible operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist. *Signage*, such as *tactile* characters and/or *Braille*, should be provided to help individuals, especially persons with low or no vision, identify locker numbers and/or names.

## Requirements

### (1) Amount:

Lockers and baggage storage areas should provide:

- (a) Minimum 20% *accessible* units of the total amount available, rounding up to the nearest whole number.

### (2) Location:

Lockers and baggage storage areas should be located at:

- (a) Private and public facilities;
- (b) All public social service facilities;
- (c) Public transit areas that meet the criteria in section 1.3.3. [Public Transit Areas](#);

- (d) Recreation and exterior specialized areas such as *public pools* and *public spas* that meet the criteria in section 1.4.5. [Public Pools and Spas](#);
- (e) Accessible change room facilities that meet the criteria in section 2.3.10. [Accessible Change Room Facilities](#);
- (f) Offices and work areas that meet the criteria in section 2.4.1. [Offices and Work Areas](#);
- (g) Shelters that meet the criteria in section 2.5.6. [Shelters](#); and
- (h) Child care facilities that meet the criteria in section 2.5.7. [Child Care Facilities](#).

### (3) Accessible Path of Travel:

Lockers and baggage storage areas should provide interior *accessible paths of travel* that:

- (a) Have a clear width that is 1100 mm minimum;
- (b) Have a clear turning space that is 1500 mm minimum in diameter; and
- (c) Meet the criteria in section 2.1.1. [Interior Accessible Paths of Travel](#).

### (4) Design:

Lockers and baggage storage areas should be designed, [Figure 2.4.6-A](#), to:

- (a) Have a variety of sizes that include:
  - (i) Half-height lockers; and
  - (ii) Full-height lockers;

- (b) Have *clear floor space* that is 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach;
- (c) Include shelves that are mounted between 460 mm to 1050 mm *A.F.F.*;
- (d) Include coat hooks that:
  - (i) Are 500 mm maximum from the front edge of the locker; and
  - (ii) Are installed 900 mm to 1050 mm *A.F.F.*; and
- (e) Have *accessible operable portions or controls* that meet the criteria in section 3.3.3. [Controls and Operating Mechanisms](#);
- (f) Have *colour/brightness contrast* from adjacent surfaces;
- (g) Have *tactile characters and/or Braille* that:
  - (i) Are 13 mm to 19 mm tall, [Figure 2.4.6-B](#);
  - (ii) Have *colour/brightness contrast* from adjacent surfaces;
  - (iii) Are mounted 1050 mm to 1525 mm *A.F.F.*; and
  - (iv) Designate upper and lower tiers of lockers; and
- (h) Include racks (platform surfaces) or carousels for baggage that are 460 mm maximum *A.F.F.*

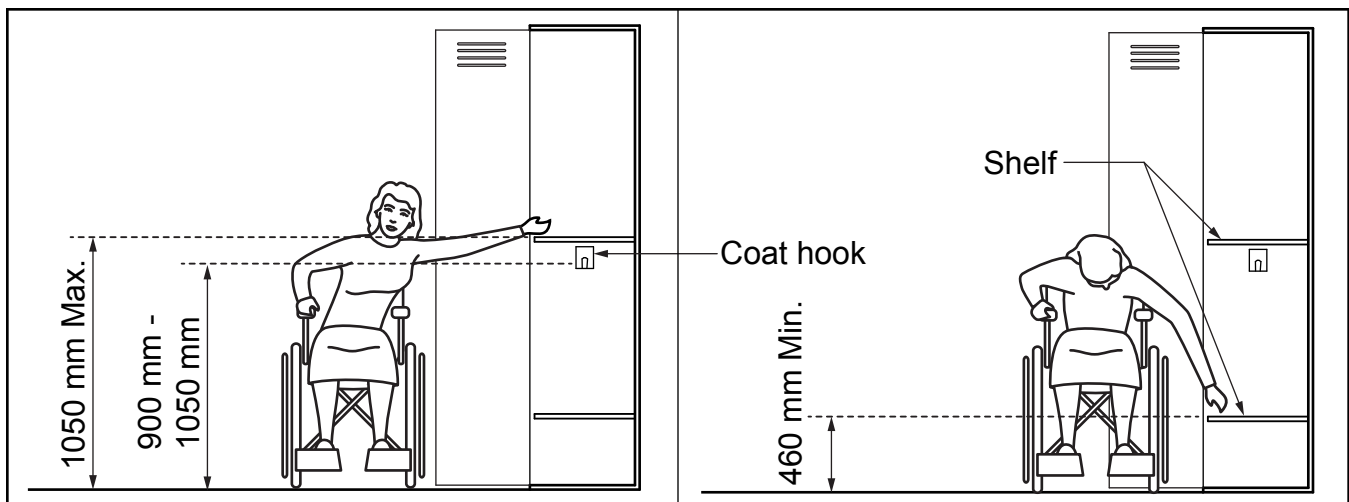


Figure 2.4.6-A Reach Range at Lockers



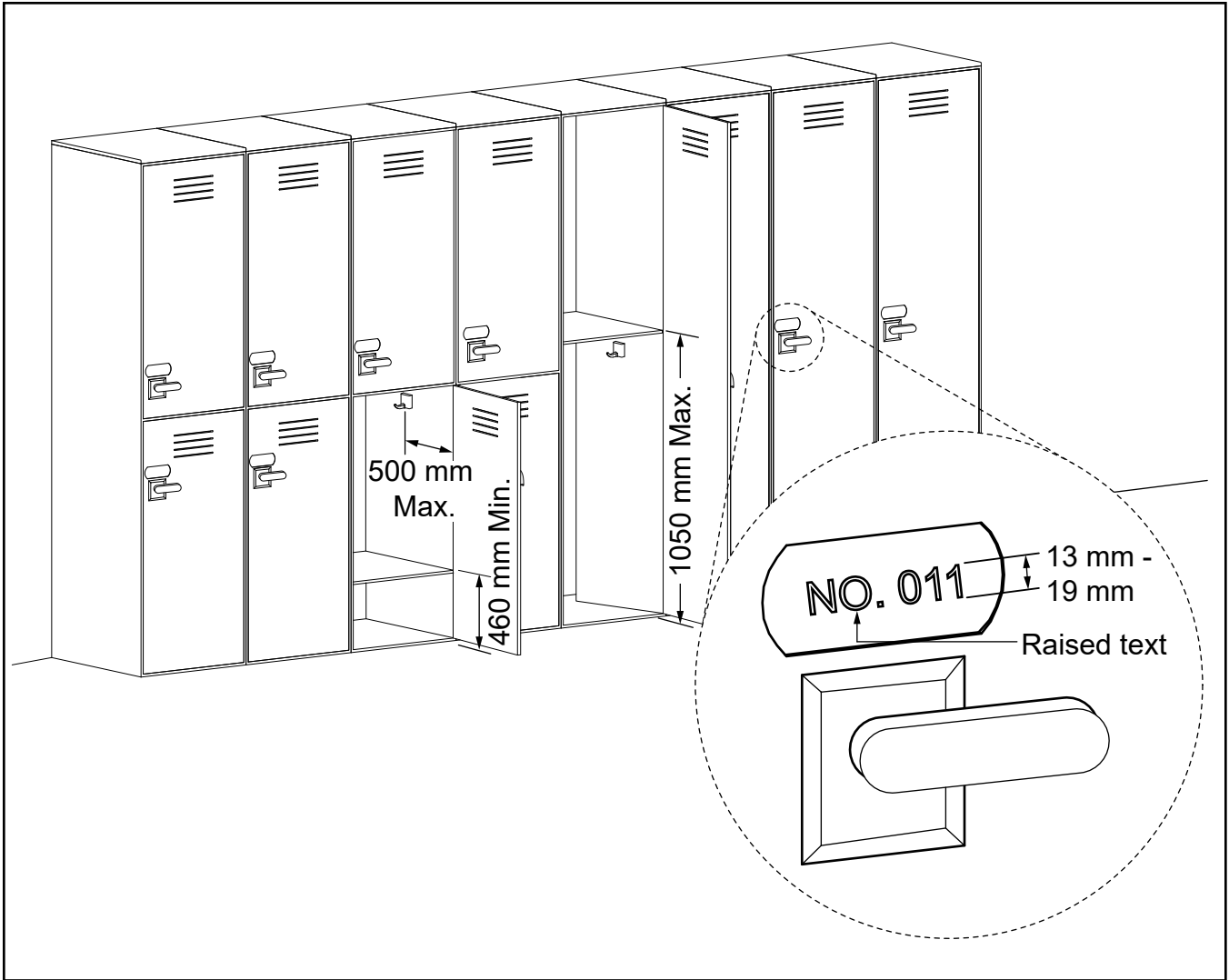


Figure 2.4.6-B Accessible Lockers

## 2.4.7. Stages and Platforms

### Rationale

Stages and platforms provided for presentation or performance purposes, should be designed to be used by all individuals.

### Application

The scope of this section applies to interior and exterior stages and platforms.



### Related Sections

- 1.6.2. Tactile Attention Indicators
- 2.1.1. Interior Accessible Paths of Travel
- 2.1.3. Interior Ramps

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to stages and platforms to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Surfaces

Floor surfaces should be provided at stages and platforms that are level to reduce the risk of tripping hazards. *Tactile attention indicators (TAI)* should be provided at the edge of stages and platforms to communicate the transition between an interior *accessible path of travel* and a drop-off. *TAI's* help to prevent individuals, including persons with low or no vision using a *white cane*, from walking over the edge of stages and platforms.

#### Interior Ramps

Where permanent or temporary interior *ramps* are provided at stages and platforms, they should have *slopes* that have a *gradual transition* to allow for better control and ease of movement for persons using *mobility devices*.

#### Furniture, Fixtures and Equipment

Where furniture, fixtures and equipment, such as podiums, lecterns and dias, are provided at stages and platforms, they should be flexible, *accessible*, adaptable and usable by all individuals.

## Requirements

### (1) Accessible Path of Travel:

Stages and platforms should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section 2.1.1. [Interior Accessible Paths of Travel](#).

### (2) Surfaces:

Stages and platforms should provide floor surfaces that:

- (a) Are level, firm, stable, and slip-resistant; and
- (b) Have *tactile attention indicators* that meet the criteria in section 1.6.2. [Tactile Attention Indicators](#).

### (3) Interior Ramps:

Stages and platforms should provide interior *ramps* that:

- (a) Are permanent, or temporary; and
- (b) Meet the criteria in section 2.1.3. [Interior Ramps](#).

### (4) Furniture, Fixtures and Equipment:

Stages and platforms should provide furniture, fixtures and equipment that:

- (a) Are flexible, *accessible*, and adaptable; and
- (b) Include podiums, lecterns or dias that are height adjustable.

## 2.4.8. Kitchens and Kitchenettes

### Rationale

Kitchens and kitchenettes for public and staff should be designed to be usable by all individuals. They are commonly found in recreation facilities or offices and work areas as common *amenity* space. In some instances they are coupled with a small or large eating area with seating and tables. Elements such as millwork, work surfaces, sinks and appliances should be *accessible*, adaptable and provide *accessible* space and reach range dimensions.



### Related Sections

- 2.1.1. Interior Accessible Paths of Travel
- 2.3.6. Lavatories
- 3.1.1. Interior Lighting
- 3.3.3. Controls and Operating Mechanisms
- 3.3.4. Emergency Power

### Related References

- [City of Toronto Workplace Design Standards](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to kitchens and kitchenettes to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Design

The design of kitchens and kitchenettes should allow individuals, especially persons using *mobility devices*, to maneuver around millwork, work surfaces, sinks and appliances with ease. Open concept style rooms and areas are preferred as they remove the need to make turns, provide easier access to all kitchen elements, and improve the overall lighting quality.

#### Millwork

Millwork should be provided within kitchens and kitchenettes that are *accessible*, adaptable and provides *accessible* space and reach range dimensions. Cabinets, pantries, shelves, waste receptacles and recycle bins should be designed to enhance usability and access. Work surfaces, such as counter-tops, should be height adjustable to be usable by all individuals.

## Sinks

Sinks should be provided within kitchens and kitchenettes to allow all individuals, including persons using *mobility devices*, to have knee and toe space, to reach controls and accessories, such as soap and paper towel dispensers. Sinks should have faucets that have *accessible operable portions or controls* that can be used with a closed fist and that do not require tight grasping, pinching or twisting of the wrist.

## Appliances

Appliances should be provided within kitchens and kitchenettes. Where fixed and non-fixed appliances such as refrigeration, freezing, cooking, cleaning, waste disposal appliances are provided, they should be usable by all individuals. Ranges and cook-tops should have controls and operating mechanisms that are installed at the front edge to reduce the risk burns from reaching over hot burners. The type of range or cook-top used, such as induction, electric smooth top, or electric coil, should be evaluated and meet the needs of the intended individuals. Side hinging doors should be provided to allow persons using *mobility devices* to easily reach into appliances, such as ovens.

## Lighting

Lighting should be provided within kitchens and kitchenettes. Where adjustable ambient, task and/or accent lighting types are provided, they should minimize *glare* and brightness on all surfaces. Lighting should allow all individuals to navigate the space safely, but consideration should be made for individuals who may be sensitive to *glare*. Direct or in-direct lighting sources should utilize diffused lenses or filters, and be adjustable to meet the needs of all individuals, as well as, the function of the space.

## Signals and Controls

Signals and controls, such as electrical power, should be provided at kitchens and kitchenettes to operate fixed and non-fixed appliances. Electrical power should be located as appropriate to the function of the space, as well as, the number of non-fixed appliances expected to be used. Controls and operating mechanisms, such as millwork hardware and appliance controls, should have *accessible operable portions or controls* that can be used with a closed fist, and that do not require tight grasping, pinching or twisting of the wrist.

## Requirements

### (1) Accessible Path of Travel:

Kitchens and kitchenettes should provide interior *accessible paths of travel* that:

- (a) Have a clear turning space, [R-2.4.8. (1)(a)], that:
  - (i) Is 2135 mm minimum in diameter at residential facilities; and
  - (ii) Is 2500 mm minimum in diameter at all other locations; and
- (b) Meet the criteria in section 2.1.1. *Interior Accessible Paths of Travel*.

### (2) Design:

Kitchens and kitchenettes should be designed to:

- (a) Be open concept style, [Figure 2.4.8-A](#);
- (b) Be galley style, [Figure 2.4.8-B](#);
- (c) Be U-shaped style, [Figure 2.4.8-C](#); or
- (d) Be island style.

**(3) Millwork:**

Kitchens and kitchenettes should provide millwork that:

- (a) Is minimum 50% *accessible* of the total number of lowers provided, rounding up to the nearest whole number;
- (b) Is installed between 460 mm to 1050 mm *A.F.F.*;
- (c) Include cabinets and/or pantries, [Figure 2.4.8-D](#), that:
  - (i) Have doors that hinge open to 180°; and
  - (ii) Have D-type handles that have smooth/rounded edges;
- (d) Include shelves that:
  - (i) Are hydraulic;
  - (ii) Pull-out from cabinets or pantries; and
  - (iii) Are height adjustable;
- (e) Include waste receptacles and recycle bins that pull-out from cabinets or pantries; and
- (f) Have *colour/brightness contrast* between adjacent surfaces.

**(4) Sinks:**

Kitchens and kitchenettes should provide sinks, [Figure 2.4.8-E](#), that:

- (a) Are mounted 860 mm maximum *A.F.F.*;
- (b) Are located so that the distance between the centre line of the sink and the side wall is 460 mm minimum;
- (c) Have insulated or protected pipes;
- (d) Have smooth and non-abrasive surfaces;

- (e) Have *clear floor space* that is 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach;
- (f) Have knee and toe space that meets the criteria in section [2.3.6. Lavatories](#);
- (g) Have a faucet that:
  - (i) Is side mounted, or within 485 mm maximum from the front of the sink;
  - (ii) Has lever-type hardware;
  - (iii) Can project the water stream to the centre of the sink;
  - (iv) Is consistently mounted throughout all kitchens and kitchenettes within a building; and
  - (v) Has a retractable hose.

**(5) Appliances:**

Kitchens and kitchenettes should provide appliances that:

- (a) Are fixed and/or non-fixed;
- (b) Have a *clear floor space* that:
  - (i) Is 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach; and
  - (ii) Is located 600 mm away from the face of the fridge door;
- (c) Include refrigeration and freezing appliances that:
  - (i) Have double, side hinging doors, where the hinges are located on the exterior edges;
  - (ii) Have *tactile* characters to communicate how to operate the appliance;

- (iii) Are configured so that minimum 50%, rounding up to the nearest whole number, of the shelves are installed 1050 mm maximum *A.F.F.*;
  - (iv) Have LCD screens, where required, that have audible and visual signals to operate the appliance; and
  - (v) Have a *clear floor space* for a side approach immediately adjacent to the unit, with its centreline 600 mm away from the front face of the unit;
- (d) Include cooking appliances such as ovens or microwave ovens that:
- (i) Have a single, side hinging door, [Figure 2.4.8-F](#);
  - (ii) Have *tactile* characters to communicate how to operate the appliance;
  - (iii) Have controls and operating mechanisms installed 1050 mm maximum *A.F.F.* that are operable using a closed fist; and
  - (iv) Have work surfaces that are adjacent to the latch side clear space of the appliance door; and
  - (v) Have a pull-out shelf below the bottom edge of the door;
- (e) Include cooking appliances such as ranges or cook-tops that:
- (i) Have *tactile* characters to communicate how to operate the appliance;
  - (ii) Have knee and toe space for a front approach that is 735 mm minimum high *A.F.F.* at the front edge, 500 mm minimum deep, and 900 mm minimum wide;
  - (iii) Have controls and operating mechanisms installed at the front edge to reduce the risk burns from reaching over hot burners;
  - (iv) Have heat resistant work surfaces that are 400 mm minimum wide on each side; and
  - (v) Have an angled mirror to view the top of the stove; and
- (f) Include cleaning appliances such as dishwashers or laundry.
- (6) Lighting:**
- Kitchens and kitchenettes should provide lighting that:
- (a) Is adjustable;
  - (b) Is task and ambient;
  - (c) Is located above:
    - (i) Work surfaces;
    - (ii) Sinks; and
    - (iii) Cooking appliances; and
  - (d) Meets the criteria in section [3.1.1. Interior Lighting](#).
- (7) Signals and Controls:**
- Kitchens and kitchenettes should provide signals and controls that:
- (a) Include electrical power that:
    - (i) Has duplex receptacles, [Figure 2.4.8-G](#);
    - (ii) Are arranged horizontally;
    - (iii) Are installed 1050 mm maximum *A.F.F.*;
    - (iv) Where work surfaces are deeper than 500 mm, be located at the front edge, or on a side wall within a 500 mm maximum reach range;

- (v) Are located so that any attached cords do not risk a tripping hazard; and
- (vi) Meets the criteria in section 3.3.4. [Emergency Power](#);
- (b) Include millwork and appliances that have *operable portions or controls* that meet the criteria in section 3.3.3. [Controls and Operating Mechanisms](#);
- (c) Include ventilation; and
- (d) Include smoke detectors.

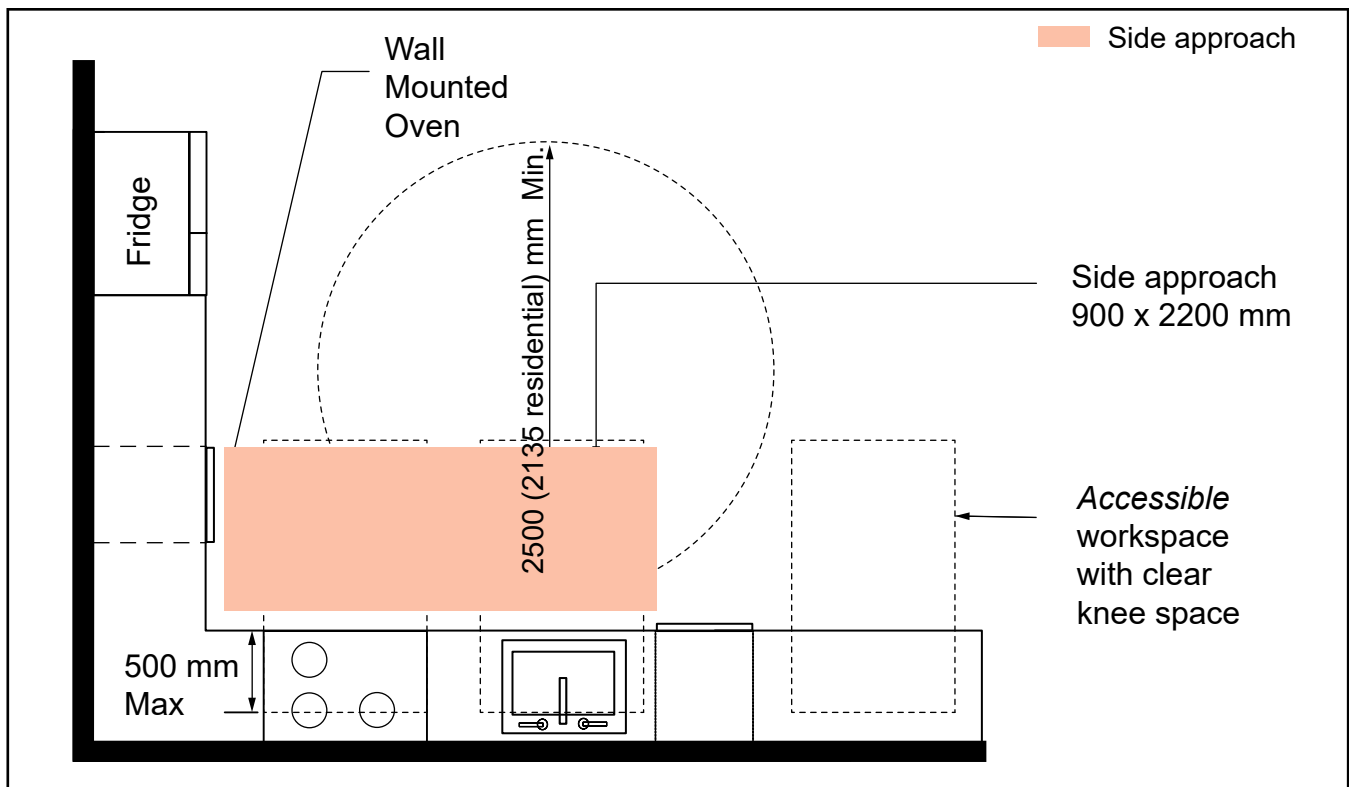


Figure 2.4.8-A Open Concept Kitchen



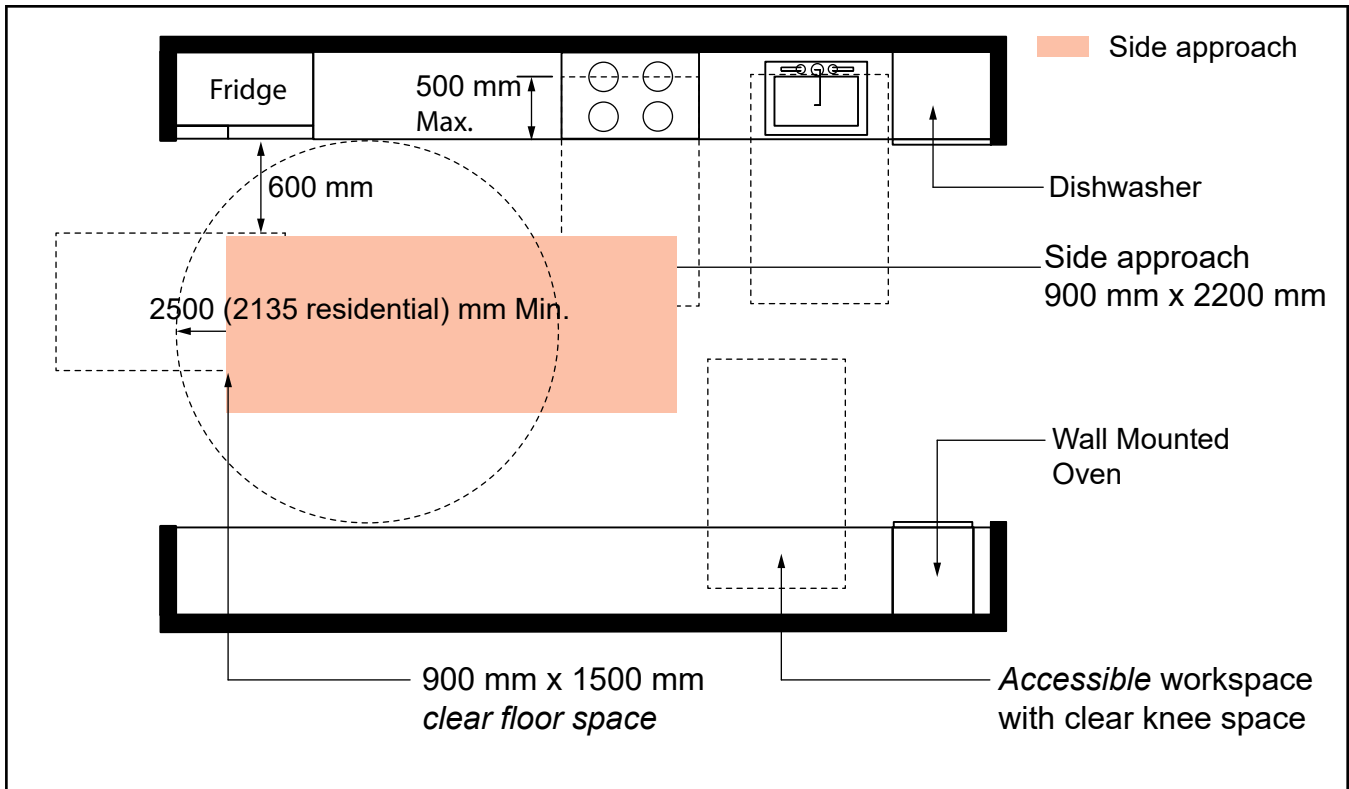


Figure 2.4.8-B Galley Style Kitchen

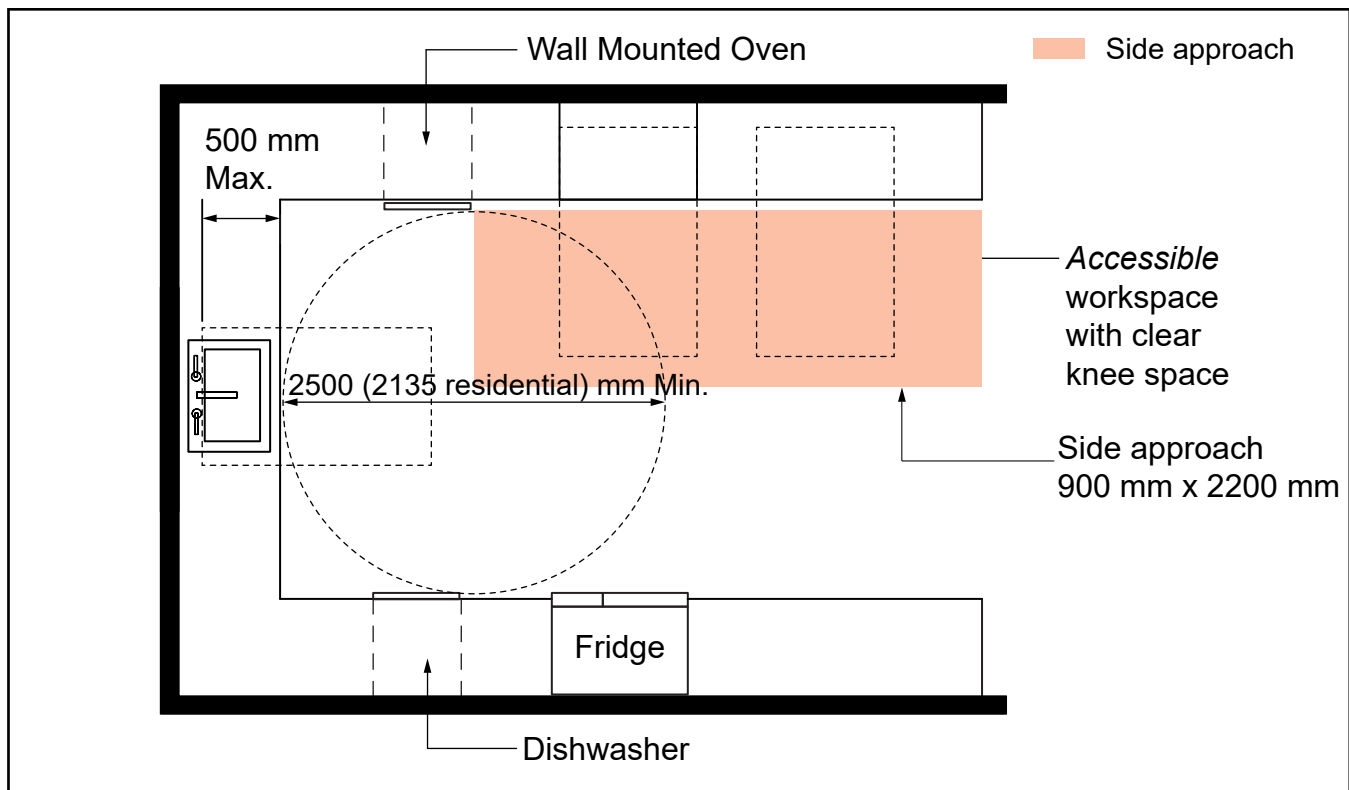


Figure 2.4.8-C U-Shaped Kitchen

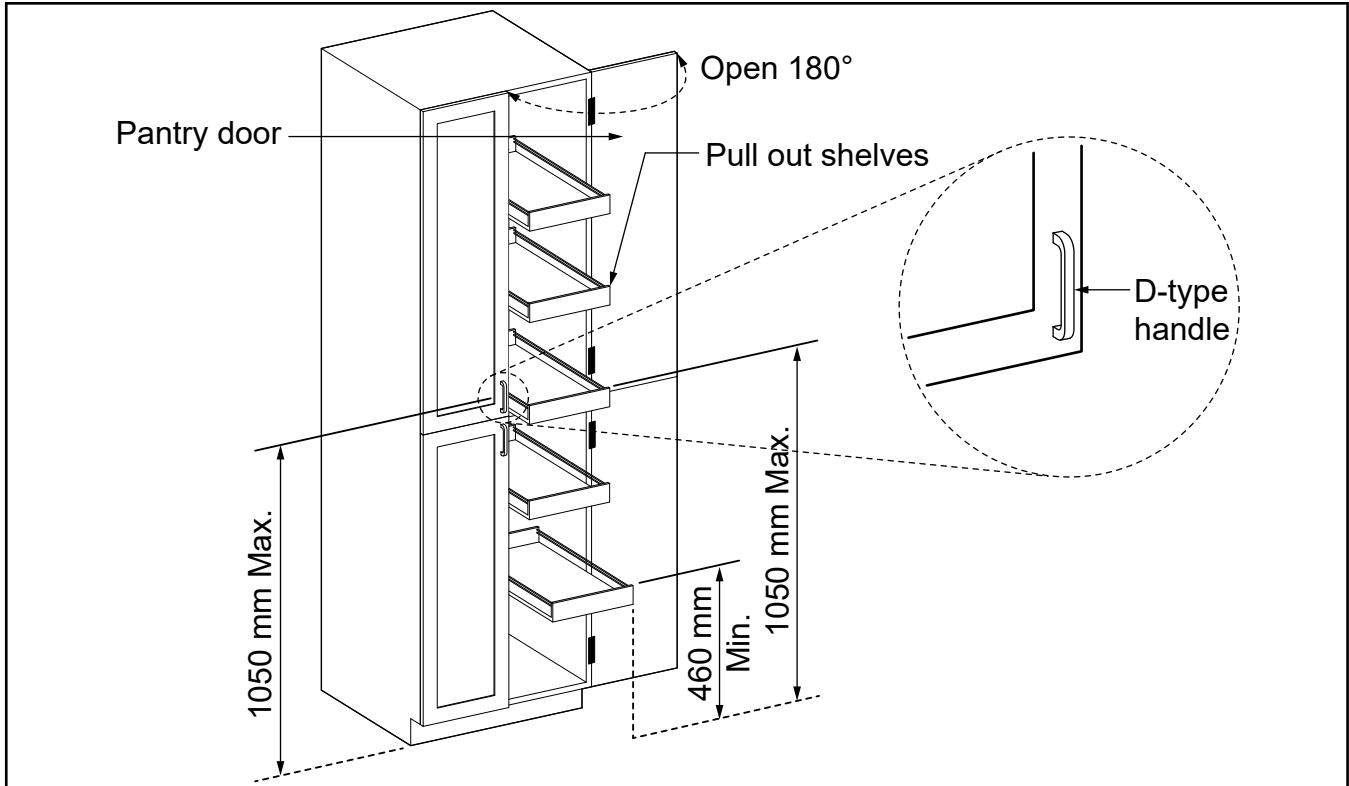


Figure 2.4.8-D Kitchen Cabinets

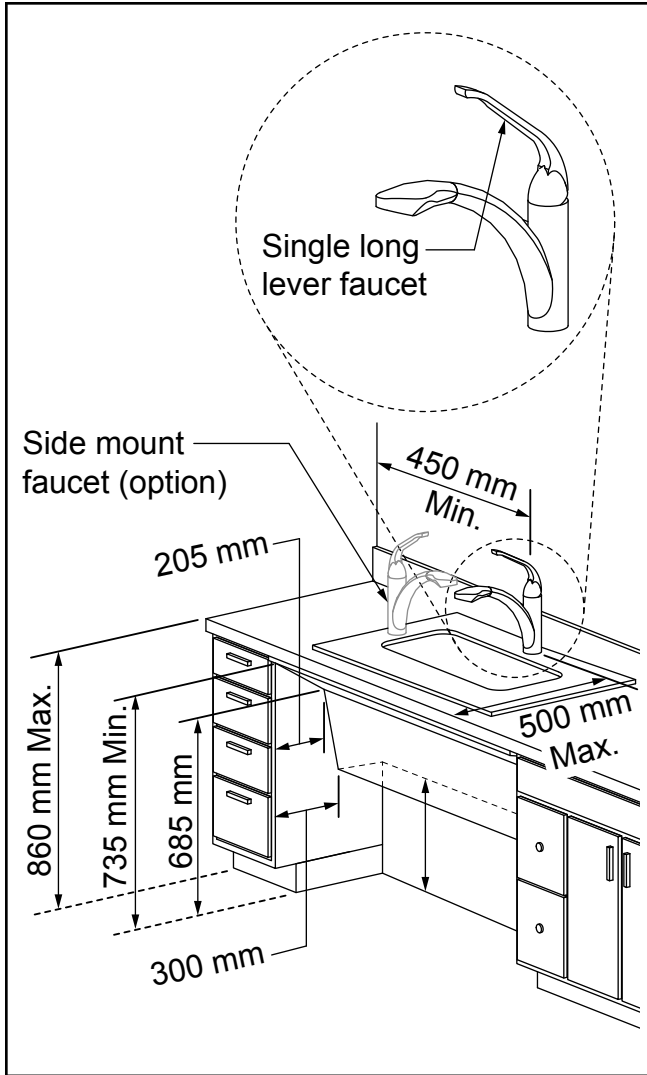


Figure 2.4.8-E Sinks

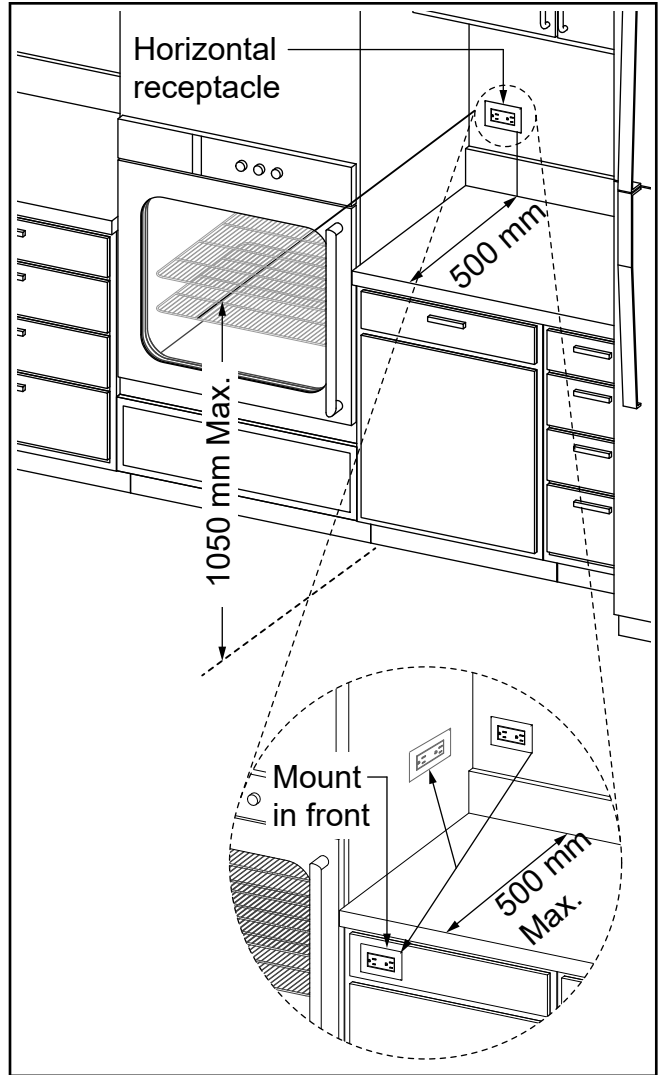


Figure 2.4.8-G Duplex Receptacle Mounting

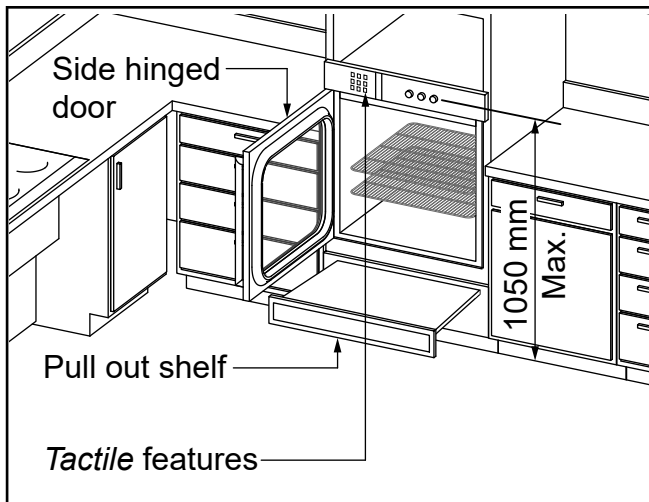


Figure 2.4.8-F Side Hinged Oven

## 2.4.9. Eating and Dining Areas

### Rationale

Eating and dining areas should be usable by all individuals. They should provide space and clearances to allow for the maneuverability of persons using *mobility devices*.

### Rationale

The scope of this section applies to interior and exterior eating or dining areas such as cafeterias, restaurants, cafes and bars.



### Related Sections

- 2.1.1. Interior Accessible Paths of Travel
- 2.6.3. Furniture and Equipment
- 2.7.1. Floor Surfaces

### Related References

- [City of Toronto Workplace Design Standards](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to eating and dining areas to allow for a continuous, unobstructed route providing interior access to elements (non-fixed or fixed) and spaces.

#### Furniture, Fixtures and Equipment

Furniture, fixtures and equipment should be provided within eating and dining areas that are flexible and *accessible*. Additional *accessible* seats and tables should be provided in *high-use areas* where a greater number of individuals will require them. Where non-fixed or fixed furniture are provided such as seats, tables, and self-service stations, they should have *accessible* space and reach range dimensions. Where bar height tables are provided, an equitable number of tables intended for seated use should be provided.

#### Materials and Finishes

Materials and finishes should be provided within eating and dining areas to identify primary and secondary interior *accessible paths of travel*, as well as, areas intended for staff only.

## Requirements

### (1) Accessible Path of Travel:

Eating and dining areas should provide interior *accessible paths of travel* that:

- (a) Have a clear width, [Figure 2.4.9-A](#) and [Figure 2.4.9-B](#), that is 1100 mm minimum; and
- (b) Meet the criteria in section 2.1.1. [Interior Accessible Paths of Travel](#).

### (2) Furniture, Fixtures and Equipment:

Eating and dining areas should provide furniture, fixtures and equipment that:

- (a) Include seats that:
  - (i) Have minimum 5% *adaptable seating* of the total number of seating capacity available, rounding up to the nearest whole number, but no less than one; and
  - (ii) Have minimum 10% *clear floor space* of the total number of seating capacity available, rounding up to the nearest whole number, but no less than one, that are 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach;
- (b) Include tables that have knee and toe space for a front approach that is 735 mm minimum high *A.F.F.* at the front edge, 500 mm minimum deep, and 900 mm minimum wide;
- (c) Include self-service stations, [Figure 2.4.9-C](#), such as buffets, beverage stations, vending machines, that:
  - (i) Have at least one *accessible* portion per station;

- (ii) Have surfaces that are 860 mm maximum *A.F.F.* for displays, cutlery, condiments, napkins, or tray rails;
  - (iii) Have shelves that are between 460 mm to 1050 mm *A.F.F.*;
  - (iv) Have a reach range that is 500 mm maximum; and
  - (v) Have *operable portions or controls*; and
- (d) Meet the criteria in section 2.6.3. [Furniture and Equipment](#).

### (3) Materials and Finishes:

Eating and dining areas should provide materials and finishes that:

- (a) Identify:
  - (i) Primary and secondary interior *accessible paths of travel*; and
  - (ii) Areas intended for staff only; and
- (b) Meet the criteria in section 2.7.1. [Floor Surfaces](#).

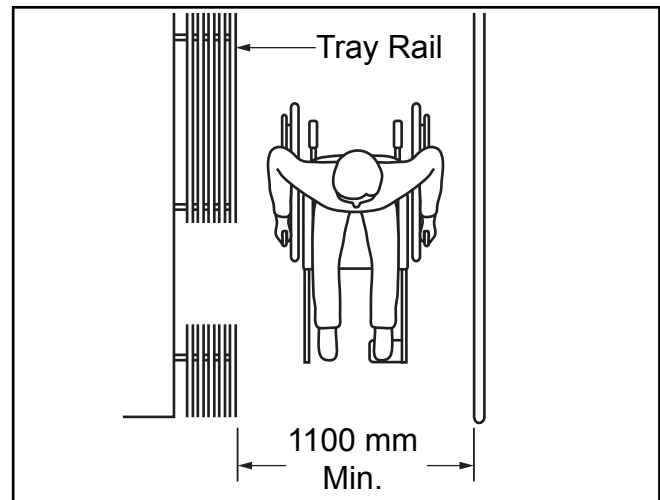


Figure 2.4.9-A Clear Width

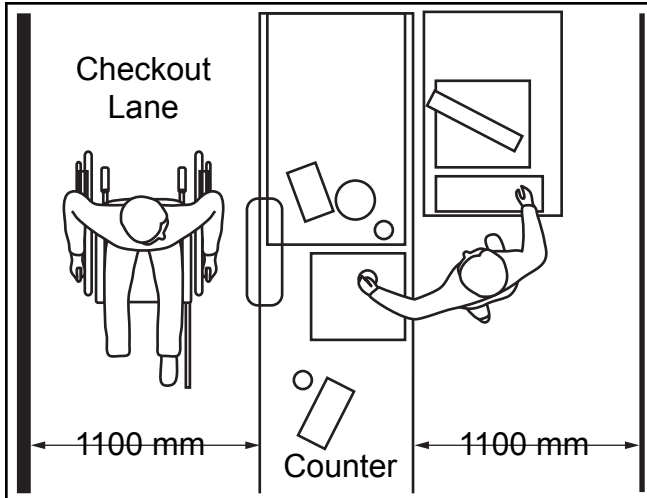


Figure 2.4.9-B Clear Width

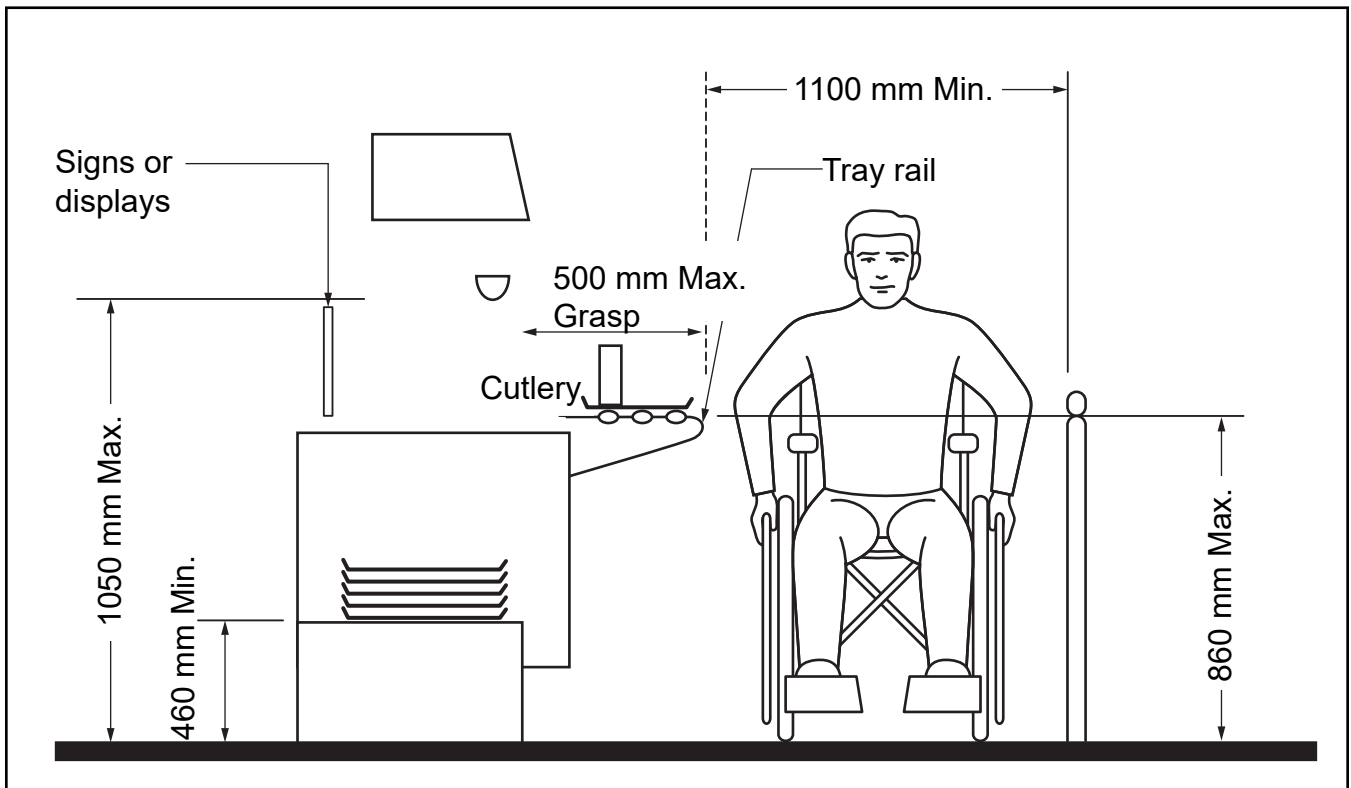


Figure 2.4.9-C Self-Serve Stations

## 2.4.10. Areas of Rescue Assistance

### Rationale

*Areas of rescue assistance*, also known as protect in place or temporary/emergency waiting areas, are spaces where persons can safely wait for rescue assistance during an evacuation. The space is indicated on the Fire Safety Plan, has a fire-rated enclosure, has direct access to an exit, and has two-way communication equipment. They should be able to accommodate and hold space for a number of persons using *mobility devices*. Fire safety plans should indicate in detail the evacuation plan and any locations of *areas of rescue assistance*. This section exceeds the minimum requirements for areas of refuge as per the Ontario Building Code. *Areas of rescue assistance* should be provided where the building is sprinklered.



### Related Sections

- 2.1.1. Interior Accessible Paths of Travel
- 3.2.1. Signage and Wayfinding Systems
- 3.2.2. Two-Way Communication Systems
- 3.3.4. Emergency Power
- 3.3.6. Fire and Life Safety

### Related References

- [Reserved]

### Key Considerations

#### Amount

The amount of *areas of rescue assistance* provided should be at every floor level above or below the first storey of a building to ensure that the highest number of persons with disabilities will receive rescue assistance during an evacuation.

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to *areas of rescue assistance* to allow for a continuous, unobstructed route and providing interior access to elements and spaces, such as direct access to an exit and evacuation area to wait for assistance from firefighters.

#### Clear Floor Spaces

*Clear floor spaces* should be provided at *areas of rescue assistance* to create unobstructed, level floor areas that are sized to provide the space for persons using *mobility devices*. The size of the *clear floor space* should be adjusted depending on the intended approach (front, side). They should be clear of the interior *accessible path of travel* so that they do not obstruct other persons trying to exit a building.

**Design**

The design of *areas of rescue assistance* should include interior lighting, a separate ventilation system, be connected to an emergency power system, have a two-way communication system, and *signage* and *wayfinding* strategy. They should have a fire separation and a fire protection rating from the floor area to ensure that a person can safely wait until assistance arrives.

**Requirements****(1) Amount:**

*Areas of rescue assistance* should provide:

- (a) A minimum of one per floor area:
  - (i) At every floor level above, or below the first story of a building; and
  - (ii) Where the building has two exits; and
- (b) A minimum of two per floor area:
  - (i) At every floor level above, or below the first story of a building;
  - (ii) Located at opposite ends of a floor area; and
  - (iii) Where the building has three or more exits.

**(2) Accessible Path of Travel:**

*Areas of rescue assistance* should provide an interior *accessible path of travel* that:

- (a) Is connected to a firefighters elevator; and
- (b) Meets the criteria in section 2.1.1. [Interior Accessible Paths of Travel](#).

**(3) Clear Floor Spaces:**

*Each areas of refuge or rescue assistance* should provide *clear floor spaces*, [Figure 2.4.10-A](#), that:

- (a) Have a minimum of two spaces;
- (b) Are 900 mm by 1500 mm for front approach, or 900 mm by 2200 mm for side approach.

**(4) Design:**

*Areas of rescue assistance* should be designed, [Figure 2.4.10-B](#), to:

- (a) Have emergency lighting that meets the criteria in section 3.3.4. [Emergency Power](#);
- (b) Have two-way communication systems that:
  - (i) Have emergency power that meets [3.3.4. Emergency Power](#); and
  - (ii) Meets the criteria in section 3.2.2. [Two-Way Communication Systems](#);
- (c) Have *signage* and *wayfinding* strategy that:
  - (i) Direct persons to the designated evacuation area;
  - (ii) Identify the designated evacuation area and contain the words *Areas of Rescue Assistance*; and
  - (iii) Meets the criteria in section 3.2.1. [Signage and Wayfinding Systems](#);
- (d) Be separated from the building floor area by a fire separation with a fire-resistance rating at least equal to that required for an exit;
- (e) Be smoke-protected;
- (f) Be served directly by an exit or by a firefighters elevator;



- (g) Be a part of the evacuation plan meet the criteria in section 3.3.6. *Fire and Life Safety*; and
- (h) Be accompanied with fire emergency, and rescue operational plans of the building and organization.

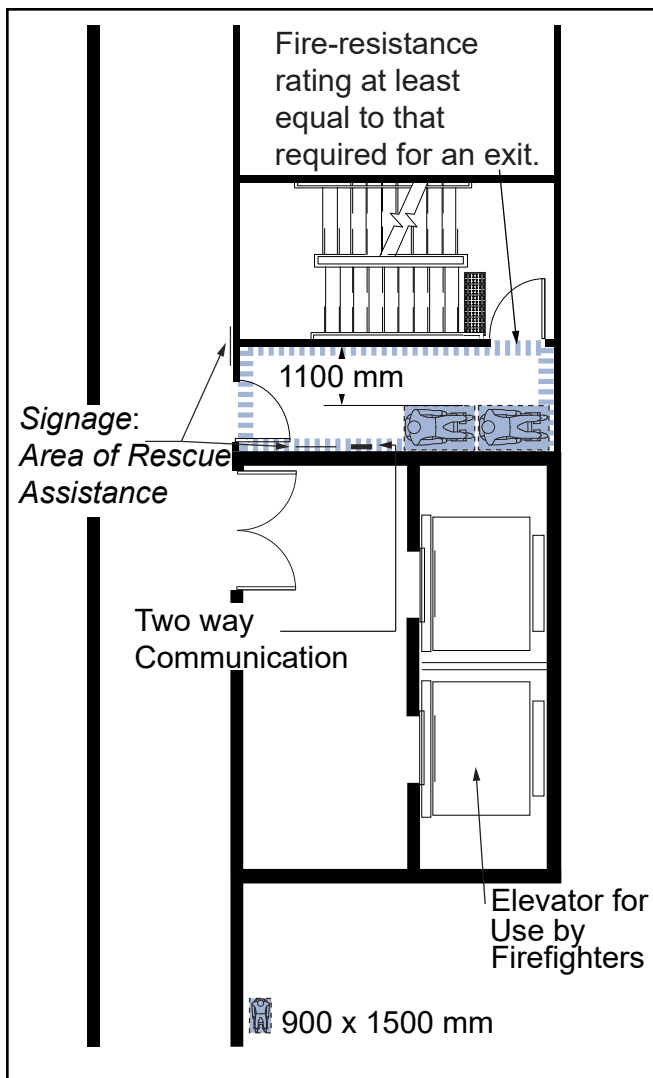


Figure 2.4.10-A Exit Stair

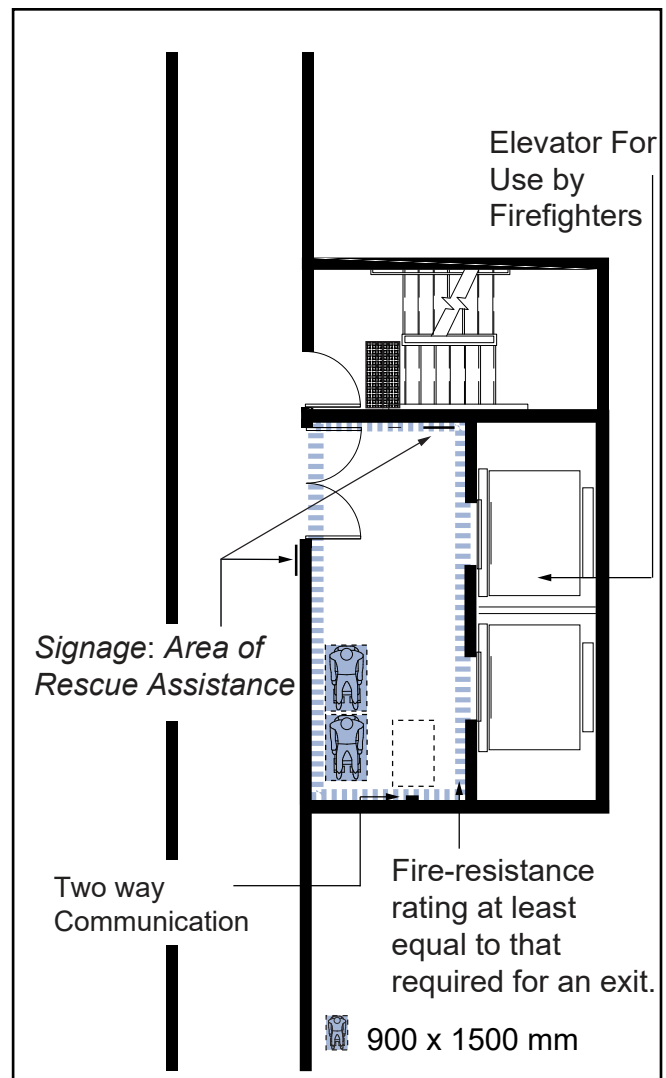


Figure 2.4.10-B Elevator Lobby



# 2.5. Interior Specialized Facilities

## Section Summary

This section reviews the *accessible* design requirements for interior specialized facilities intended for use by the public and City staff. An interior *accessible path of travel* should be provided into and throughout interior specialized facilities, including recreation and service facilities, to ensure that all individuals can safely navigate throughout.

## Contents in Section

- 2.5.1. Arenas and Recreation Facilities**
- 2.5.2. Library and Reference Facilities**
- 2.5.3. Exhibition, Museum and Gallery Facilities**
- 2.5.4. Residential Facilities**
- 2.5.5. Long-Term Care Homes**
- 2.5.6. Seniors Housing**
- 2.5.7. Shelters**
- 2.5.8. Child Care Facilities**
- 2.5.9. Emergency Service Facilities**
- 2.5.10. Service Yard Facilities**
- 2.5.11. Temporary Use Facilities**
- 2.5.12. Courtroom Facilities**

## 2.5.1. Arenas and Recreation Facilities

### Rationale

Arenas and recreation facilities, such as specialized areas for fitness, sport and wellness should be designed to be usable by all individuals. Where ice rinks, gymnasiums, exercise studios and weight rooms are provided they should be designed to allow individuals to participate in a range of activities.



### Related Sections

- 1.4.2. Spectator Areas
- 1.4.5. Public Pools and Spas
- "2.1.1. Interior Accessible Paths of Travel"

### Related References

- [Accessible Recreation](#)
- [Toronto Green Standard](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to arenas and recreation facilities to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Interior Public Pools and Spas

Interior *public pools* and *public spas* should have recreational and therapeutic aquatic experiences for all individuals. *Ramps* and *pool lifts* continue an *accessible path of travel* at *public pools*. Where as, *transfer walls* provide *accessible* entry into and exit from *public spas*.

#### Ice Rinks

Ice rinks should be multi-purposed. They should allow all individuals to participate in recreational and competitive fitness and sport such as skating, hockey, sledge hockey, shinny hockey, curling, etc. Ice rinks should provide *accessible* control gates to allow for *accessible entrance* and exit onto the ice surface. All individuals should have access to equipment that is *accessible*, flexible and adaptable.

### Gymnasiums

Gymnasiums should be multi-purposed. They should allow all individuals to participate in recreational and competitive fitness and sport such as running, basketball, volleyball, soccer, gymnastics, squash, etc. All individuals should have access to equipment that is *accessible*, flexible and adaptable.

### Spectator Areas

Spectator areas have a designated space for the public to sit and view events, such as sports games, performances, etc. Benches and seats should be provided for spectators, athletes and performers, including persons with disabilities.

### Exercise Studios and Weight Rooms

Exercise studios and weight rooms should have access to equipment and machines that are *accessible*, flexible and adaptable.

## Requirements

### (1) Accessible Path of Travel:

Arenas and recreational facilities should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section "2.1.1. Interior Accessible Paths of Travel".

### (2) Interior Public Pools and Spas:

Arenas and recreational facilities should provide interior *public pools* and *public spas* that:

- (a) Meet the criteria in section 1.4.5. *Public Pools and Spas*.

### (3) Ice Rinks:

Arenas and recreational facilities should provide ice rinks that:

- (a) Have equipment that is *accessible*, flexible and adaptable;
- (b) Have at least one access point, in addition to the ice resurfacers (zamboni machines) access point, leading to the ice surface that:
  - (i) Has a clear width that is 2100 mm minimum, where a single, overhead gate is used;
  - (ii) Has a clear width that is 3600 mm minimum where a single, swing gate is used; and
  - (iii) Can also be accessed by ice resurfacers (zamboni machines); and
- (c) Have an automated external defibrillator (AED).

### (4) Gymnasiums:

Arenas and recreational facilities should provide gymnasiums that:

- (a) Have equipment that is *accessible*, flexible and adaptable; and
- (b) Have an automated external defibrillator (AED).

### (5) Spectator Areas:

Arenas and recreational facilities should provide spectator areas that:

- (a) Meet the criteria in section 1.4.2. *Spectator Areas*.

**(6) Exercise Studios and Weight Rooms:**

Arenas and recreational facilities should provide exercise studios and weight rooms that:

- (a) Have equipment and machines that:
  - (i) Are *accessible*, flexible and adaptable to allow persons with a range of abilities to use them;
  - (ii) Have *tactile* characters, including free-weights;
  - (iii) Have *colour/brightness contrast* from adjacent surfaces and between *operable portions and controls*; and
  - (iv) Have high visibility and clear sight lines between individuals using equipment and machines and the facility staff and service counter, where provided;
- (b) Where electronic equipment and machines are provided, they should:
  - (i) Have a visual display;
  - (ii) Audible descriptions of the visual display; and
  - (iii) Be designed to plug headphones or earbuds into;
- (c) Have emergency call systems to signal immediate assistance with equipment and machines;
- (d) Have a map of the equipment and machine plan that has *tactile* characters; and
- (e) Have an automated external defibrillator (AED) located in an *accessible* area.

## 2.5.2. Library and Reference Facilities

### Rationale

The design of library facilities and their accessibility requirements falls within the jurisdiction of the Toronto Library Board. Library and reference facilities can be located within community or civic centres. Service counters, book stacks, teaching, learning and study spaces, digital services, such as computers, printing and photocopying, digital innovation hubs, etc. should be usable by all individuals, especially persons using *mobility devices*. Communication and information systems should be provided to enhance the usability for persons with low or no vision, and persons who are deaf, deafened or hard of hearing. Library and reference material should be available in a variety of *accessible* formats.

### Application

The scope of this section applies to libraries and reference facilities within City facilities, such as museums or archival buildings.



### Related Sections

- "2.1.1. Interior Accessible Paths of Travel"
- 2.4.1. Offices and Work Areas
- 2.4.3. Service Counters
- 2.4.4. Queuing Guides and Waiting Areas
- "2.6.3. Furniture and Equipment"
- "3.1.1. Interior Lighting"
- "3.2.1. Signage and Wayfinding Systems"
- "3.3.1. Acoustics"

### Related References

- [Toronto Green Standard](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)
- [Toronto Public Library, Accessibility](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to library and reference facilities to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Interior Rooms and Areas

Interior rooms and areas should be provided within library and reference facilities that are designed to be flexible, *accessible* and adaptable to meet the needs of a wide range of individuals and group sizes.

#### Furniture, Fixtures and Equipment

Furniture, fixtures and equipment should be provided within library and reference facilities that are flexible, adaptable, ergonomic, and usable by all individuals.

Depending on the use of an area, workstations, lounge spaces and *amenities* should be provided throughout library and reference facilities that meet the needs of all individuals. Equipment and assistive technologies such as screen readers, braille writer, assistive listening devices or magnifying equipment should be provided to increase the usability of the library for persons who are blind or have low vision, or who are deaf, deafened or hard of hearing.

### Lighting

Lighting should be provided within library and reference facilities that minimize *glare* and brightness on all surfaces. Lighting should allow all individuals to navigate the space safely, but consideration should be made for individuals who may be sensitive to *glare*. Direct or in-direct lighting sources should utilize diffused lenses or filters and be adjustable to meet the needs of all individuals, as well as, the function of the facility.

### Signage and Wayfinding Systems

*Signage* and *wayfinding* systems should be provided within library and reference facilities. They should be designed to communicate necessary information effectively to all individuals and be easy to understand.

### Acoustic Controls

Acoustic controls should be provided within library and reference facilities. Ambient noise should be controlled to help improve concentration for all individuals who are engaged in tasks such as reading and studying. Too much ambient noise can further limit the hearing ability of persons who are deaf, deafened or hard of hearing.

## Requirements

### (1) Accessible Path of Travel:

Library and reference facilities should provide interior *accessible paths of travel* that:

- (a) Have a clear width that is 1300 mm minimum, between book stacks, "Figure 2.5.2-A Clear Width at Book Stacks"; and
- (b) Meet the criteria in section "2.1.1. Interior Accessible Paths of Travel".

### (2) Interior Rooms and Areas:

Library and reference facilities should provide interior rooms and areas that include:

- (a) Offices and work areas that meet the criteria in section 2.4.1. *Offices and Work Areas*;
- (b) Service counters that:
  - (i) Have procedures for addressing people who may need assistance with getting access to special resources; and
  - (ii) Meet the criteria in section 2.4.3. *Service Counters*; and
- (c) Queuing guides and waiting areas that meet the criteria in section 2.4.4. *Queuing Guides and Waiting Areas*.

### (3) Furniture, Fixtures and Equipment:

Library and reference facilities should provide furniture, fixtures and equipment that:

- (a) Is flexible, adaptable and ergonomic;
- (b) Include workstations that:
  - (i) Have a surface height that is 860 mm *A.F.F.*, where fixed;



- (ii) Have knee and toe space for a front approach that is 735 mm minimum high *A.F.F.* at the front edge, 500 mm minimum deep, and 900 mm minimum wide;
- (c) Include book stacks or shelves that:
  - (i) Are 1050 mm maximum *A.F.F.*; and
  - (ii) Are 500 mm maximum deep for side reach range;
- (d) Include task chairs and lounge seating that are ergonomic and adaptable; and
- (e) Meet the criteria in section "2.6.3. Furniture and Equipment".

#### (4) Lighting:

Library and reference facilities should provide lighting that:

- (a) Is direct or in-direct;
- (b) Utilizes diffused lenses or filters;
- (c) Is adjustable;
- (d) Is natural;
- (e) Includes task lighting at workstations;
- (f) Is located above book stacks or shelves; and
- (g) Meets the criteria in section "3.1.1. Interior Lighting".

#### (5) Signage and Wayfinding Systems:

Library and reference facilities should provide *signage* and *wayfinding* systems that:

- (a) Compliments the surrounding environment allowing for easy navigation and identification of key elements and spaces; and
- (b) Meet the criteria in section "3.2.1. Signage and Wayfinding Systems"; and

- (c) Where provided at special or designated spaces, have a variety of *accessible* formats, such as pre-recorded information, audio books, and audio playback.

#### (6) Acoustic Controls:

Library and reference facilities should provide acoustic controls that:

- (a) Meet the criteria in section "3.3.1. Acoustics".

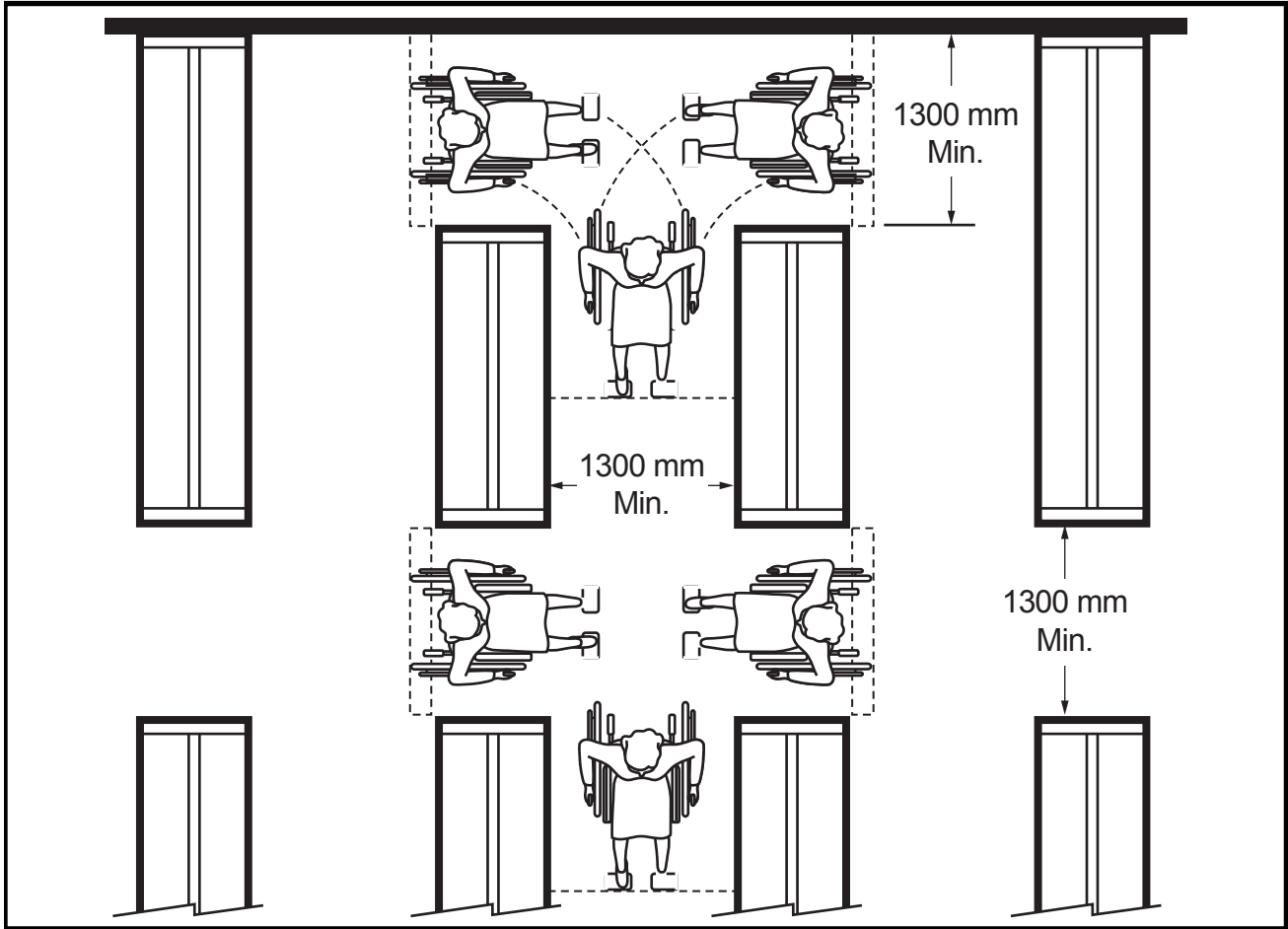


Figure 2.5.2-A Clear Width at Book Stacks

## 2.5.3. Exhibition, Museum and Gallery Facilities

### Rationale

Exhibition, museum and gallery facilities should be designed to include for how all members of the public experience the space and participate with the exhibits and presentations. They should integrate a range of creative strategies and technologies into the design to be usable by all individuals.

### Application

The scope of this section applies to art and cultural facilities including but not limited to art galleries, concert halls, theatres, heritage sites, community, civic centres etc.



### Related Sections

- "2.1.1. Interior Accessible Paths of Travel"
- "2.6.3. Furniture and Equipment"
- "3.1.1. Interior Lighting"
- "3.2.1. Signage and Wayfinding Systems"
- "3.2.5. Assistive Listening Devices"

### Related References

- [Toronto Green Standard](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)
- [Toronto Public Library, Accessibility](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to exhibition, museum and gallery facilities to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Lighting

Lighting should be provided within exhibition, museum and gallery facilities that minimize *glare* and brightness on all surfaces. Lighting should allow all individuals to navigate the space safely, but consideration should be made for individuals who may be sensitive to *glare*. Direct or in-direct lighting sources should utilize diffused lenses or filters and be adjustable to meet the needs of all individuals, as well as, the function of the facility. Lighting such as wall sconces should be provided to help identify displays within the exhibit and highlight individual exhibit items.

### Communication and Information Systems

Communication and information systems, such as *signage and wayfinding* systems, and *assistive listening devices*, should be provided within exhibition, museum and gallery facilities to enhance the usability for persons with low or no vision and persons who are deaf, deafened or hard of hearing. Systems should be designed to communicate necessary information effectively to all individuals and be easy to understand. Display materials should be available in a variety of *accessible* formats to be usable by all individuals. Where interactive displays such as multi-media description for exhibit items are provided and are located on tables or work surfaces, they should have *accessible* space and reach range dimensions. Where virtual reality communication systems are provided they should be usable by all individuals.

### Requirements

#### (1) Accessible Path of Travel:

Exhibition, museum and gallery facilities should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section "2.1.1. Interior Accessible Paths of Travel".

#### (2) Lighting:

Exhibition, museum and gallery facilities should provide lighting that:

- (a) Is direct or in-direct;
- (b) Utilizes diffused lenses or filters;
- (c) Eliminates *glare*;
- (d) Include wall sconces:
  - (i) To help identify displays within the exhibit; and
  - (ii) To highlight individual exhibit items; and

- (e) Meets the criteria in section "3.1.1. Interior Lighting".

#### (3) Communications and Information Systems:

Exhibition, museum and gallery facilities should provide communications and information systems that:

- (a) Include *signage and wayfinding* systems that:
  - (i) Compliments the surrounding environment allowing for easy navigation and identification of displays and exhibit items;
  - (ii) Display labels that have *tactile* characters and *Braille*; and
  - (iii) Meet the criteria in section "3.2.1. Signage and Wayfinding Systems";
- (b) Include *assistive listening devices* that meet the criteria in section "3.2.5. Assistive Listening Devices";
- (c) Are available in a variety of *accessible* formats; and
- (d) Where interactive displays are provided, they should:
  - (i) Be *accessible*;
  - (ii) Where tables or work surfaces are incorporated, be mounted 860 mm maximum *A.F.F.*; and
  - (iii) Meet the criteria in section "2.6.3. Furniture and Equipment".

## 2.5.4. Residential Facilities

### Rationale

Residential facilities should provide suites that are designed to be *accessible*, adaptable and usable by all individuals. These design considerations will help to ensure that future renovations to improve the functionality of suites are minimized. An interior *accessible path of travel* that is level and smooth should be provided to and throughout bedrooms, bathrooms, kitchens, living rooms, and where provided, balconies or terraces to ensure that residents and visitors have equitable access to elements and spaces within their suite.

### Application

The scope of this section is intended to guide the development/creation of accessible and adaptable suites within multi-unit residential buildings and facilities. New residential construction and renovation projects led or funded by the City of Toronto should follow the Affordable Rental Housing Design Guidelines.



### Related Sections

- 1.4.8. Balconies, Terraces and Patios
- "2.1.1. Interior Accessible Paths of Travel"
- 2.2.3. Doors and Doorways
- "2.3.4. Accessible Water Closets"
- "2.3.6. Accessible Lavatories"
- "2.3.7. Washroom and Change Room Accessories"
- "2.3.9. Accessible Showers"
- 2.4.8. Kitchens and Kitchenettes
- "2.6.3. Furniture and Equipment"

### Related References

- [Mid-Rise Buildings](#)
- [Tall Buildings](#)
- [Affordable Rental Housing Design Guidelines](#)
- [Toronto Community Housing \(TCH\) Accessibility Build Standards](#)
- [Toronto Green Standard](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)

### Key Considerations

#### Amount

*Accessible* and adaptable suites should not be less than 15% of the total number of suites available, and City-led projects should aim to exceed this amount to the greatest extent possible.

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to residential facilities to allow for a continuous, unobstructed route providing interior access to elements and spaces including all suites and common areas within a residential facility.

An interior *accessible path of travel* should be provided from the suite *entrance* to and throughout bedrooms, bathrooms, kitchens, living rooms, balconies, terraces and patios that are located on the same level.

### Doors and Doorways

Doors should be provided at residential facilities to connect exterior and interior *accessible paths of travel*, and to ensure privacy, independent, equitable and dignified access.

### Kitchens

Kitchens should be provided within suites within residential facilities that are designed to be *accessible* and adaptable. They should be designed to be usable by all individuals. Elements such as millwork, work surfaces, sinks and appliances should be *accessible*, adaptable and provide *accessible* space and reach range dimensions.

### Living Rooms

Living rooms should be provided within suites within residential facilities that are designed to be *accessible* and adaptable. They should be designed to have a clear turning space to provide maneuvering space for persons using *mobility devices* to make a 360° turn.

### Balconies, Terraces and Patios

Where provided, balconies should be designed to provide a level threshold through the balcony door. The surface of the balcony should be stable, firm and slip-resistant. The balcony should provide sufficient *clear floor space* to be *accessible* for residents and visitors, including persons using *mobility devices*.

### Bedrooms

Bedrooms should be provided within suites within residential facilities that are designed to be *accessible* and adaptable. They should be designed to have clear turning spaces to provide maneuvering space for persons using *mobility devices* to make a 360° turn.

### Bathrooms

Bathrooms should be provided within suites within residential facilities that are designed to be *accessible* and adaptable. They should include a *lavatory*, a *water closet*, a bathtub or a shower. Bathrooms should have wall reinforcement installed for future renovations of elements, such as grab bars. They should be designed to have a clear turning space to provide maneuvering space for persons using *mobility devices* to make a 360° turn.

### Bathtubs

Where bathtubs are provided within suites within residential facilities, they should be designed to be *accessible* and adaptable, they should have accessories, such as grab bars and a hand-held shower head. An alternative to bathtubs may include step-in bathtubs that are built into a single prefabricated unit with *accessible* features included.

## Requirements

### (1) Amount:

Residential facilities should provide:

- (a) Accessible and adaptable suites should not be less than 15% of the total number of suites available, and City-led projects should aim to exceed this amount to the greatest extent possible.
- (b) *Accessible* and adaptable suites that are in proportion of the total number of suites having one, two, three or more bedrooms in the remainder of residential facilities (a building); and

- (c) *Accessible* and adaptable suites that are distributed among storeys having regard to the height of the suite above grade.

## (2) Accessible Path of Travel:

Residential facilities should provide interior *accessible paths of travel* that:

- (a) Have a clear width that is 1100 mm minimum;
- (b) Extends from the suite *entrance* to and throughout at least one:
  - (i) Bedroom;
  - (ii) Bathroom;
  - (iii) Kitchen;
  - (iv) Living room; and
  - (v) Balcony, terrace and patio, where provided; and
- (c) Meet the criteria in section "2.1.1. Interior Accessible Paths of Travel".

## (3) Doors and Doorways:

Residential facilities should provide doors and doorways that:

- (a) Meet the criteria in section 2.2.3. *Doors and Doorways*.

## (4) Kitchens:

Residential facilities should provide kitchens that:

- (a) Meet the criteria in section 2.4.8. *Kitchens and Kitchenettes*.

## (5) Living Rooms:

Residential facilities should provide living rooms that:

- (a) Are *accessible*; and
- (b) Have a clear turning space that is 2135 mm in diameter, at 360° turns.

## (6) Balconies, Terraces and Patios:

Where provided at residential facilities, balconies, terraces and patios should:

- (a) Have a clear turning space that is 2135 mm in diameter, at 360° turns;
- (b) Have a level entry threshold, or be *bevelled* at a slope of 1 in 2 (50%) maximum at changes in level not more than 13 mm; and
- (c) Meet the criteria in section 1.4.8. *Balconies, Terraces and Patios*.

## (7) Bedrooms:

Residential facilities should provide bedrooms, "Figure 2.5.4-A Residential Bedroom", that:

- (a) Are *accessible* and adaptable;
- (b) Are positioned directly across the hallway from an *accessible* bathroom;
- (c) Are at least 3352 mm by 6070 mm in size;
- (d) Have a clear turning space that is 2135 mm in diameter, at 360° turns; and
- (e) Have coat closets, rods, hooks and shelves that meet the criteria in section "2.6.3. Furniture and Equipment".

## (8) Bathrooms:

Residential facilities should provide bathrooms, "Figure 2.5.4-B Residential Bathroom", that:

- (a) Are *accessible*;
- (b) Have a clear turning space that is 2135 mm in diameter, at 360° turns;
- (c) Include a *lavatory* that meets the criteria in section "2.3.6. Accessible Lavatories".

- (d) Include a *water closet* that meets the criteria in section "2.3.4. Accessible Water Closets"; and
- (e) Include a shower that meets the criteria in section "2.3.9. Accessible Showers", or a bathtub that meets the criteria in this section.

### (9) Bathtubs:

Where bathtubs, "Figure 2.5.4-C Residential Bathtub", are provided within residential facilities they should:

- (a) Be *accessible*;
- (b) Be 1500 mm minimum long;
- (c) Be capable of being accessed along the full length of the bathtub with no tracks mounted on the bathtub rim;
- (d) Have faucets that:
  - (i) Are operable using a closed fist and with a force of 22.2 N maximum; and
  - (ii) Are located on the centre line of the bathtub or between the centre line of the bathtub and the exterior edge of the bathtub rim, at 450 mm maximum above the bathtub rim;
- (e) Unless the bathtub is free-standing, have three grab bars that:
  - (i) Are 1200 mm minimum long;
  - (ii) Have two that are located vertically at each end of the bathtub, mounted between 80 mm and 280 mm above the bathtub rim, and 150 mm from the edge of the tub;
  - (iii) Have one that is located horizontally along the full length of the bathtub, mounted between 80 mm and 280 mm above the bathtub rim and 150 mm from the front edge of the bathtub; and
- (iv) Meet the criteria in section "2.3.7. Washroom and Change Room Accessories";
- (f) Have a slip-resistant bottom surface;
- (g) Be equipped with a hand-held shower head that:
  - (i) Has 1800 mm minimum of flexible hose;
  - (ii) Can be used in a fixed position at a height of 1200 mm and 2030 mm; and
  - (iii) Does not obstruct the use of the grab bars;
- (h) Have a *clear floor space* that:
  - (i) Is 900 mm wide by 1500 mm long minimum for a front approach; and
  - (ii) Is located along the full length of the bathtub; and
- (i) Have a fixed seat ledge that:
  - (i) Is the same width as the bathtub and 480 mm deep minimum;
  - (ii) Is mounted on the same side wall as the vertical grab bar, opposite the bathtub controls, between 460 mm and 480 mm *A.F.F.*; and
  - (iii) Is designed to carry a 1.3 kN minimum load;
  - (iv) Has a smooth and slip-resistant surface and no rough edges; and
  - (v) Allows water to drain.





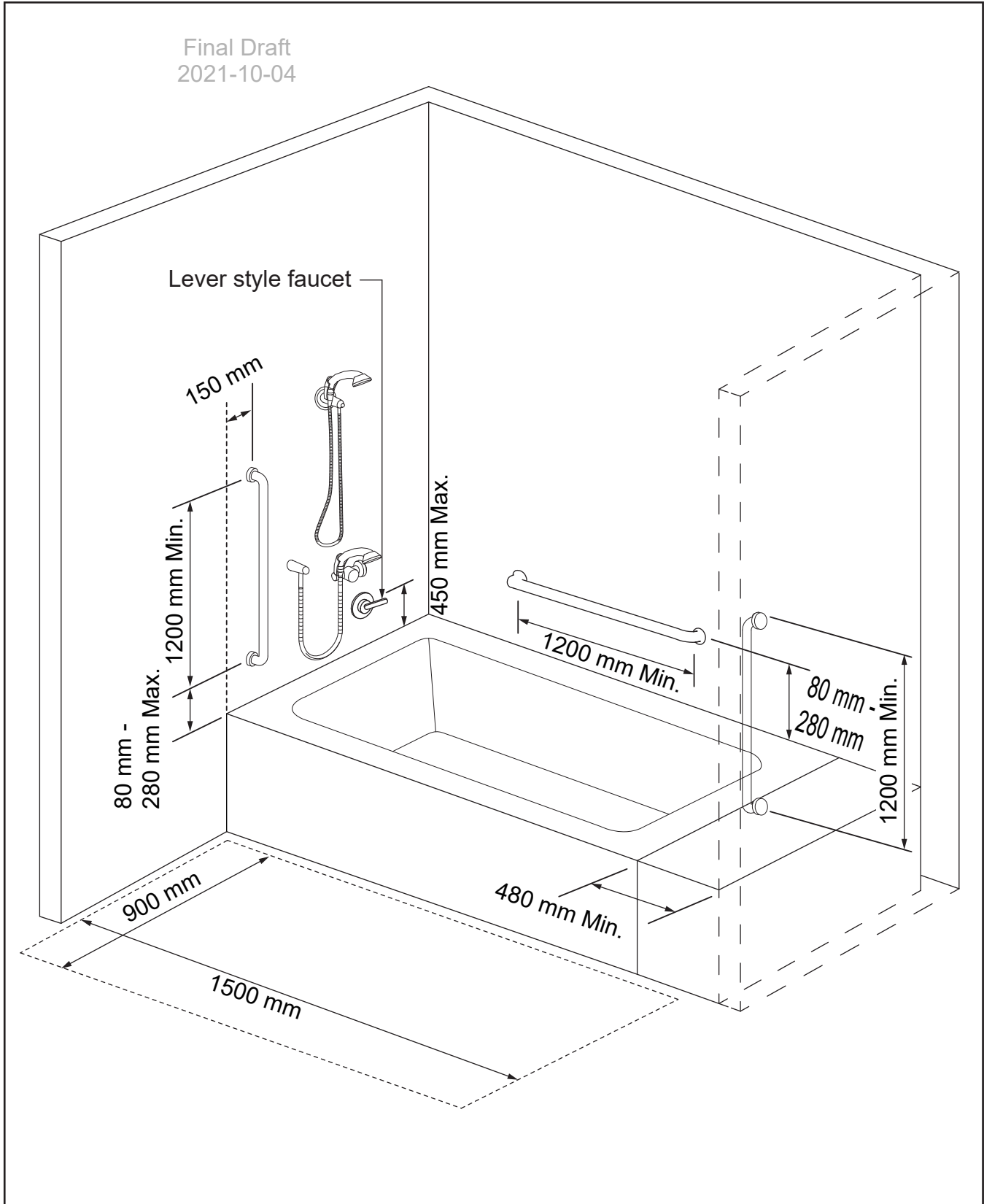


Figure 2.5.4-C Residential Bathtub

## 2.5.5. Long-Term Care Homes

### Rationale

Long-term care homes should provide residential or long-term care to seniors with varying levels of ability and individual needs. Long-term care homes should provide residents with independent, equitable and dignified access to activities of daily living. Interior rooms and areas, such as those for therapeutic treatments, exercise, dining and programmed activities that support recovery and well-being, should be designed to allow all residents to participate.

### Application

The scope of this section applies to long-term care homes including retirement and homes for the aged, group homes, nursing homes and/or chronic care facilities. Notwithstanding the requirements of this section, the City of Toronto Accessibility Design Guidelines, and/or the highest level of accessibility standards or requirements applicable to long-term care homes should apply.



### Related Sections

- [\[Reserved\]](#)

### Related References

- [Toronto Green Standard](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)
- [Long-Term Care Home Design Manual](#)

### Key Considerations

#### Design

The design of long-term care homes should be *accessible* and adaptable to meet the needs of all persons, including residents and support staff with varying levels of ability, and the functional needs of the facility. An interior *accessible path of travel* should be provided from the *entrance* into *amenity* and support areas, and resident rooms, including individual or private bedrooms and washrooms.

*Entrances* into lounges, program/activity areas, and dining areas should be as large as possible with no single door widths. If doors are provided in these areas, they must be able to be kept in the open position. Design and material selection should be provided with consideration for age and dementia-friendly design strategies.

### Requirements

#### (1) Design:

Long-term care homes should be designed to:

- Meet the criteria in [Long-Term Care Home Design Manual](#).

## 2.5.6. Seniors Housing

### Rationale

Seniors housing should provide residential, services and support to persons, ages 55 and above, with varying levels of ability and individual needs who are able to live alone and independently. Housing options should shift to support our changing needs as we age. Seniors may require housing with different design requirements to enable them to continue to live in their homes safely and comfortably. These facilities should provide residents with independent, equitable and dignified access to activities of daily living. Interior rooms and areas, such as private living and common areas that support well-being, should be designed to allow all residents to participate.

### Application

The scope of this section is intended to guide the design of seniors housing, including retirement homes. New residential construction and renovation projects led or funded by the City of Toronto should follow the Affordable Rental Housing Design Guidelines.



### Related Sections

- [\[Reserved\]](#)

### Related References

- [Mid-Rise Buildings](#)
- [Tall Buildings](#)
- [Affordable Rental Housing Design Guidelines](#)
- [Toronto Community Housing \(TCH\) Accessibility Build Standards](#)
- [Toronto Green Standard](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)

### Key Considerations

#### Design

The design of seniors housing should be *accessible* and adaptable to meet the needs of all persons, including residents and support staff with varying levels of ability, and the functional needs of the facility. An interior *accessible path of travel* should be provided from the *entrance* into *amenity* and support areas, and resident rooms, including individual or private bedrooms and washrooms. *Entrances* into lounges, program/activity areas, and dining areas should be as large as possible with no single door widths. If doors are provided in these areas, they must be able to be kept in the open position. Design and material selection should be provided with consideration for age and dementia-friendly design strategies.

## Requirements

### (1) Design:

Seniors housing should be designed to:

- (a) Meet the criteria in [Toronto Community Housing \(TCH\) Accessibility Build Standards](#); and
- (b) Meet the criteria in [Toronto Affordable Housing Design Guidelines](#).

## 2.5.7. Shelters

### Rationale

Shelters should be designed to be *accessible* and adaptable to meet the needs of all individuals, including the community, all shelter-individuals, staff, and visitors, and the functional needs of the facility. These facilities should promote dignity, comfort, and choice to support shelter-individuals in moving to permanent housing. There are multiple categories of accommodation. Shelters for persons experiencing homelessness include 24-hour drop in centres, 24-hour respites, emergency shelters, and transitional shelters

### Application

The scope of this section applies to emergency shelter categories including adults (over the age of 24), youth (up to the age of 24), and family (in family shelters up to 75% of the population may be children).



### Related Sections

- [Reserved]

### Related References

- [Shelter Design & Technical Guidelines](#)

### Key Considerations

#### Design

The design of shelters should be *accessible* and adaptable to meet the needs of all persons, including the community, all shelter-users, staff, and visitors, and the functional needs of the facility.

### Requirements

#### (1) Design:

Shelters should be designed to:

- Meet the criteria in [Shelter Design & Technical Guidelines](#).

## 2.5.8. Child Care Facilities

### Rationale

Child care facilities should create *accessible* spaces for all of its individuals including children, parents, staff or volunteers while balancing the need to create a safe and functional environment supporting child development and safety. All areas in child care facilities should be *accessible* to person with disabilities. In many child care facilities the requirements for enlarged entry vestibules and *passenger pick-up and drop-off* areas for strollers aid parents dropping off and picking up their children. In some cases City supported child care facilities are located within mixed-use residential facilities, recreation centres and civic centre facilities. In these cases an *accessible path of travel* that meet the criteria in these guidelines should be provided to the child care entrance.



### Related Sections

- 1.4.3. Play Spaces
- "2.1.1. Interior Accessible Paths of Travel"
- "2.3.1. Multi-Stall Washrooms"
- "2.3.7. Washroom and Change Room Accessories"

### Related References

- [Child Care Design & Technical Guideline](#)
- [Toronto Green Standard](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to child care facilities to allow for a continuous, unobstructed route providing interior access to elements and spaces. Clear turning spaces should be provided where required, in areas such as *entrances* or elevators, to allow space for persons using multiple sizes of strollers to maneuver.

#### Furniture, Fixtures and Equipment

Furniture, fixtures and equipment (FFE) should be provided within child care facilities that are flexible, adaptable and usable by all individuals. FFE should be safe, functional and developmentally appropriate. In some cases the accessibility criteria of these guidelines will not adequately address the abilities and needs of children, but most notably children with disabilities or special mental and cognitive needs. Examples include reduced size of sinks and water closets or the requirement for sensory rooms (snoezelen room).

Designers should work closely with City project staff and operational supervisors to ensure they meet the criteria of the City's Childcare Design Guidelines, the childcare licensing requirements from the Ministry of Education and the most appropriate accessibility requirements of these guidelines.

### Washrooms

Washrooms that have baby change tables should be provided within child care facilities that are usable by all individuals. Plumbing fixtures, such as *water closets* and *lavatories*, should be provided that are safe, functional and developmentally appropriate.

### Play Spaces

Play spaces should be provided at child care facilities that are easy to navigate and engage all individuals. They should offer a variety of active and *passive play* experiences, landscape settings and opportunities to connect with others. Play is important for all children as a means of developing intelligence, physical skills and interpersonal and social awareness.

## Requirements

### (1) Accessible Path of Travel:

Child care facilities should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section "2.1.1. Interior Accessible Paths of Travel".

### (2) Furniture, Fixtures and Equipment:

Child care facilities should provide furniture, fixtures and equipment that:

- (a) Meet the criteria in [Child Care Design & Technical Guideline](#).

### (3) Washrooms:

Child care facilities should provide washrooms that:

- (a) Have baby change tables that meet the criteria in section "2.3.7. Washroom and Change Room Accessories"; and
- (b) Meet the criteria in section "2.3.1. Multi-Stall Washrooms".

### (4) Play Spaces:

Child care facilities should provide play spaces that:

- (a) Meet the criteria in section 1.4.3. Play Spaces.



## 2.5.9. Emergency Service Facilities

### Rationale

Emergency service facilities include service providers such as fire services, paramedic services (or emergency medical services), police services and the office of emergency management. They support their local community neighbourhoods and are occupied by highly trained specialized staff. They should all be designed to be *accessible* and usable by all individuals including the public and authorized personnel. Each service provider handles specific types of public safety and emergencies, and are all able to provide assistance in a time of need. All areas that are accessed by staff, visitors, authorized personnel including those on modified duty, legal counsel, public officials and or detainees within emergency service facilities should be made *accessible* for persons with disabilities.

### Application

The scope of this section applies to service providers including fire services, paramedic services, police services and the office of emergency management. This section does not apply to emergency hospital facilities and medical clinics performing emergency care services by visiting paramedics, police officers or fire fighters.



### Related Sections

- "2.1.1. Interior Accessible Paths of Travel"
- 2.3. Plumbing Fixtures, Washrooms and Change Rooms
- 2.4.1. Offices and Work Areas
- 2.4.3. Service Counters
- 2.4.6. Lockers and Baggage Storage Areas
- 2.4.8. Kitchens and Kitchenettes

### Related References

- [Toronto Green Standard](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to emergency service facilities, including fire, paramedic and police services, to allow for a continuous, unobstructed route providing interior access to elements and spaces. Interior rooms and areas that are *accessible* by service provider personnel should also be usable by the public, including persons with disabilities.

#### Fire Stations

Fire stations should be *accessible* to persons with disabilities who are staff, including staff who are injured and choose to access the facility for modified duty and public visitors.

Fire stations should be *accessible* to occasional users such as community and school groups on public tours as well as authorized visitors who are meeting with fire services staff such as city staff or consultants attending site visits.

Common ground floor areas within a fire station should be *accessible* to the general public who may require emergency assistance or wish to visit the fire vehicle apparatus bay. These areas should be designed to be *accessible* for persons with disabilities.

Areas within a fire station that are designated for the exclusive use by fire fighters are exempt from the requirements of this section. These areas include but are not limited to fitness rooms, sleep quarters, hose drying towers, 2nd floor, basement storage and cooking kitchens.

### Paramedic Stations

Paramedic stations (or emergency medical services) should be *accessible* to persons with disabilities who are staff, including staff who are injured and wish to access the facility for modified duty and public visitors.

Paramedic stations should be able to support access required for occasional users such as community and school groups on public tours as well persons from the public who arrive by vehicle on foot who are injured and in need of immediate emergency assistance.

Areas within paramedic station that are designated for the exclusive use by specialized paramedic staff are exempt from the requirements of this section. These areas include but are not limited to crew rooms, fitness rooms, locker rooms, equipment testing areas, vehicle bays and equipment storage rooms for specialized medical equipment.

### Police Stations

Police stations should be *accessible* to persons with disabilities who are staff, public visitors, detainees and legal counsellors.

Areas in police stations that will be used by detainees, such as cells and common visitation areas, should accommodate persons with disabilities.

All areas of police stations that are *accessible* to the public and members of staff and counsel should meet the requirements of this section, especially areas that support community services such as information counters, etc.

Some areas not *accessible* to the public within police stations that are designated for the exclusive use by police staff are exempt from meeting the requirements of this section. These areas include but are not limited to fitness rooms, locker rooms, training areas, police equipment storage and maintenance areas.

## Requirements

### (1) Accessible Path of Travel:

Emergency service facilities should provide interior *accessible paths of travel* that:

- (a) Extend to, where provided:
  - (i) Washrooms and change rooms that meet the criteria in section 2.3. [Plumbing Fixtures, Washrooms and Change Rooms](#);
  - (ii) Offices and work areas that meet the criteria in section 2.4.1. [Offices and Work Areas](#);
  - (iii) Service counters that meet the criteria in section 2.4.3. [Service Counters](#);
  - (iv) Lockers and baggage storage areas that meet the criteria in section 2.4.6. [Lockers and Baggage Storage Areas](#);

- (v) Kitchens and kitchenettes that meet the criteria in section 2.4.8. [Kitchens and Kitchenettes](#), with the exception of a cooking kitchen that is located within a station; and
- (vi) Sleeping quarters, only at fire services; and
- (b) Meet the criteria in section "2.1.1. [Interior Accessible Paths of Travel](#)".

**(2) Fire Stations:**

Emergency service facilities should provide fire stations that:

- (a) Meet the criteria in this section.

**(3) Paramedic Stations:**

Emergency service facilities should provide paramedic stations that:

- (a) Meet the criteria in this section.

**(4) Police Stations:**

Emergency service facilities should provide police stations that:

- (a) Meet the criteria in this section.

## 2.5.10. Service Yard Facilities

### Rationale

Service yard facilities should be designed to be *accessible* and usable by all individuals including visitors and employees. In cases where employees have become injured temporarily they should still be able to fulfill their workplace tasks without any limitations. Where specialized areas are provided that create the risk of hazards, strategies should be implemented to help maintain the health and safety for all individuals.

### Application

The scope of this section does not apply to service yard facilities that have exterior or interior restricted areas that are occasionally used by operational staff performing specialized duties. These restricted areas include, but are not limited to, service vehicle storage garages, vehicle repair garages, heavy equipment storage sheds, aggregate silos, pumping stations, and high hazard industrial facilities.



### Related Sections

- "1.1.1. Exterior Accessible Paths of Travel"
- "2.1.1. Interior Accessible Paths of Travel"

### Related References

- [Toronto Green Standard](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to service yard facilities to allow for a continuous, unobstructed route providing exterior and interior access to elements and spaces. Depending on the functional needs of the facility, it may be unsafe to provide *accessible paths of travel* throughout high hazard areas.

### Requirements

#### (1) Accessible Path of Travel:

Service yard facilities should provide exterior and interior *accessible paths of travel* that:

- Meet the criteria in section "1.1.1. Exterior Accessible Paths of Travel"; and
- Meet the criteria in section "2.1.1. Interior Accessible Paths of Travel".

## 2.5.11. Temporary Use Facilities

### Rationale

Temporary use facilities should be designed to be *accessible* and usable by all individuals regardless of the size of the facility or the duration that the facility will be occupied. Temporary use facilities, although constructed with the intention of being demolished within a specific period of time, should still serve all persons with the same level of equitable access that permanent facilities are required to provide.

### Application

The scope of this section applies to all temporary use facilities that are accessed by the public, staff and visitors regardless of the size of the facility and the duration that the facility will be in use. Temporary use facilities include audience viewing stages, temporary access *ramps*, spectator bleacher areas, temporary kiosks, shelters, markets, event tents, health screening services or temporary safe pedestrian passageways around construction sites, that are accessed by the public and City staff. This section does not apply to temporary structures such as scaffolding, open covers, material hoists, or construction trailers, that are directly associated with construction activities.



### Related Sections

- "1.1.1. Exterior Accessible Paths of Travel"
- "2.1.1. Interior Accessible Paths of Travel"
- 2.2.1. Entrances
- 2.3. Plumbing Fixtures, Washrooms and Change Rooms
- 2.4.3. Service Counters
- 2.4.8. Kitchens and Kitchenettes

### Related References

- [24-Hour Respite Site Standards](#)
- [Toronto Green Standard](#)
- [Toronto Neighbourhood Urban Design Guidelines Template & Manual](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to temporary use facilities to allow for a continuous, unobstructed route providing exterior and interior access to elements and spaces.

#### Entrances

*Entrances* should be provided at temporary use facilities to ensure equitable access for all persons entering the building.

#### Washrooms

Washrooms should be provided at temporary use facilities that are *accessible*. This will ensure that all persons within the building, especially those using *mobility devices*, are able to access facilities required for basic human necessity.

### Interior Rooms and Areas

Where interior rooms and areas are provided at temporary use facilities, they should be *accessible* and usable to ensure that all individuals can safely navigate throughout the facility. Service counters, kitchens and kitchenettes should be made to be *accessible* to ensure that all persons, especially those using *mobility devices*, are able to be served without any *barriers*.

- (b) Kitchens and kitchenettes that meet the criteria in section 2.4.8. [Kitchens and Kitchenettes](#).

### Requirements

#### (1) Accessible Path of Travel:

Temporary use facilities should provide exterior and interior *accessible paths of travel* that:

- (a) Meet the criteria in section "1.1.1. [Exterior Accessible Paths of Travel](#)"; and
- (b) Meet the criteria in section "2.1.1. [Interior Accessible Paths of Travel](#)".

#### (2) Entrances:

Temporary use facilities should provide *entrances* that:

- (a) Meet the criteria in section 2.2.1. [Entrances](#).

#### (3) Washrooms:

Temporary use facilities should provide washrooms that:

- (a) Meet the criteria in section 2.3. [Plumbing Fixtures, Washrooms and Change Rooms](#).

#### (4) Interior Rooms and Areas:

Temporary use facilities should provide interior rooms and areas that:

- (a) Service counters that meet the criteria in section 2.4.3. [Service Counters](#); and

## 2.5.12. Courtroom Facilities

### Rationale

Courtroom facilities should be designed to create *accessible* spaces for all individuals. They need to create a safe and functional environment supporting visitors who are feeling vulnerable and anxious due to nature of their visit. All areas in courtroom facilities should be *accessible* to persons with disabilities.

### Application

The scope of this section applies to courtroom facilities that are located within City owned civic facilities such as office buildings, civic centres or mixed use facilities and are operated and supported by the City, as well as quasi-judicial facilities and spaces, such as administrative tribunal facilities, local appeals bodies, judicial pre-trial rooms and their legislative mandatory minimum accessibility requirements that falls within the jurisdiction Ministry of the Attorney General and the Ontario Court of Justice.



### Related Sections

- "2.1.1. Interior Accessible Paths of Travel"
- "2.1.5. Elevators"
- 2.2.1. Entrances
- 2.2.2. Doors and Doorways
- 2.4.3. Service Counters
- 2.4.4. Queuing Guides and Waiting Areas
- "2.5.8. Child Care Facilities"
- "2.6.3. Furniture and Equipment"
- "3.2.1. Signage and Wayfinding Systems"
- "3.2.5. Assistive Listening Devices"

### Related References

- Ministry of Attorney General
- Ontario Court of Justice

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to courtroom facilities to allow for a continuous, unobstructed route providing interior access to elements and spaces. All courtrooms and public areas of courthouses should be *accessible* to persons using *mobility devices*. All offices, meeting rooms, holding areas, changing areas or other support facilities available to members of the legal fraternity, the police or support staff should be *accessible* to persons with varying disabilities.

#### Entrances

*Entrances* should be provided at courtroom facilities that are *accessible* and lead from exterior *accessible paths of travel* at *sidewalk* level, or a *ramp* that leads from a *sidewalk*.

Integrating *accessible* elements to enhance the usability of *entrances* will help to ensure that all individuals are able to enter a building with independence, equitable use and dignity.

### Doors and Doorways

Doors should be provided at courtroom facilities to connect exterior and interior *accessible paths of travel*, and to ensure privacy, independent, equitable and dignified access.

### Communication and Information Systems

Communication and information systems including *signage and wayfinding* systems, and *assistive listening devices* should be provided at courtroom facilities. *Signage and wayfinding systems* should be used for identification purposes, to draw attention to safety hazards and to help individuals safely and independently navigate throughout the built environment including interior and exterior *accessible paths of travel*. It should clearly indicate the type of facilities available.

*Assistive listening devices* should be designed to be usable by persons with and without hearing aids. They should help to improve individuals hearing ability and to distinguish speech over other noise and should be provided in locations such as service counters and seating areas where an exchange of conversation is expected.

### Witness Stands, Lecterns and Podiums

Witness stands, lecterns and podiums should be provided at courtroom facilities that have *accessible* portions that are integrated into the design. They should be usable by all individuals, including persons using *mobility devices*, and persons of short stature.

### Legal Counsel Visitation and Detainee Holding Areas

Legal counsel visitation and detainee holding areas, such as cells and common visitation areas, should be provided at courtroom facilities that are *accessible* by detainees and visiting legal counsel. Special holding/detention areas and visitor areas should be designed to accommodate persons using *mobility devices*, including all access routes from prisoner arrival areas through to the courtroom or meeting and interview rooms.

### Requirements

#### (1) Accessible Path of Travel:

Courtroom facilities should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section "2.1.1. Interior Accessible Paths of Travel"; and
- (b) Meet the criteria in section "2.1.5. Elevators".

#### (2) Entrances:

Courtroom facilities should provide *entrances* that:

- (a) Meet the criteria in section 2.2.1. Entrances.

#### (3) Doors and Doorways:

Courtroom facilities should provide doors and doorways that:

- (a) Meet the criteria in section 2.2.2. Doors and Doorways.



**(4) Communication and Information Systems:**

Courtroom facilities should provide communication and information systems that:

- (a) Have the ability to support audio visual, and close captioning;
- (b) Have *signage and wayfinding* systems that meet the criteria in section "3.2.1. Signage and Wayfinding Systems"; and
- (c) Have *assistive listening devices* "3.2.5. Assistive Listening Devices".

**(5) Witness Stands, Lecterns and Podiums:**

Courtroom facilities should provide witness stands, lecterns and podiums that:

- (a) Meet the criteria in section "2.6.3. Furniture and Equipment".

**(6) Legal Counsel Visitation and Detainee Holding Areas:**

Courtroom facilities should provide legal counsel visitation and detainee holding areas that:

- (a) Meet the criteria in section "2.6.3. Furniture and Equipment".



# 2.6. Interior Furniture, Fixtures and Equipment

## Section Summary

This section reviews the *accessible* design requirements for interior furniture, fixtures and equipment (FFE) intended for use by the public and City staff. Interior FFE should be connected to interior *accessible paths of travel* and be located outside of the clear width to avoid obstructing the route and to reduce the risk of tripping.

## Contents in Section

### 2.6.1. Millwork

### 2.6.2. Windows and Window Hardware

### 2.6.3. Furniture and Equipment

### 2.6.4. Mail and Drop Boxes

### 2.6.5. Mirrors

### 2.6.6. Self-Service Kiosks

## 2.6.1. Millwork

### Rationale

Millwork (cabinetry) includes custom wood working pieces such as shelving and storage solutions. Millwork should be designed to be *accessible* and adaptable, often fabricated through systemic strategies and installed based on the functional needs of a space. Millwork is limited to the exact dimensions of a specific wall or confined area.



### Related Sections

- “3.3.3. Controls and Operating Mechanisms”

### Related References

- [Reserved]

### Key Considerations

#### Hardware

Hardware should be provided on millwork such as cabinet or pantry handles, drawer pulls, locks or latches and door opening devices. They should be designed to be usable by all individuals including persons who have limited dexterity and strength. Hardware should have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist. They should have *colour/ brightness contrast* from adjacent surfaces so that persons with low vision can easily find and operate hardware.

#### Shelves

Shelves should be provided within millwork and be designed to have space and reach range dimensions to be usable by all individuals. Shelves provide a zone for individuals and help to temporarily or permanently store items.

#### Doors

Doors should be provided on millwork, such as closets or wardrobes. Where individuals are intended to enter closets they should have doors that meet the needs of all individuals. Sliding doors, or pocket doors should be provided whenever possible. Where sliding doors, or pocket doors, are provided on millwork, they should meet the needs of the intended individuals and the functional needs of the space.

Consider providing hold open-type hinges or closers so that doors can remain in an open position to allow individuals to access the closet elements without having to worry about holding the door open manually or asking for assistance.

### Coat Hooks and Rods

Coat hooks and rods should be designed to be usable by all individuals. They provide a zone for individuals to temporarily or permanently store items, such as coats, bags, clothing, including seasonal outerwear, or other personal items.

## Requirements

### (1) Hardware:

Millwork should provide hardware that:

- (a) Is manually operated;
- (b) Include D-type, "Figure 2.6.1-A Millwork Hardware", or lever-type hardware that:
  - (i) Is 75 mm minimum long; and
  - (ii) Is mounted on centre 900 mm to 1050 mm *A.F.F.*;
- (c) Have *tactile* features; and
- (d) Have *operable portions or controls* that meet the criteria in section "3.3.3. Controls and Operating Mechanisms".

### (2) Shelves:

Millwork should provide shelves that:

- (a) Are located 200 mm maximum above the top of furnishings or equipment, or are mounted between 460 mm to 1050 mm *A.F.F.*; and
- (b) Project 100 mm maximum from the wall, or mounting surface.

### (3) Doors:

Millwork should provide doors that:

- (a) Where sliding or pocket-type closet doors are provided, "Figure 2.6.1-B Sliding Doors", have hardware that:
  - (i) Is provided on the leading edge of the door; and
  - (ii) Meets the criteria within this section;
- (b) Have hold open-type hinges or closers;
- (c) Have a clear width that is 950 mm minimum;
- (d) Have latch side clearance that is 300 mm minimum; and
- (e) Are operable using a force of 22 N maximum.

### (4) Coat Hooks and Rods:

Millwork should provide coat hooks and rods that:

- (a) Have minimum 25%, rounding up to the nearest whole number, *accessible* portion, "Figure 2.6.1-C Accessible Portion"; and
- (b) Are mounted between 460 mm to 1050 mm maximum *A.F.F.*

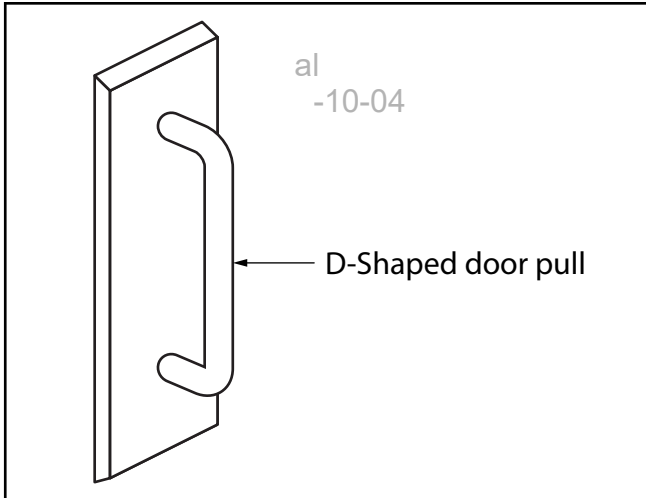


Figure 2.6.1-A Millwork Hardware

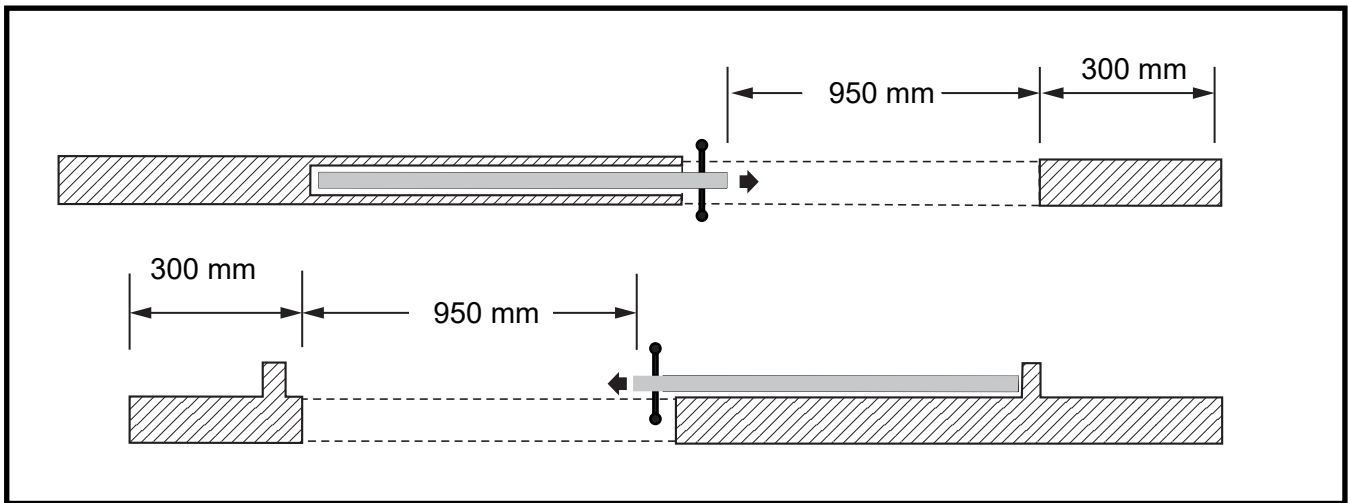


Figure 2.6.1-B Sliding Doors

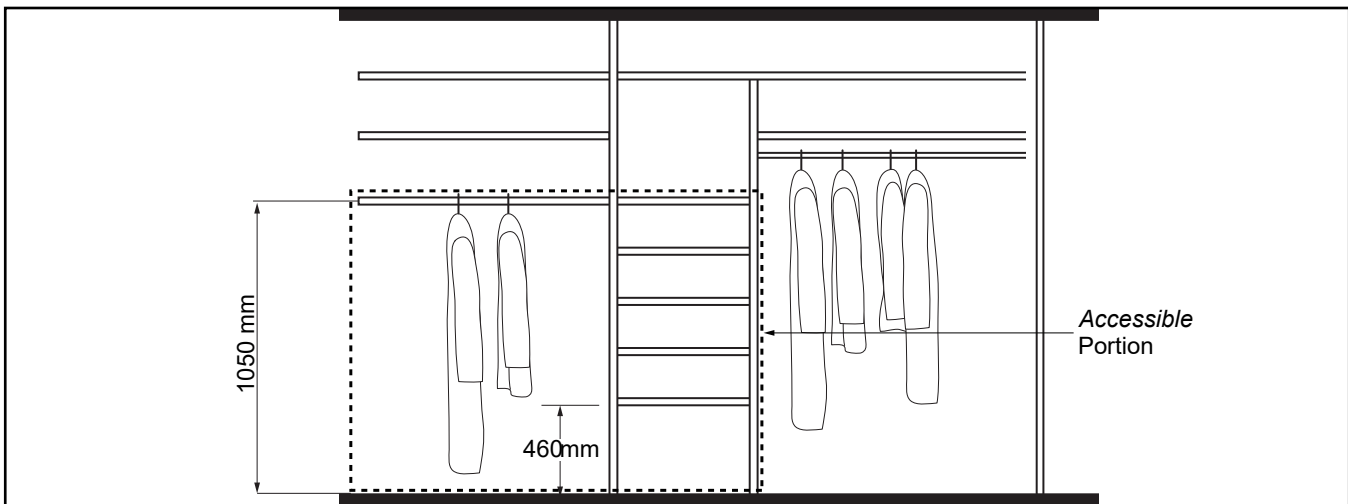


Figure 2.6.1-C Accessible Portion

## 2.6.2. Windows and Window Hardware

### Rationale

Windows located within a wall, door or a roof, provide natural lighting, natural ventilation and can be used to prevent inclement weather. The design of windows should consider the size, type and location to meet the needs of the intended individuals and the functional needs of the space, especially where window hardware is provided.



### Related Sections

- “3.3.3. Controls and Operating Mechanisms”

### Related References

- [Reserved]

### Key Considerations

#### Window Sills

Window sills should be provided at windows that are above the intended individuals centre of gravity, reducing the risk of hazards.

#### Horizontal Transoms

Where horizontal transoms are provided at windows, they should allow for clear sight lines for both individuals who are standing and persons using *mobility devices*.

#### Window Hardware

Where window hardware is provided at windows, it should be designed to be adjustable and usable by all individuals including persons who have limited dexterity and strength. Window hardware should have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist. They should have *colour/brightness contrast* from adjacent surfaces so that persons with low vision can easily find and operate hardware. Depending on the functional needs of a specialized facility, such as child care or shelter facilities, controls and operating mechanisms should have safety restraints to prevent accidental injury and reduce the risk of choking hazards.

### Shading Devices

Where shading devices are provided at windows, they should be designed to provide sun control. Shading devices including roller fabric shades, drapes, and/or vertical and horizontal blinds should be designed to control the impacts of *glare* from natural lighting and provide privacy as appropriate to the design. Where safety is a concern such as in Childcare Facilities or Shelters, controls should be equipped with safety restraints preventing accidental injury or choking hazards.

### Requirements

#### (1) Window Sills:

Windows should provide sills, “Figure 2.6.2-A Glazed Windows”, that:

- (a) Are mounted at a height 760 mm maximum *A.F.F.*

#### (2) Horizontal Transoms:

Where horizontal transoms are provided at windows, they should:

- (a) Have no horizontal components that are located between 1000 mm to 1200 mm *A.F.F.*;
- (b) Have clear sight lines; and
- (c) Have *colour/brightness contrast* from adjacent surfaces.

#### (3) Window Hardware:

Where window hardware is provided at windows, it should:

- (a) Be manually or automatically operated;
- (b) Include lever-type hardware that is mounted on centre 900 mm to 1050 mm *A.F.F.*;
- (c) Have *tactile* features;

- (d) Have a *clear floor space* that is 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach; and
- (e) Have *operable portions or controls* that meet the criteria in section “3.3.3. Controls and Operating Mechanisms”

#### (4) Shading Devices:

Where shading devices are provided at windows, they should:

- (a) Have sun control using matte vinyl, fabric finish, or blackout function;
- (b) Include roller fabric shades, drapes, vertical or horizontal blinds;
- (c) Are located to avoid direct visibility, where privacy is required; and
- (d) Are installed at a height that is 2450 mm minimum *A.F.F.*, or below 2450 mm *A.F.F.*, where a diffuser or a tinted/anti-*glare* lens is provided.

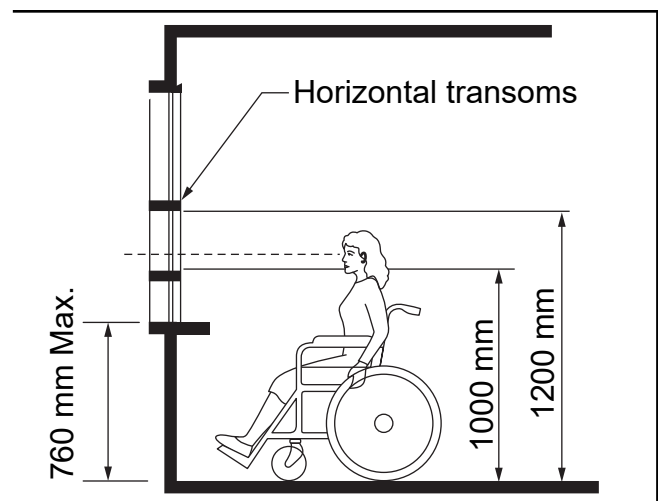


Figure 2.6.2-A Glazed Windows



## 2.6.3. Furniture and Equipment

### Rationale

Furniture and equipment provided within interior rooms and areas, as well as, specialized facilities should be designed to be *accessible* and usable by all persons. Fixed or non-fixed furniture and equipment layouts should continue to maintain interior *accessible paths of travel* and not create obstacles. *Clear floor spaces* for persons using *mobility devices* or persons with *service animals* should be integrated into the space. Where non-fixed furniture and equipment is provided, a more flexible and adaptable interior environment is created.



### Related Sections

- “2.1.1. Interior Accessible Paths of Travel”

### Related References

- [City of Toronto Workplace Design Standards](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to furniture and equipment to allow for a continuous, unobstructed route providing interior access to elements and spaces. Furniture and equipment should not create obstacles along interior *accessible paths of travel*.

#### Benches and Seats

Where benches and seats (chairs) are provided, they should be designed to have a variety of *accessible* options that include seating with and without back support and armrests. Where open ended benches are provided, they should provide space to allow persons using *mobility devices* to side transfer. Where armrests are provided they should have rounded edges, be easily graspable, and free from obstructions.

#### Tables

Where tables are provided, they should have *clear floor space* between adjacent tables and on ends that connect to interior *accessible paths of travel* to allow persons using *mobility devices* to avoid the risk of creating an obstruction. Tables should provide an extension that has underside knee and toe space for persons using *mobility devices*.

## Requirements

### (1) Accessible Path of Travel:

Furniture and equipment should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section “2.1.1. Interior Accessible Paths of Travel”.

### (2) Benches and Seats:

Where benches and seats, “Figure 2.6.3-A Seating”, are provided, they should:

- (a) Be fixed, or non-fixed that have wheels or castors;
- (b) Have a seat that:
- Is 460 mm *A.F.F.*;
  - Is 360 mm to 460 mm deep; and
  - Has foot space under the bench or seat in order to allow individuals to lean forward to stand;
- (c) Have back support that:
- Is 450 mm minimum *A.F.F.*; and
  - Is angled 5 to 15 degrees back from the vertical;
- (d) Have armrests that:
- Are 600 mm *A.F.F.*;
  - Have rounded edges;
  - Are stationary or adaptable; and
  - Are made from materials that are durable and easily graspable; and
- (e) Have *colour/brightness contrast* from the surrounding environment.

### (3) Tables:

Where tables, “Figure 2.6.3-B Tables”, are provided, they should:

- (a) Have a surface height that is 760 mm to 860 mm *A.F.F.*, where fixed;

- (b) Have knee and toe space for a front approach that is 735 mm minimum high *A.F.F.* at the front edge, 500 mm minimum deep, and 900 mm minimum wide;
- (c) Where provided, coffee tables that have a surface that is 510 mm minimum *A.F.F.*; and
- (d) Have *colour/brightness contrast* from the surrounding environment.

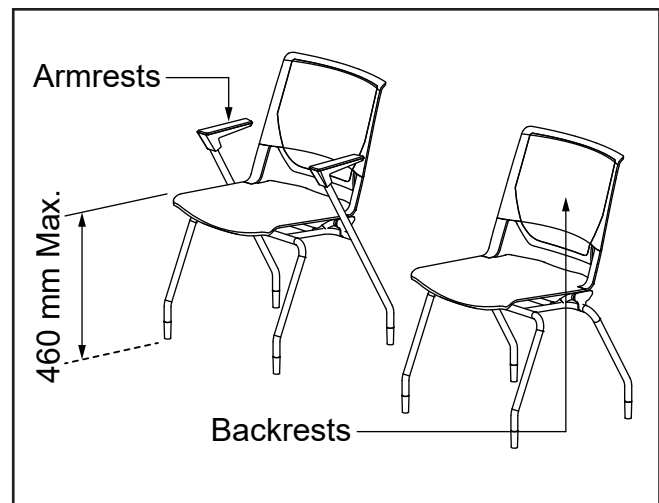


Figure 2.6.3-A Seating

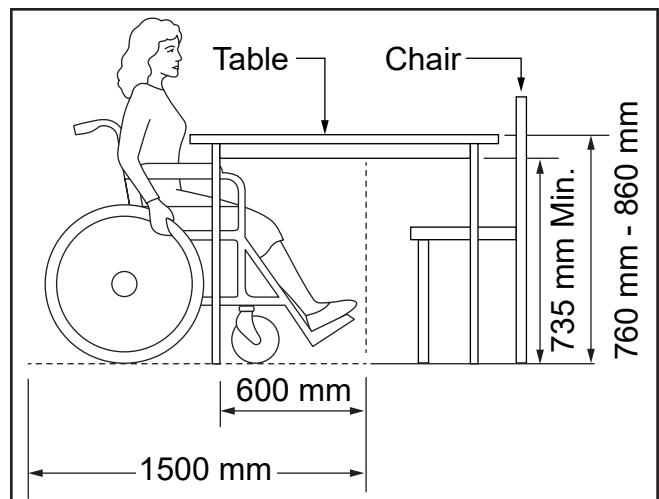


Figure 2.6.3-B Tables

## 2.6.4. Mail and Drop Boxes

### Rationale

Mail and drop boxes should be designed to be *accessible* and usable by all individuals. Specialized facilities that have mail and drop boxes should have *accessible* space and reach range dimensions.

### Application

The scope of this section applies to providing access to interior mail and drop boxes operated by a building owner and not those operated by Canada Post. The design of mailboxes owned and operated by Canada Post should meet the criteria in their national standards and do not need to meet the criteria in this section.



### Related Sections

- [Reserved]

### Related References

- [Reserved]

### Key Considerations

#### Design

The design of mail and drop boxes should meet the needs of the intended individuals, including persons using *mobility devices*, as well as, the functional needs of the specialized area.

### Requirements

#### (1) Design:

Mail and drop boxes should be designed to:

- (a) Where located at interior specialized areas, including residential facilities such as apartment buildings, have mail slots for letters and packages that:
  - (i) Have a swing door that has a lock, or be an open shelf that is 420 mm maximum deep;
  - (ii) Are located between 610 mm to 1050 mm maximum *A.F.F.*;
- (b) Have 500 mm maximum reach range, and 600 mm maximum grasp reach range to an object or item that:
  - (i) Is between 460 mm to 1050 mm *A.F.F.* for a front approach; or
  - (ii) Is between 860 mm to 1050 mm for a side approach;
- (c) Be recessed within a wall;

- (d) Have a *clear floor spaces*, “[Figure 2.6.4-A Mail and Drop Boxes](#)”, that is 735 mm high, 600 mm deep, and 900 mm wide minimum for a front approach; and
- (e) Have a clear turning space that is 2500 mm minimum in diameter.

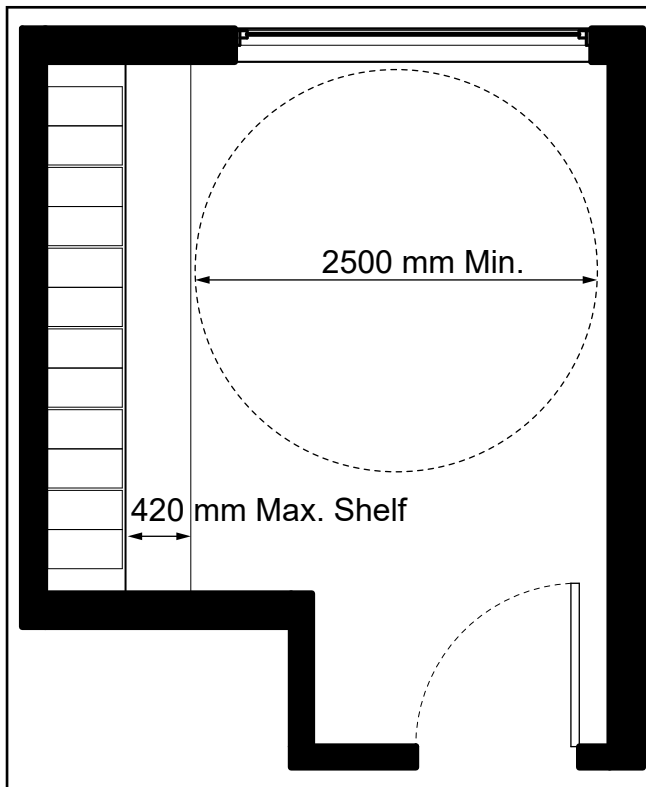


Figure 2.6.4-A Mail and Drop Boxes

## 2.6.5. Mirrors

### Rationale

Mirrors should be designed to be usable by all individuals. They should be installed in simple and intuitive areas that contribute to the safety, security and enjoyment of the space. Flat wall mirrors should not be located at the end of corridors or hallways. The use of convex mirrors are more useful at intersections for safety and security. When mirrors reflect interior *accessible paths of travel* they create the illusion that the path is continuing which makes navigation and wayfinding more challenging.



### Related Sections

- [Reserved]

### Related References

- [Reserved]

### Key Considerations

#### Design

Where mirrors are located above furniture, fixtures and equipment, they allow individuals to view their upper body while full-length mirrors allow individuals to view their whole body. All mirrors help to reflect views and light. Lighting should not cause any surface *glare* on mirrors or interfere with the reflection. Surface *glare* will further diminish the sight of a person and will inhibit their ability to navigate the space. Patterned or antiqued mirrors should not be provided because they create visual distortion. Mirrors should be securely wall mounted. Free standing or tilted mirrors should not be provided because they create the risk of hazards. Convex or concave-type mirrors should be provided at interior *accessible paths of travel*, and be installed for safety and security.

### Requirements

#### (1) Design:

Mirrors should be designed to:

- (a) Have a frame that has *colour/brightness contrast* from adjacent surfaces;
- (b) Have lighting that:
  - (i) Has even quality and distribution; and
  - (ii) Is directed away from the mirror surface; and

- (c) Include convex-type mirrors at interior *accessible paths of travel*, including at intersections, installed for safety and security.

## 2.6.6. Self-Service Kiosks

### Rationale

Self-service kiosks provide self-service access to interactive devices to allow individuals to initiate and/or conduct automated activities that would otherwise require on-site assistance to obtain services. They should be designed to have *accessible* space and reach range dimensions. Self-service kiosks should be integrated into a facility's *signage* and *wayfinding* strategy. Any visual displays should consider the use of audible instructions, access to a service intercom or phone that can be used to aid persons who are blind or have low vision to use the device. Any *signage* or operating instructions should also be included as raised *tactile* text and/or braille.

### Application

The scope of this section applies to interactive kiosks such as computer terminals featuring specialized hardware and software that provides access to information and applications for communication, commerce, entertainment or education using touch-screen or keypad technology. This section also applies to vending machines and automated banking machines.



### Related Sections

- “2.1.1. Interior Accessible Paths of Travel”
- “3.2.1. Signage and Wayfinding Systems”
- “3.2.3. Self-Service Interactive Devices”
- “3.3.3. Controls and Operating Mechanisms”

### Related References

- CSA B651.2-07 Accessible Design for Self-Service Interactive Devices
- CSA B651.1-09 Accessible Design for Automated Banking Machines

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to self-service kiosks to allow for a continuous, unobstructed route providing interior access to elements and spaces. Self-service kiosks should not create obstacles along interior *accessible paths of travel*.

#### Clear Floor Spaces

*Clear floor spaces* should be provided at self-service kiosks to create unobstructed, level floor areas that are sized to provide the space for persons using *mobility devices* to use the self-service safely and independently. The size of the *clear floor space* should be adjusted depending on the intended approach (front, side).

### Design

The design of self-service kiosks should meet the needs of the intended individuals, including persons using *mobility devices*, persons who are blind or have low vision, persons who are deaf, deafened or hard of hearing.

### Communication and Information Systems

Communication and information systems, such as *signage and wayfinding*, information, visual systems and directories, and *assistive listening systems*, should be provided at self-service kiosks. They should be designed to communicate necessary information effectively to all individuals and be easy to understand. Audio and visual signals, as well as, *vibro-tactile devices (haptic technology)* should be provided to communicate and inform persons who are deaf, deafened or hard of hearing, persons with low to no vision which self-service they are engaging with.

### Signals and Controls

Signals and controls, such as volume control, should be provided at self-service kiosks. Signals and controls should be designed to have *accessible* space and reach range dimensions.

### Requirements

#### (1) Accessible Path of Travel:

Self-service kiosks should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section “2.1.1. Interior Accessible Paths of Travel”.

#### (2) Clear Floor Spaces:

Self-service kiosks should provide *clear floor spaces* that:

- (a) Are 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach.

#### (3) Design:

Self-service kiosks should be designed to:

- (a) Be able to plug headphones or earbuds into;
- (b) Have 500 mm maximum reach range, and 600 mm maximum grasp reach range to an object or item that:
  - (i) Is between 460 mm to 1050 mm *A.F.F.* for a front approach, “[Figure 2.6.6-A Forward Reach at an ATM](#)”; or
  - (ii) Is between 860 mm to 1050 mm for a side approach, “[Figure 2.6.6-B Side Reach at an ATM](#)”;
- (c) Have knee and toe space that is 735 mm high, 600 mm deep, and 900 mm wide minimum for a front approach.

#### (4) Communication and Information Systems:

Self-service kiosks should provide communication and information systems that:

- (a) Have *tactile* characters and/or *Braille*;
- (b) Have options to enlarge text font size;
- (c) Include *vibro-tactile (haptic technology)*;
- (d) Have voice or sound cues where specific sequences or instructions are to be followed;
- (e) Meets the criteria in section “3.2.1. Signage and Wayfinding Systems”; and



- (f) Meets the criteria in section “3.2.3. Self-Service Interactive Devices”.

**(5) Signals and Controls:**

Self-service kiosks should provide signals and controls that:

- (a) Are mounted, “Figure 2.6.6-C Vending Machines”, between 460 mm to 1050 mm *A.F.F.* and are in a clearly identifiable location;
- (b) Include volume controls that meets the criteria in section “3.3.3. Controls and Operating Mechanisms”; and
- (c) Have *colour/brightness contrast* from adjacent surfaces, “Figure 2.6.6-D Signage”.

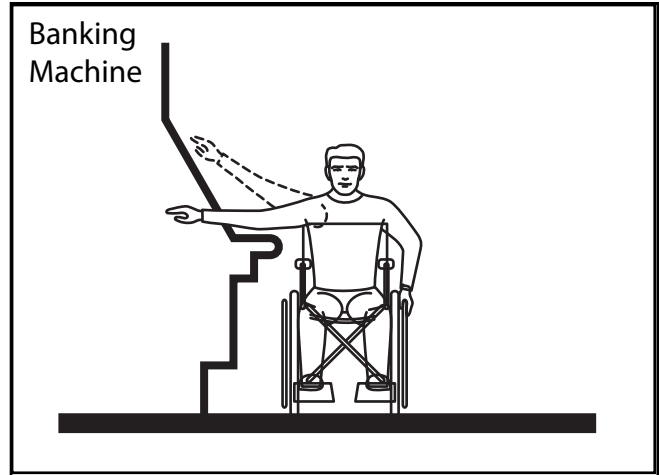


Figure 2.6.6-B Side Reach at an ATM

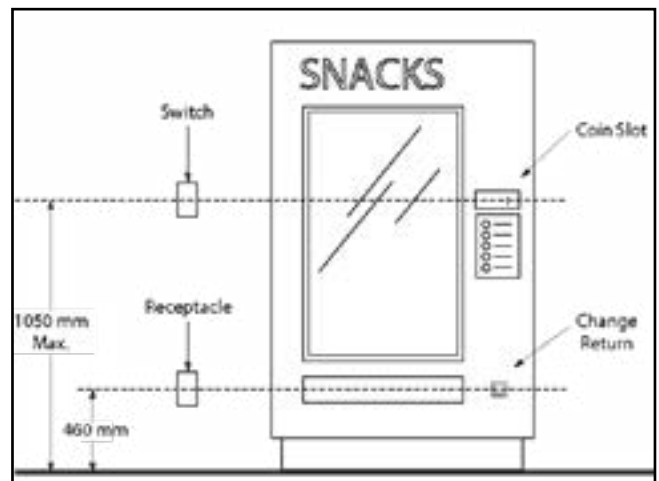


Figure 2.6.6-C Vending Machines

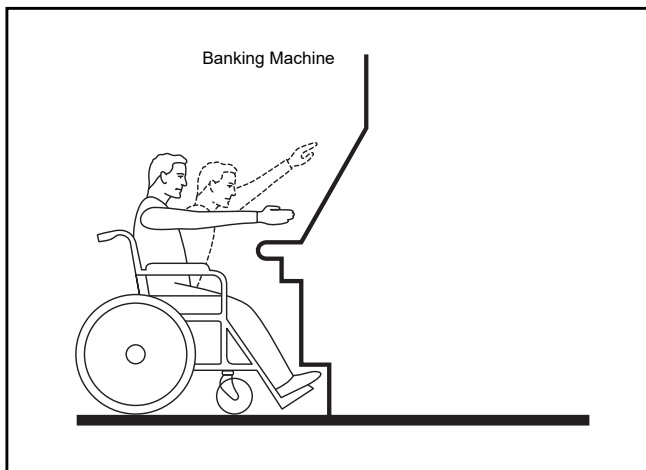


Figure 2.6.6-A Forward Reach at an ATM

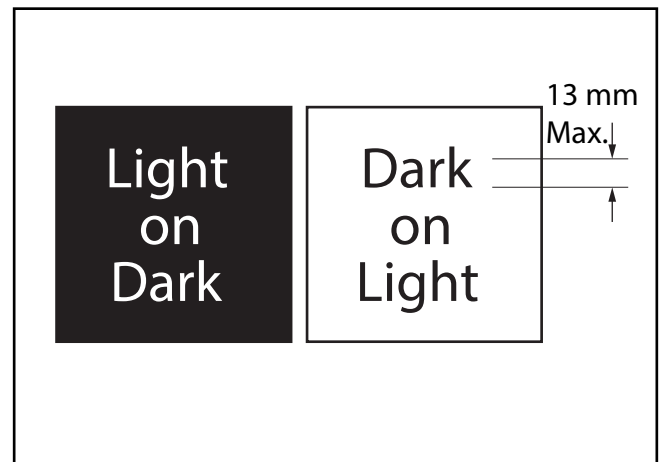


Figure 2.6.6-D Signage



# 2.7. Interior Materials and Finishes

## Section Summary

This section reviews the *accessible* design requirements for interior materials and finishes intended to be used by the public and City staff. Materials should have physical properties that meet the needs of the intended individuals and the functional needs of the space. Materials, including floor, wall and ceiling surfaces may be used as structural members. Finishes should have solid, rigid backings, acoustical qualities, fire resistance and thermal insulation values. They should provide aesthetic qualities to a space using colour, pattern and surface textures with consideration for how finishes meet and join adjacent finishes. Interior materials and finishes should help to improve safety, visibility, and detectability of elements and features in the built environment. Careful consideration of interior materials and finishes can also help with navigation and *wayfinding*.

## Contents in Section

### 2.7.1. Floor, Wall and Ceiling Surfaces

## 2.7.1. Floor, Wall and Ceiling Surfaces

### Rationale

Floor surfaces, wall and ceiling surfaces should be durable, comfortable and safely support interior *accessible paths of travel*. Wall surfaces should be resistant to wear and cleanable. Ceiling surfaces should be relatively *maintenance free*. Materials and finishes should be provided on floor, wall and ceiling surfaces that have consideration for natural and artificial lighting, *wayfinding*, and acoustics.

### Application

This section applies to floor, wall and ceiling surfaces.



### Related Sections

- “1.6.2. Tactile Attention Indicators”
- “1.6.3. Tactile Direction Indicators”
- “3.2.1. Signage and Wayfinding Systems”
- “3.3.1. Acoustics”

### Related References

- [Strategy and Standards for Office Space and Ergonomics - Building Services](#)

### Key Considerations

#### Materials and Finishes

Materials and finishes should be provided on floor, wall and ceiling surfaces that enhance the functional and aesthetic intent, as well as the usability for all persons. Excessive light and uncontrolled brightness can cause *glare* from a direct source or be reflected from a surface creating a range of responses from visual annoyance, discomfort, to visual loss for all persons, especially persons with low vision. Floor, wall and ceiling surfaces should be matte, honed, flamed, or brushed to reduce *glare* from natural and artificial lighting.

Avoid bold patterns, especially on floor and wall surfaces. The visual over-stimulation can exacerbate confusion for some older adults or those with cognitive disabilities. *Colour/brightness contrast* should be used to highlight key design elements, whereas camouflage should be used to reduce unwanted use and out of bound areas.

Pattern and texture may also be provided. Surface textures can be used in conjunction with *colour/brightness contrast* to define potential hazards or indicate special features such as an *accessible* viewing area or *wayfinding* decision point.

Texture can be used to clearly define boundaries of materials, like carpeting or floor tiles, and should enhance safety by defining the junction between walls and floors, or defining primary and secondary *accessible paths of travel* in large facilities such as, civic buildings or long term care facilities with long corridors.

### Wayfinding

*Wayfinding* should be provided on floor, wall and ceiling surfaces. *Wayfinding* uses cognitive and perceptual information to help a person to understand where they are located and how to reach their destination. Strategic use of *colour/brightness contrast* can help with orienting persons within the space. Where *tactile walking surface indicators* are provided on floor surfaces, they should be *can detectable* to help with navigation.

### Acoustics

Acoustics should be provided on floor, wall and ceiling surfaces. Acoustical properties of a space can help persons who are blind or have low vision navigate the environment. Managing sound levels and reverberation helps to create more acoustically comfortable environments for persons who are deaf, deafened or hard of hearing with residual hearing, while supporting neurodiversity.

## Requirements

### (1) Materials and Finishes:

- Floor, wall and ceiling surfaces should provide materials and finishes that:
- (a) Are matte, honed, flamed, or brushed to reduce *glare* from natural or artificial lighting;
  - (b) Have colours that improves safety, visibility, and detectability of elements and features;
  - (c) Where provided, have patterns that:
    - (i) Are minimal or simple;
    - (ii) Are non-directional;
    - (iii) Have low *colour/brightness contrast*;
    - (iv) Only have single, not multiple designs; and
    - (v) Are only used on feature or accent surfaces;
  - (d) Have *colour/brightness contrast* from adjacent surfaces including between:
    - (i) Floor to wall surfaces;
    - (ii) Floor to folding partitions; and
    - (iii) *Floor to tactile walking surface indicators*;
    - (iv) Wall surfaces to doors or door frames, except where the door does not lead to an *accessible path of travel*;
    - (v) Wall surfaces to window frames or sills;
    - (vi) Wall surfaces to elevator doors;
    - (vii) *Wall surfaces to signage*; and
    - (viii) Ceiling surfaces to *signage*, where *signage* is wall mounted;
  - (e) Where provided on floor surfaces, have tiles, bricks or pavers that:

- (i) Are 6 mm maximum wide; and
  - (ii) Are level to reduce the risk tripping hazards;
- (f) Where provided on floor surfaces, have carpets, “[Figure 2.7.1-A Carpet Variation](#)”, that:
- (i) Have low level loop construction (10 or 12 gauge);
  - (ii) Have a pile height that is 13 mm maximum;
  - (iii) Have non-static fibres;
  - (iv) Are firmly glued to sub-floor and secured in place;
  - (v) No additional padding;
  - (vi) Properly trimmed around floor box, recessed wire ways, and wire molds; and
  - (vii) Help to reduce visual confusion and facilitate *wayfinding* by using *colour/brightness contrast* between seasonal (winter) mats and runners, and adjacent floor surfaces;
- (g) Where provided have textures that:
- (i) Are located on wall surfaces that are smooth, and non-abrasive;
  - (ii) Are used in conjunction with *colour/brightness contrast* to define potential hazards or indicate special features such as, boundaries between floor and wall surfaces, primary and secondary *accessible paths of travel* throughout a large area, and indicate *wayfinding* decision points or entry points to common areas;
  - (iii) Are clearly detectable both visually and physically from the surrounding surface without use of thresholds; and
- (h) Limit and/or eliminate scents from off-gassing materials in all areas that receive general interior *maintenance*.
- (2) Wayfinding:**
- Floor surfaces should provide wayfinding that:
- (a) Where provided have *tactile walking surface indicators* that:
    - (i) Meet the criteria in section “[1.6.2. Tactile Attention Indicators](#)”; and
    - (ii) Meet the criteria in section “[1.6.3. Tactile Direction Indicators](#)”.
- (3) Acoustics:**
- Floor, wall and ceiling surfaces should provide acoustics that:
- (a) Meet the criteria in section “[3.3.1. Acoustics](#)”.

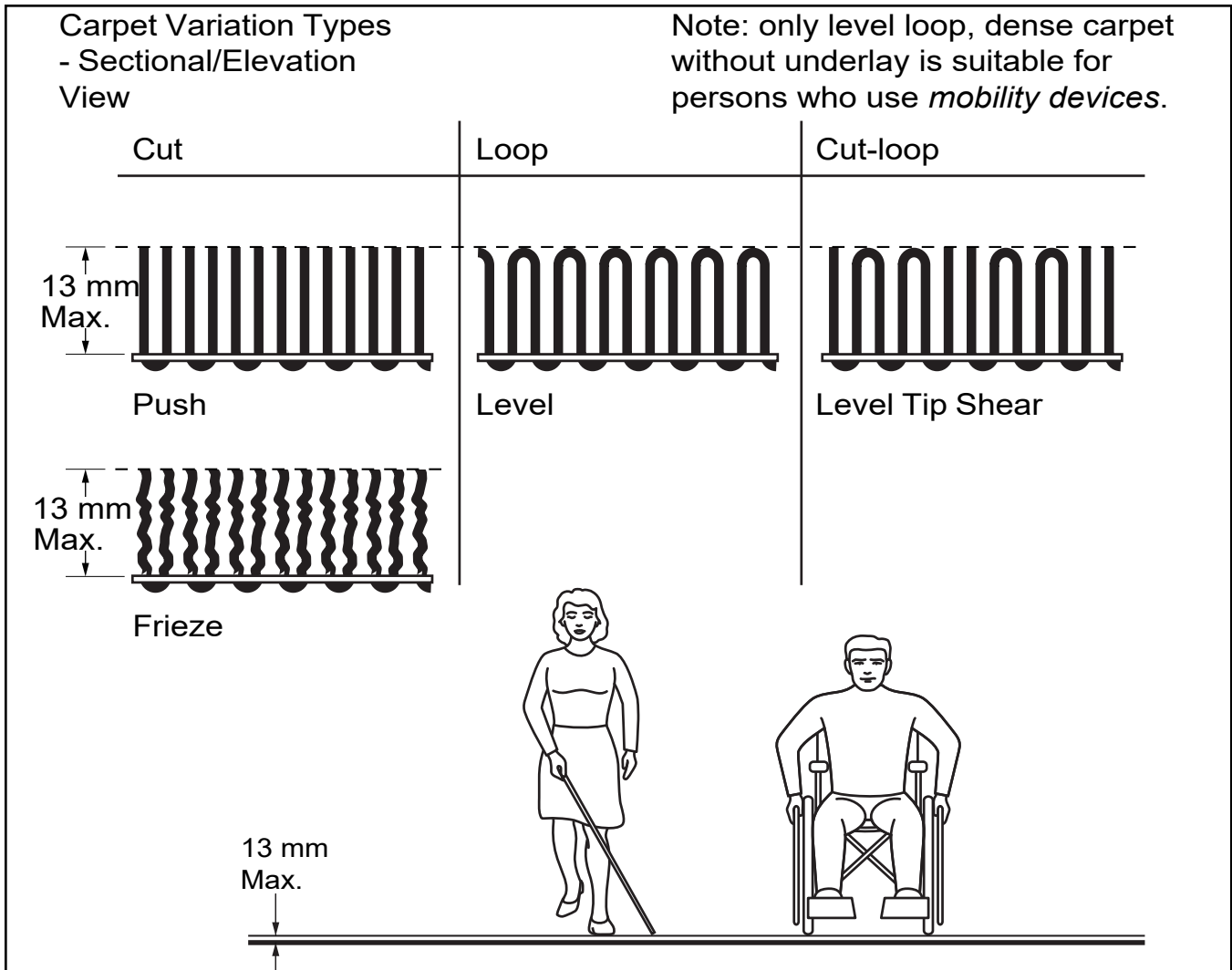


Figure 2.7.1-A Carpet Variation





# Systems and Controls

# 3



# 3.1. Lighting

## Section Summary

This section reviews the *accessible* design requirements for lighting intended to be used by the public and City staff. *Glare*, inadequate and uneven lighting levels will contribute to a less usable and *accessible* environment. A reduction in *glare* and the provision of adequate and even lighting levels allow for individuals, including persons with low vision or for those who are deaf, deafened or hard of hearing and heavily rely on their visual field, to better perceive the environment around them. However, persons with light sensitivity or photophobia will be more sensitive to higher lighting levels. As a result, consideration should also be given to provide persons with the option to control their lighting levels.

## Contents in Section

### 3.1.1. Interior Lighting

### 3.1.2. Exterior Lighting

### 3.1.1. Interior Lighting

#### Rationale

Interior lighting should provide both natural and artificial lighting to enhance the quality of lighting, which helps to improve safety, visibility and detectability of elements and features within the built environment. Interior lighting should be designed to reduce *glare* on surfaces and be evenly distributed. Where the quality of interior lighting does not meet the needs of the intended individuals or the functional needs of a space, the risk of health hazards are increased such as eye strain, eye discomfort, headaches, Seasonal Affective Disorder (SAD) and depression. Where there is a transition between spaces, interior lighting levels should be consistent to reduce the risk of pupillary light reflex or disorientation.



#### Related Sections

- "2.6.2. Windows and Window Hardware"

#### Related References

- [Lighting Handbook](#)
- [Best Practices Effective Lighting](#)

#### Key Considerations

##### Natural Lighting

Natural lighting should be provided as a part of the interior lighting plan. Natural lighting brings daylight into a space using exterior glazing, such as windows or skylights, and should be designed to reduce *glare* on floor, wall and ceiling surfaces.

##### Artificial Lighting

Artificial lighting should be provided as a part of the lighting plan. Maintaining consistent lighting levels helps to reduce risks and improves safety, visibility and detectability of elements and features. Artificial lighting should be designed to create an even distribution at floor level and minimize pools of light or shadows.

Rooms and spaces should have multi-zoned lighting fixtures and options for spot lighting fixtures to increase visibility to speakers and the gestures of Sign Language Interpreters, or general task lighting fixtures. Artificial lighting that provides multiple pinpoints of high intensity lighting should be avoided. They increase *glare* and leave an afterimage on the retina. Lighting fixtures should use lenses and filters to evenly diffuse the light and reduce *glare*.

Additional artificial lighting that provides upward and downward lighting options, such as wall sconces, should be provided to help identify displays within exhibition, museum and gallery facilities and highlight individual exhibit items.

Artificial lighting should ensure that the colour temperature of light emits as much of a full spectrum to aid in edge and colour definition. Where fluorescent or quartz light sources with a high blue content, or cool colour, are used, they should be offset with incandescent or equivalent LED lights, or warm colour. This ensures that the warm end of the spectrum provides appropriate colour and identification of elements and features within the built environment.

## Requirements

### (1) Natural Lighting:

Interior lighting should provide natural lighting that:

- (a) Uses glazed windows or skylights that meet the criteria in section "2.6.2. [Windows and Window Hardware](#)"; and
- (b) Reduces *glare* on all surfaces.

### (2) Artificial Lighting:

Interior lighting should provide artificial lighting that:

- (a) Maintains consistent lighting levels;
- (b) Creates an even distribution at floor level and minimizes pools of light or shadows;
- (c) Reduces *glare* on all surfaces;
- (d) Includes lighting fixtures that:
  - (i) Utilize diffused lenses or filters; and
  - (ii) Have adjustable lighting levels;

- (e) Includes multi-zoned lighting fixtures at large interior specialized areas;
- (f) Includes options for spot lighting fixtures that increase visibility to speakers and the gestures of Sign Language Interpreters;
- (g) Includes task lighting fixtures, such as desk lamps, that have controls that adjust the direction of the light to help personalize lighting levels on work surfaces; and
- (h) Has lighting levels in various locations that meet the criteria in "[Table 3.1.1-A Minimum Interior Lighting Levels \(lux\)](#)".

Table 3.1.1-A Minimum Interior Lighting Levels  
(lux)

Location	Minimum Lighting Levels (lux)
Interior Paths of Travel	200
Elevator Lobby and Cab	100 (Measured at threshold of the elevator)
Stairs, <i>Ramps</i> , Escalators	200
Washrooms	100
Waiting Areas	200
Service Counters	300 (at task plane)
Offices and Work Areas	500
Lounges and Common Rooms	200
Computer Work Stations	300
<i>Signage</i>	200
Card Access and Building Security Systems	150 (LCD screens) 100 (at controls)
Task Lighting	200

## 3.1.2. Exterior Lighting

### Rationale

Exterior lighting should provide artificial lighting to enhance the quality of lighting outside of a building, exterior paths of travel, *pedestrian crossings*, parking, vehicular arrival and departure areas and exterior specialized areas. It helps to improve safety, visibility and detectability of elements and features within the built environment. Exterior lighting fixtures should withstand the affects of inclement weather.

### Application

The scope of this section does not apply to exterior areas such as vehicular roadways.



### Related Sections

- [Reserved]

### Related References

- [Lighting Handbook](#)
- [Best Practices Effective Lighting](#)

### Key Considerations

#### Artificial Lighting

Artificial lighting should be provided as a part of the exterior lighting plan. Maintaining consistent lighting levels helps to reduce risks and improves safety, visibility and detectability of elements and features. Artificial lighting should be designed to create an even distribution at ground level and minimize pools of light or shadows. It should reduce *glare* on all surfaces and allow independent navigation and *wayfinding*.

### Requirements

#### (1) Artificial Lighting:

Exterior lighting should provide artificial lighting that:

- (a) Creates an even and consistent distribution at ground level;
- (b) Maintains a 2100 mm height, light cut-off angle and fixture spacing, "[Figure 3.1.2-A Controlling Lighting Direction and Glare](#)";
- (c) Where fixtures are below 1525 mm, they should have direct light to ground surfaces and be shielded to reduce *glare*, "[Figure 3.1.2-B Controlling Lighting Direction and Glare](#)";
- (d) Reduces *glare* on all surfaces;

- (e) Are on posts that are mounted high enough to clear snow accumulation; and
- (f) Has lighting levels in various locations that meet the criteria in "Table 3.1.2-A Minimum Exterior Lighting Levels (lux)".

Table 3.1.2-A Minimum Exterior Lighting Levels (lux)

Location	Minimum Lighting Levels (lux)
Exterior paths of travel (including stairs and <i>ramps</i> )	30
<i>Accessible</i> Parking	50
<i>Accessible path of travel</i> from <i>accessible</i> parking to building <i>entrance</i>	50
<i>Passenger Pick-Up and Drop-Off</i>	50
<i>Entrances</i>	50
Main Driveway	30
Exterior <i>Signage</i> (building sign, directional and traffic)	30

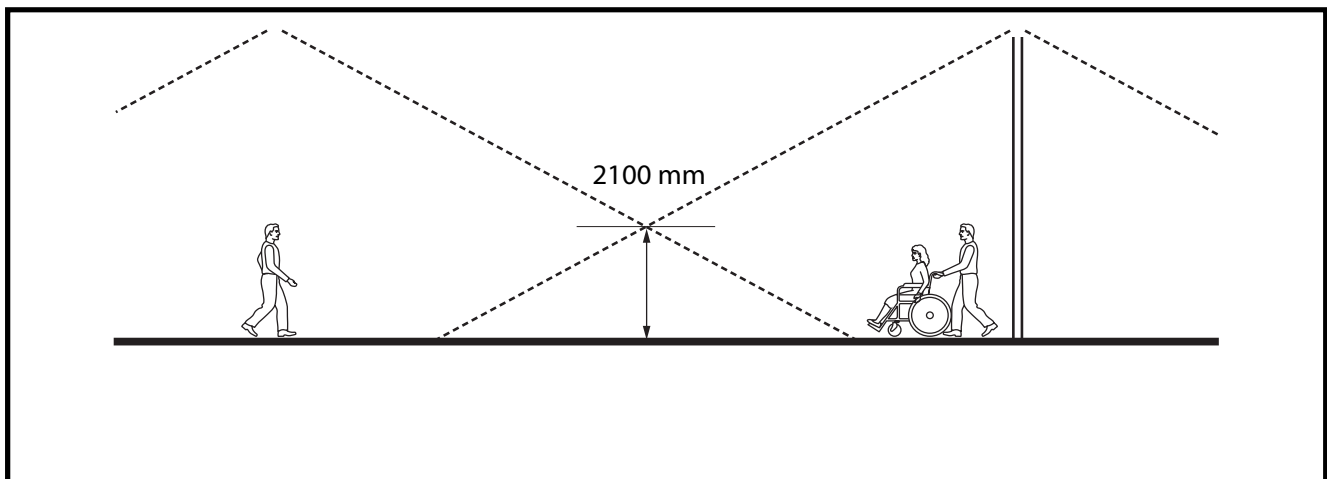


Figure 3.1.2-A Controlling Lighting Direction and Glare



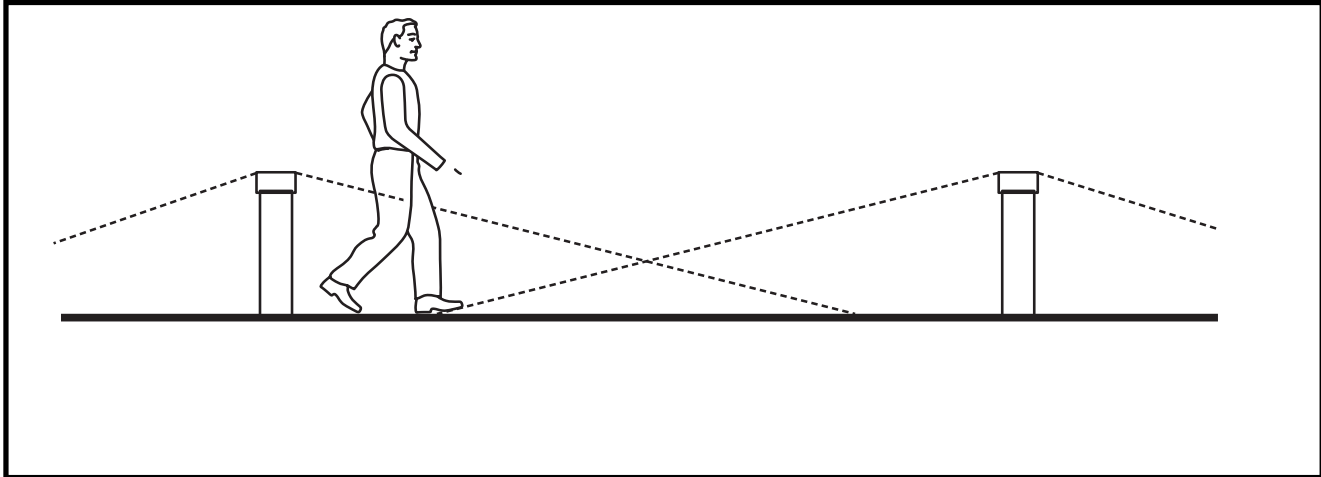


Figure 3.1.2-B Controlling Lighting Direction and Glare



# 3.2. Communication and Information Systems

## Section Summary

This section reviews the *accessible* design requirements for communication and information systems intended to be used by the public and City staff. Communication and information systems should be designed to communicate necessary information effectively to all individuals and be easy to understand. For persons who are blind or have low vision, printed content should be provided in an audible format. Where as, for persons who are deaf, deafened or hard of hearing, the equivalent audible information should be provided in print form or through American Sign Language (recorded or live). Communication and information systems should enhance safe and independent navigation throughout the built environment and interior and exterior *accessible paths of travel*.

## Contents in Section

**3.2.1. Signage and Wayfinding Systems**

**3.2.2. Two-Way Communication Systems**

**3.2.3. Self-Service Interactive Devices**

**3.2.4. Public Address Systems**

**3.2.5. Assistive Listening Devices**

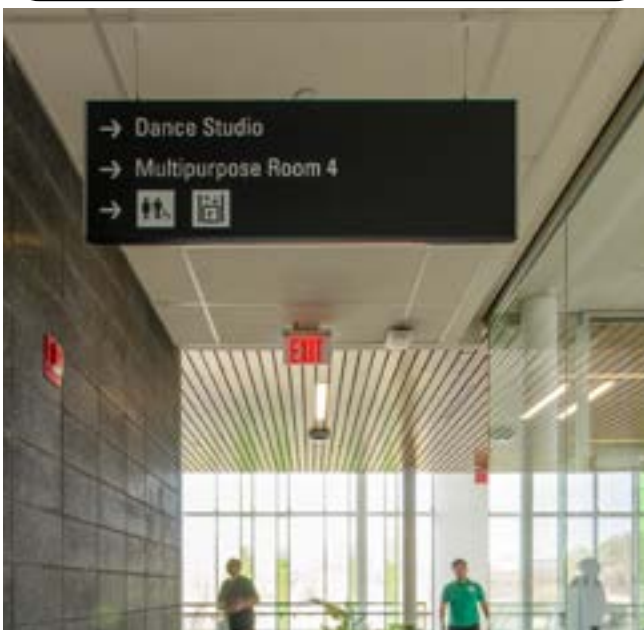
**3.2.6. Accessible Public Telephones**

### 3.2.1. Signage and Wayfinding Systems

#### Rationale

*Signage* and *wayfinding* systems should be used for identification purposes, to draw attention to safety hazards and to help individuals safely and independently navigate throughout the built environment including interior and exterior *accessible paths of travel*. It should clearly indicate the type of facilities available.

*Signage* is a component of *wayfinding* and is a means of communicating information about the built environment and can include printed text, *tactile signage* and pictograms. *Wayfinding* uses cognitive and perceptual information to help a person reach a destination. A spatial problem-solving process based upon consistent use and organization of definite sensory cues in the environment that persons use to understand where they are, know where their desired location is, and know how to get to that destination from their present location.



#### Related Sections

- “1.6.2. Tactile Attention Indicators”
- “1.6.3. Tactile Direction Indicators”
- “2.6.6. Self-Service Kiosks”
- “3.1.1. Interior Lighting”

#### Related References

- [Toronto TO360 Wayfinding](#)
- [Complementary Wayfinding Systems](#)
- [Corporate Identity Program Manual](#)
- [Corporate Identity Program: Signage](#)

#### Key Considerations

##### Installation

*Signage* and *wayfinding* systems should be installed, or mounted, on the ground or floor, wall and/or ceiling surfaces. To avoid risk of hazards, *signage* should not be mounted on swinging doors, especially those that have *tactile* characters and/or *Braille*. Where mounted on ceiling surfaces, overhead clearance should be provided below, and it should have larger text to provide maximum legibility of essential information. *Tactile signage* and digital *signage* that is interactive should be mounted within an *accessible* reach range and be adjacent to *clear floor space*.

##### Printed Signage

Where printed *signage* is provided for *signage* and *wayfinding* systems, it should have *colour/brightness contrast* from adjacent backgrounds and surfaces. The *colour/brightness contrast* of key elements in the built environment should be at least 50 percent, whereas the *colour/brightness contrast* on signs and pictograms should be at least 70 percent.

### Digital Signage

Where digital *signage* is provided for *signage* and *wayfinding* systems, it should be used to allow dynamic or changing messages. Alternative formats of the same information should be made available to individuals where digital *signage* is provided. Where digital *signage* is designed to be interactive, such as touch screen, it should be usable by all individuals and should consider how persons who are blind or have low vision can access the same information. Settings that allow individuals to customize their experience to enhance accessibility such as drop-down menus and adjustable *colour/brightness contrast* should be provided.

### Tactile Signage

Where *tactile signage*, such as *tactile* characters (raised print) and/or *Braille*, is provided on *signage* and *wayfinding* systems it should be designed for all individuals, especially persons with low or no vision. *Tactile* graphics are images that use raised surfaces so that individuals, especially persons who are blind or have low vision, can touch them. They may be used to communicate non-textual information such as maps, paintings, graphs, diagrams, and pictograms.

### Tactile Maps

Where *tactile* maps are provided for *wayfinding* systems, they should be placed at key points to make an environment intuitive. *Tactile* maps should help to allow persons to reach their destination, but also positively effect a persons experience within the environment. They should help individuals to understand where they are, know where their desired location is, and know how to get to that destination from their present location.

*Tactile* maps should help to reduce overall stress and frustration, increase efficiency and functionality of a space, and contribute to an environment that is easy to exit in case of emergency evacuation.

### Pictograms

Where pictograms, or icons, are provided on *signage* and *wayfinding* systems it should be used to help individuals recognize information quickly and easily. They should communicate ideas, meaning and function using a common visual language. The ISA, also known as the International Wheelchair Symbol, consists of a blue square overlaid in white with a stylized image of a person in a wheelchair. This sign depicts a stationary person with an emphasis on the wheelchair.

### Tactile Walking Surface Indicators

Where *tactile walking surface indicators* are provided for *wayfinding* systems, they should be designed to be *cane detectable* by persons with low or no vision using a *white cane* for navigation in the built environment.

## Requirements

### (1) Installation:

*Signage* and *wayfinding* systems should be installed on:

- (a) Floor surfaces;
- (b) Wall surfaces that:
  - (i) Are mounted 1200 mm *A.F.F.*, to the centre-line of the *tactile* portion;
  - (ii) Have 75 mm of clear space around the sign;
  - (iii) Where at doors, “[Figure 3.2.1-A Wall Mounted Room Signage](#)”, be installed on the latch side of doors, and be 140 mm to 160 mm from the edge of the door; and
  - (iv) Have a *clear floor space*, where *tactile* or digital *signage* that is interactive is provided, that is 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach; or
- (c) Ceiling surfaces that have the bottom edge of the sign mounted 2100 mm minimum *A.F.F.* to provide overhead clearance.

### (2) Printed Signage:

Where printed *signage* is provided for *signage* and *wayfinding* systems, it should:

- (a) Have *colour/brightness contrast*, “[Figure 3.2.1-B Colour/Brightness Contrast](#)”, from adjacent backgrounds and surfaces; and
- (b) Include text that:
  - (i) Has sans serif fonts;
  - (ii) Has arabic numerals;

- (iii) Uses uppercase letters with a stroke width to height ratio between 3:5 to 1:1;
- (iv) Uses lowercase letters and all other characters with a stroke width to height ratio of 1:5 to 1:10;
- (v) Has line spacing, measured between baselines of characters, 135% to 170%, rounding up to the nearest whole number; and
- (vi) Is sized to be legible at junctions.

### (3) Digital Signage:

Where digital *signage* is provided for *signage* and *wayfinding* systems, it should:

- (a) Allow dynamic or changing messages that displays information for minimum 10 seconds;
- (b) Have alternative formats of the information, such as *tactile* characters and audible;
- (c) Where audible, have plug in audio jack, voice activated intercom or a call for help feature;
- (d) Include text that:
  - (i) Has sans serif fonts; and
  - (ii) Has no red font colours on black backgrounds;
- (e) Have LED lights, such as white, yellow, green, or light blue, on a black background;
- (f) Have lighting levels that are 200 lux minimum at the surface of the sign that meets the criteria in section “[3.1.1. Interior Lighting](#)”; and
- (g) Includes interactive *signage* that:
  - (i) Has a touch screen;
  - (ii) Has customizable settings; and
  - (iii) Is *can be detectable*;

- (iv) Provides alternate formats of the equivalent information; and
- (v) Includes self-service kiosks that meet the criteria in section “2.6.6. Self-Service Kiosks”.

#### (4) Tactile Signage:

Where *tactile signage* is provided for *signage* and *wayfinding* systems, it should:

- (a) Be located at:
  - (i) Interior rooms; and
  - (ii) *Amenity* spaces;
- (b) Have smooth edges;
- (c) Include *tactile* characters that:
  - (i) Are between 16 mm to 50 mm high; and
  - (ii) Are raised 0.8 mm to 1.5 mm above the surface of the sign;
- (d) Include *Braille* that:
  - (i) Has Grade 1 *Braille* words at the bottom;
  - (ii) Is spaced 9.5 mm minimum from other *tactile* elements, where located below corresponding text or characters; and
- (e) Include *tactile* graphics, such as *tactile* maps, or pictograms.

#### (5) Tactile Maps:

Where *tactile* maps are provided for *wayfinding* systems, they should:

- (a) Have equivalent information as provided on printed maps, where provided.

#### (6) Pictograms:

Where pictograms are provided on *signage* and *wayfinding* systems, they should:

- (a) Help individuals recognize information quickly and easily;
- (b) Communicate ideas, meaning and function using a common visual language;
- (c) Include the International Symbol of Access (ISA) that has a blue square overlaid in white;
- (d) Are 150 mm high and wide;
- (e) Are raised 0.8 mm to 1.5 mm above the surface of the sign;
- (f) Are located above *tactile* characters; and
- (g) Be consistent with the recognized standards and the City’s Corporate Identity Program Signage Specifications.

#### (7) Tactile Walking Surface Indicators:

Where *tactile walking surface indicators* are provided for *wayfinding*, they should:

- (a) Have *tactile attention indicators* that meet the criteria in section “1.6.2. Tactile Attention Indicators”; or
- (b) Have *tactile direction indicators* that meet the criteria in section “1.6.3. Tactile Direction Indicators”.

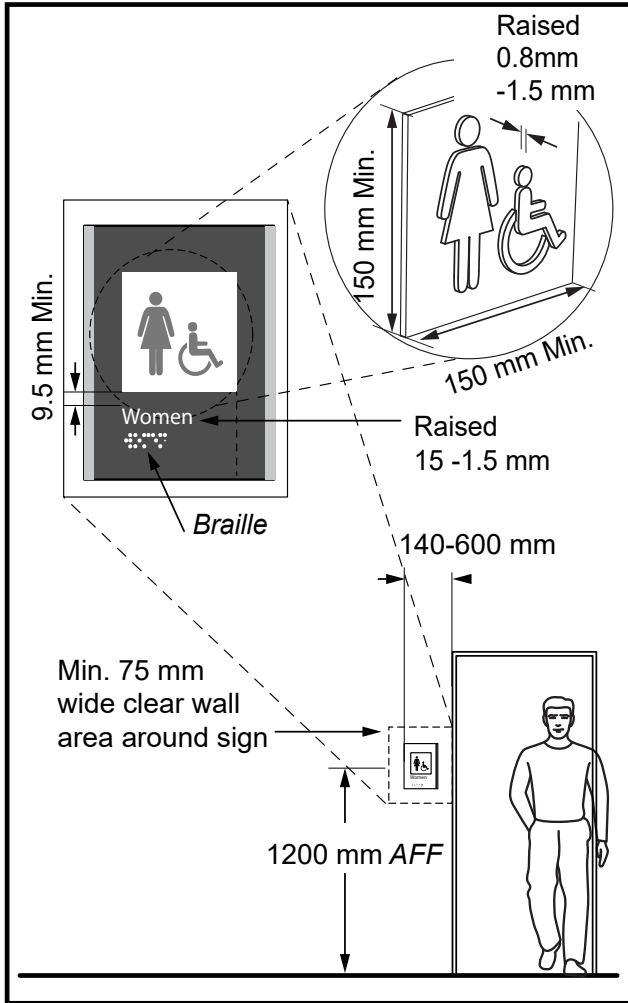


Figure 3.2.1-A Wall Mounted Room Signage

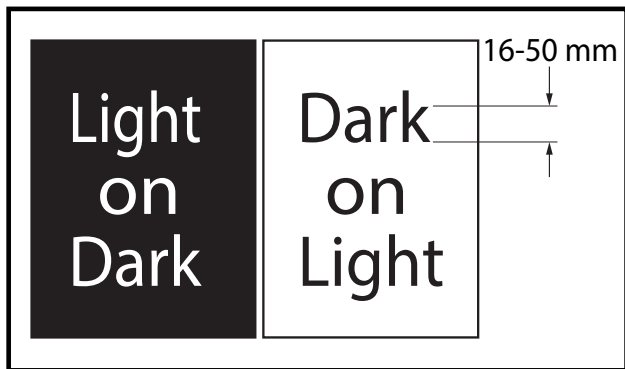


Figure 3.2.1-B Colour/Brightness Contrast



## 3.2.2. Two-Way Communication Systems

### Rationale

Two-way communication systems should be designed to support communication of information between individuals and receivers, such as building operators or emergency services (first responders).

### Application

This section applies to emergency and non-emergency two-way communication systems provided in elevators, and in *areas of rescue assistance* or where public telephones are provided.

### Related Sections

- “3.2.6. Accessible Public Telephones”
- “3.3.3. Controls and Operating Mechanisms”

### Related References

- [City of Toronto Corporate Accessibility Policy](#)

### Key Considerations

#### Design

Two-way communication systems should be user friendly and be *accessible* to all persons. Where emergency two-way communication systems are provided, they should provide audible and visible signals to indicate communication has been received and assistance is on the way. Additional *signage* should be provided to communicate information to ensure that emergency and non-emergency two-way communication systems are usable by all individuals. Two-way communication systems should be designed to be used with a closed fist without requiring tight grasping, pinching or twisting of the wrist. They should have *colour/brightness contrast* from adjacent surfaces so that persons with low vision can easily find and operate them.



## Requirements

### (1) Design:

Two-way communication systems should be designed to:

- (a) Be emergency or non-emergency two-way communication systems;
- (b) Have voice input and output;
- (c) Be hands-free with a speaker;
- (d) Be mounted at 1050 mm maximum A.F.F.;
- (e) Have a visual display;
- (f) Have volume enhancement on at least one machine of each type;
- (g) Have a coupling device for persons with hearing aids; and
- (h) Where public telephones are provided, they should meet the criteria in section ["3.2.6. Accessible Public Telephones"](#);
- (i) Include a TTY, ["Figure 3.2.2-ATTY"](#); and
- (j) Have *operable portions or controls* that meet the criteria in section ["3.3.3. Controls and Operating Mechanisms"](#).

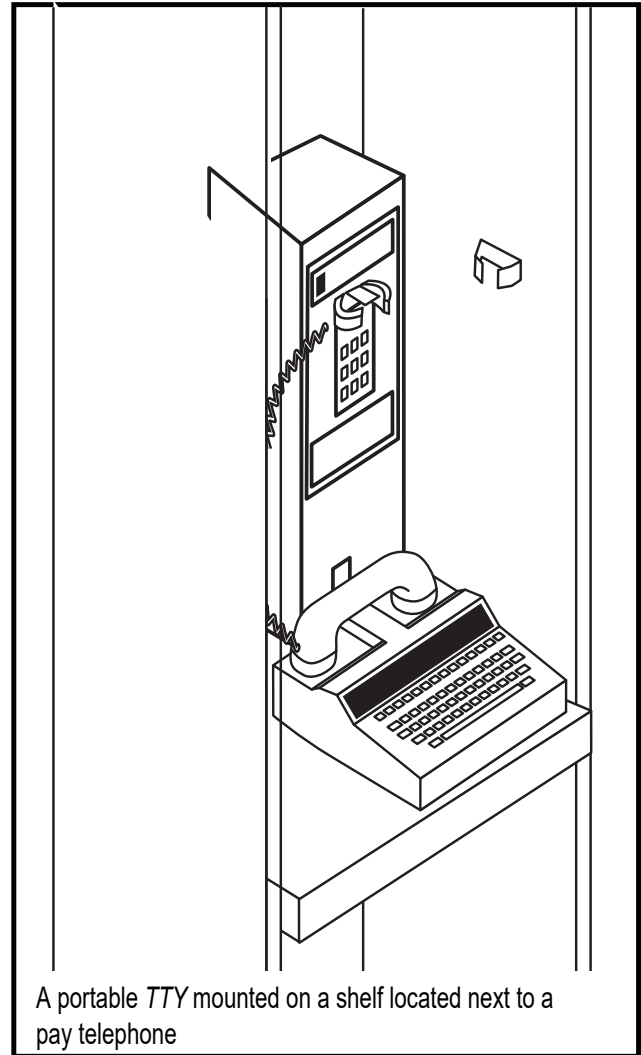


Figure 3.2.2-ATTY

### 3.2.3. Self-Service Interactive Devices

#### Rationale

Self-service interactive devices should be able to relay information in various formats in order to be able to be understood by all persons, especially those with low to no vision and those who are deaf, deafened or hard of hearing. The incorporation of audible and visual feedback, *tactile* characters or *Braille*, and where text is printed, helps ensure a wide variety of persons are able to get the information they need.

#### Application

The scope of this section applies to self-service interactive devices such as information, visual display and directory systems including kiosks and bank machines.



#### Related Sections

- “2.1.1. Interior Accessible Paths of Travel”
- “3.2.1. Signage and Wayfinding Systems”
- “3.3.3. Controls and Operating Mechanisms”

#### Related References

- [Display Guidelines](#)
- [CSA B651.2-07 Accessible Design for Self-Service Interactive Devices](#)

#### Key Considerations

##### Design

Self-service interactive devices should be designed to be usable and *accessible* by all persons.

##### Accessible Path of Travel

An interior *accessible path of travel* should be connected to visual display and directory systems to allow for a continuous, unobstructed route providing interior access to elements and spaces. Information, visual display systems and directories should not create obstacles along *accessible paths of travel*.

##### Clear Floor Spaces

*Clear floor spaces* should be provided at self-service interactive devices to create unobstructed, level floor areas that are sized to provide the space for persons using *mobility devices* to use the self-service safely and independently. The size of the *clear floor space* should be adjusted depending on the intended approach (front, side).

### Installation

Self-service interactive devices should be installed to be stable and only moved when an intended force is applied. This will ensure that the device will be self supported and will not have to be constantly adjusted or held upright.

### Signals and Controls

Signals and controls should be designed to have *accessible* space and reach range dimensions. For example, slots for cash dispensing at banking machines or ticketing machines. Where they have *operable portions or controls*, they should be designed to be used with a closed fist without requiring tight grasping, pinching or twisting of the wrist. They should have *colour/brightness contrast* from adjacent surfaces so that persons with low vision can easily find and operate them.

Audible and visual signals should be provided to communicate and inform persons who are deaf, deafened or hard of hearing, persons with low to no vision which element they are engaging with. They should provide feedback, using varying tones or vibro-*tactile* devices (haptic technology), to individuals to let them know when they have touched, tapped, or pressed a button, when they have successfully completed a task or where action is still required

### Signage

*Signage*, such as *tactile signage*, should be provided at self-service interactive devices. *Tactile signage*, such as *tactile* characters (raised print) and/or *Braille*, should be designed for all individuals, especially persons with low or no vision.

### Software

Software should be provided within self-service interactive devices that is easy and intuitive to use. Individuals should be able to follow instructions and interact with the interface instantly without an extended period of time to learn the software. This will ensure that all individuals are able to independently and quickly access the intended information or service. Software should only react to one input method at a time to avoid accidental signals disrupting the individuals interaction with the device. For example, when the keyboard is being used to input information the mouse or any other input method should become inactive, and vice versa.

### Requirements

#### (1) Design:

Self-service interactive devices should be designed to:

- (a) Meet the requirements in [CSA B651.2-07 Accessible design for self-service interactive devices](#).

#### (2) Accessible Path of Travel:

Self-service interactive devices should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section “2.1.1. Interior Accessible Paths of Travel”.

#### (3) Clear Floor Spaces:

Self-service interactive devices should provide *clear floor spaces* that:

- (a) Is 900 mm wide by 1500 mm long minimum for a front approach, or 900 mm wide by 2200 mm long minimum for a side approach.

**(4) Installation:**

Self-service interactive devices should be installed to:

- (a) Be stable;
- (b) Withstand the “tilt test” whereby the device will not fall over when tilted 10° from its upright position;
- (c) Withstand the “force test” whereby the device will:
  - (i) Not fall over when a force equal to 20%, rounding up to the nearest whole number, of the device weight is applied;
  - (ii) Withstand a 250 N maximum force that is applied in any direction; and
  - (iii) Be mounted 2000 mm maximum *A.F.F.*; and
- (d) Withstand the “force-on-self test” whereby the device will not fall over when a constant 800 N maximum downward force is applied.

**(5) Signals and Controls:**

Self-service interactive devices should provide signals and controls that:

- (a) Include *audible signals* that:
  - (i) Are activated by *controls*;
  - (ii) Are 20 decibels above the anticipated ambient noise level;
  - (iii) Are in plain language, with phased instructions;
  - (iv) Have varying tones and durations for successful completion and warning;
  - (v) Have an audio jack to initiate audio instructions and descriptions for graphic images central to the desired task to be completed; and

- (vi) Have the option to activate text captioning and descriptive video;

**(b) Include visual signals that:**

- (i) Are activated by *controls*;
- (ii) Are adjustable;
- (iii) Are equipped with an enlarge function to increase the scale and size of font on the screen;

**(iv) Are *glare* free; and****(v) Have sans serif fonts;****(c) Have controls and operating mechanisms that:****(i) Are 1050 mm maximum *A.F.F.*;****(ii) Are 500 mm maximum from the front edge of the obstruction, if any obstruction;****(iii) Where touchscreen, have *vibro-tactile* (haptic technology) feedback, and *tactile* controls; and****(iv) Have *operable portions or controls* that meet the criteria in section “3.3.3. Controls and Operating Mechanisms”.****(6) Signage:**

Self-service interactive devices should provide *signage* that:

- (a) Includes *tactile signage*;
- (b) Includes alternative formats of the same information; and
- (c) Meets the criteria in section “3.2.1. Signage and Wayfinding Systems”.

**(7) Software:**

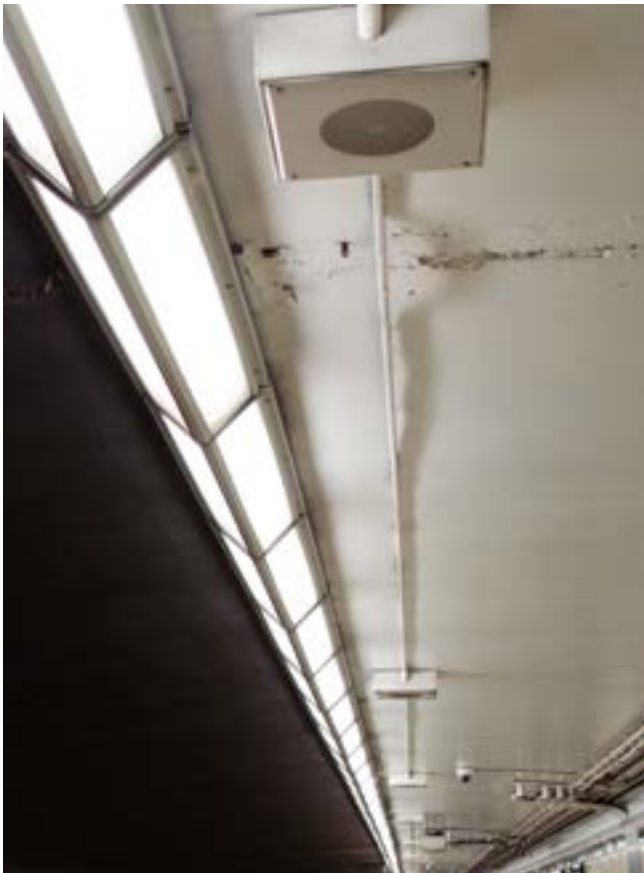
Self-service interactive devices should provide software that:

- (a) Directs individuals attention to complete one task at a time;
- (b) Allows individuals to undo an unintended action; and
- (c) Allows for additional time to complete a task and ask a user, “Do you require more time to complete the task?”.

### 3.2.4. Public Address Systems

#### Rationale

Public address (PA) systems are electronic systems including microphones, amplifiers, loudspeakers and related equipment. They increase the apparent volume (loudness) of a persons voice, musical instrument or other acoustic sound source or recorded sound or music. PA systems are an essential element in the built environment to allow critical information, emergency or safety, to be audible at a distance or over a large area. Emergency or safety related information should also be communicated in alternative formats. They should be designed so that messages are effectively heard and understood by all individuals, including those who may be deaf, deafened or hard of hearing.



#### Related Sections

- [Reserved]

#### Related References

- [Reserved]

#### Key Considerations

##### Design

Public address systems should be designed to have effective sound coverage in all required areas with acceptable output level from all speakers to nearby audiences. The volume of the speakers should be louder than the expected ambient noise of the room so that the information from the public address system can be clearly heard. In order to ensure safety for all individuals within a building, especially persons who are deaf, deafened or hard of hearing, where emergency or warning information is being announced it should be preceded by a distinguishable warning tone and alternative formats of the audible information should be provided in the form of visual information. For example, American Sign Language or written text messages presented on marquee boards or television screens.

Paging or call systems should be used with discretion and only where the intended individuals, such as nurses, staff, or security, might be located. For persons who are deaf, deafened or hard of hearing, or for persons with cognitive disabilities, especially for persons who have difficulty managing sensory stimuli, constant paging, loud noises and reverberation from speakers throughout a space may be distracting and interfere with an individuals ability to focus and hinder any residual hearing.

## Requirements

### (1) Design:

Public address systems should be designed to:

- (a) Loud speakers located to cover the desired area without feedback, echoes or reverberation;
- (b) Be mounted on a post at 2100 mm minimum *A.F.F.*;
- (c) Be located at:
  - (i) Exterior specialized areas;
  - (ii) Interior *accessible paths of travel*; and
  - (iii) Interior specialized facilities;
- (d) Be multi-zoned so that information can be directed to key locations to minimize background noise in other areas of a building;
- (e) Have a clear warning signal that sounds before significant information will be announced;
- (f) Have alternative formats of the information being conveyed using visible formats such as video or marquee displays;
- (g) Include point call systems that are used for fire and emergency information; and
- (h) Include paging systems that:
  - (i) Are discreet; and
  - (ii) Low in volume.



### 3.2.5. Assistive Listening Devices

#### Rationale

*Assistive listening devices* should be designed to be usable by persons with and without hearing aids. They should help to improve individuals hearing ability and to distinguish speech over other noise and should be provided in locations where an exchange of conversation is expected.



#### Related Sections

- 2.4.2. Meeting and Conference Rooms
- 2.4.3. Service Counters
- "3.3.1. Acoustics"

#### Related References

- [Reserved]

#### Key Considerations

##### Location

*Assistive listening devices* should be located at service counters and spaces with an assembly occupancy including all classrooms, auditorium, meeting rooms, theatres and exercise rooms.

##### Design

*Assistive listening devices* should be designed to encompass the entire service counter and seating area. They help individuals who are deaf, deafened or hard of hearing listen to the intended speaker or media display, without any *barriers*. Where *assistive listening devices* are provided, ambient noise levels or other audible sources within the space should not disturb the individuals experience. Dimmer switches (or other transformer coils) should be carefully located within the area so that electro-magnetic interference with any audio induction loops does not occur. At locations where a motion picture is intended to be viewed, consideration for the integration of described video and rear-view captioning, where a motion picture is intended to be viewed should be provided.

## Requirements

### (1) Location:

*Assistive listening devices* should be located at:

- (a) Classrooms;
- (b) Auditorium;
- (c) Theatres;
- (d) Exercise rooms;
- (e) Meeting and conference rooms that meet the criteria in section 2.4.2. [Meeting and Conference Rooms](#); and
- (f) Service counters that meet the criteria in section 2.4.3. [Service Counters](#);
- (g) Any other assembly space that:
  - (i) Is greater than 100 m<sup>2</sup>; or
  - (ii) Have an occupancy that is 25 persons or more.

### (2) Design:

*Assistive listening devices* should be designed to:

- (a) Include:
  - (i) FM systems;
  - (ii) Infrared systems, where no overhead incandescent lights are used, as they cancel out the infrared signal to the receiver;
  - (iii) Induction loop systems; or
  - (iv) Another compatible system;
- (b) Be compatible with personal hearing aids, where provided as portable headsets;
- (c) Have dimmer switches; and
- (d) Have acoustics that meet the criteria in section ["3.3.1. Acoustics"](#).

## 3.2.6. Accessible Public Telephones

### Rationale

*Accessible* public telephones, including phone booths, should be designed to be usable by all individuals. Despite the prevalence of mobile phones, the provision of public telephones helps to ensure that those without mobile phones can make phone calls in public spaces.

### Application

The scope of this section applies to telephones that are available for public use located in both interior and exterior environments, telephones that are regulated by the Canadian Radio-Television Commission (CRTC), as well as coin operated, coin-less, and courtesy telephones. For telephones regulated by the CRTC, all requirements of this section should apply except for signals and controls.



### Related Sections

- “2.1.1. Interior Accessible Paths of Travel”
- “3.2.1. Signage and Wayfinding Systems”
- “3.3.3. Controls and Operating Mechanisms”

### Related References

- [Reserved]

### Key Considerations

#### Amount

*Accessible* public telephones should be provided as a percentage of the population still do not own mobile phones.

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to public telephones to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Clear Floor Spaces

*Clear floor spaces* should be provided at *accessible* public telephones to create unobstructed, level floor areas that are sized to provide the space for persons using *mobility devices* to make calls safely and independently. The size of the *clear floor space* should be adjusted depending on the intended approach (front, side).

#### Design

*Accessible* public telephones should provide a shelf that has space and reach range dimensions to be usable by all individuals. Shelves provide a zone for persons to place their portable *text telephone (TTY)*.

*TTY's* are machinery or equipment that uses text-based communication through the transmission of coded signals across the standard telephone network. *TTY's* can include, for example, devices known as TDD's (telecommunication devices for persons who are deaf, deafened or hard of hearing) or computers with special modems. Text telephones are also called *TTY*, an abbreviation for teletypewriter.

### Signals and Controls

Signals and controls should be provided at *accessible* public telephones that are designed to have *accessible* space and reach range dimensions. Controls should have *operable portions or controls* that can be used with a closed fist and do not require tight grasping, pinching or twisting of the wrist. They should have *colour/brightness contrast* from adjacent surfaces so that persons with low vision can easily find and operate them.

### Requirements

#### (1) Amount:

*Accessible* public telephones should provide:

- (a) A minimum of one *accessible* unit, where one or more is provided.

#### (2) Accessible Path of Travel:

*Accessible* public telephones should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section "2.1.1. Interior Accessible Paths of Travel".

#### (3) Clear Floor Spaces:

*Accessible* public telephones should provide *clear floor spaces* that:

- (a) Is centered on the telephone; and
- (b) Are 900 mm by 1500 mm minimum for front approach.

#### (4) Design:

*Accessible* public telephones, "Figure 3.2.6-A Public Telephones", should be designed to:

- (a) Have a shelf that:
  - (i) Is level;
  - (ii) Is 500 mm wide and 350 mm deep minimum; and
  - (iii) Has, for each telephone provided, a clear space that has no obstruction within 250 mm above the surface; and
- (b) Have the top surface of a section of the shelf or counter that:
  - (i) Is mounted between 775 mm to 875 mm *A.F.F.*; and
  - (ii) Have knee and toe space for a front approach that is 740 mm minimum high *A.F.F.* at the front edge, 500 mm minimum deep, and 900 mm minimum wide.

#### (5) Signage:

*Accessible* public telephones should provide *signage* that:

- (a) Indicated *TTY* device location and *accessible* public telephones; and
- (b) Meets the criteria in section "3.2.1. Signage and Wayfinding Systems".

**(6) Signals and Controls:**

Accessible public telephones should provide signals and controls that:

(c) Have *operable portions or controls* that meet the criteria in section “3.3.3. Controls and Operating Mechanisms”.

- (a) Are mounted at 1050 mm maximum A.F.F.;
- (b) Have controls and operating mechanisms that:
  - (i) Include coin slots;
  - (ii) Have a TTY device;
  - (iii) Have an acoustic coupler; and

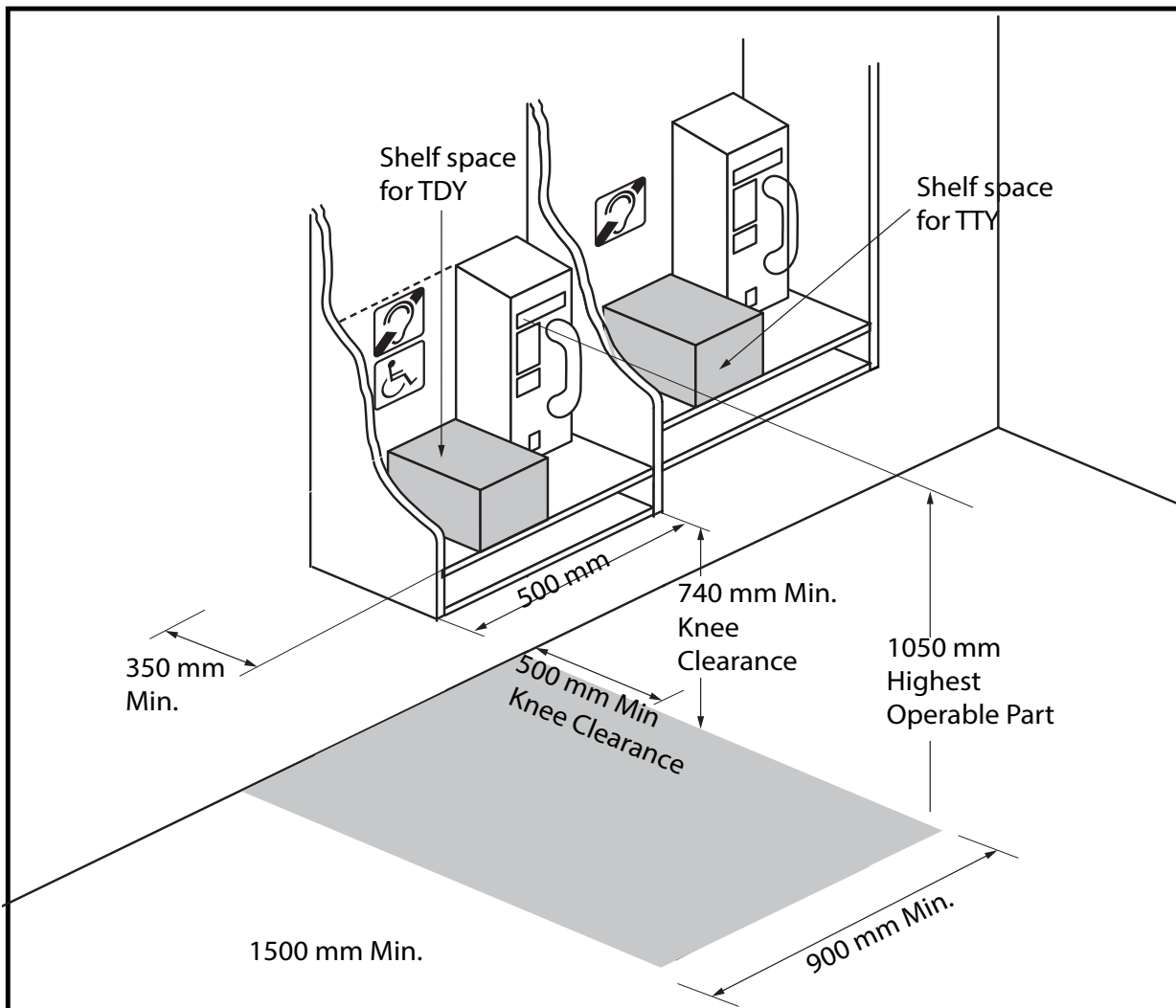


Figure 3.2.6-A Public Telephones



# 3.3. Signals and Controls

## Section Summary

This section reviews the *accessible* design requirements for signals and controls intended to be used by the public and City staff. Signals and controls, such as controls and operating mechanisms, should provide sensory feedback including audible and visual signals, as well as, *tactile* elements. These secondary elements provide alternative means of communication to indicate that the signal or control has been activated. Lighting and acoustic design become critical cues to persons who have low or no vision, while visual feedback is a critical cue to an individual who is deaf, deafened or hard of hearing. Elements of personal comfort and safety should also be considered for all individuals when designing interior systems.

## Contents in Section

- 3.3.1. Acoustics**
- 3.3.2. Card Access and Building Security Systems**
- 3.3.3. Controls and Operating Mechanisms**
- 3.3.4. Emergency Power**
- 3.3.5. Heating, Ventilation and Air Conditioning (HVAC)**
- 3.3.6. Fire and Life Safety**
- 3.3.7. Audible and Visible Signals**

### 3.3.1. Acoustics

#### Rationale

Acoustics within a room or a space is an important aspect of how *accessible* and usable a building is for everyone. Acoustical properties of a space can help persons who are blind or have low vision navigate the environment. Managing sound levels and reverberation helps to create more acoustically comfortable environments for persons who are deaf, deafened, hard of hearing, or with residual hearing while supporting sensory reduced environments and facilitating a person's ability to focus on the task at hand.



#### Related Sections

- [\[Reserved\]](#)

#### Related References

- [Strategy and Standards for Office Space and Ergonomics - Building Services](#)

#### Key Considerations

##### Finishes

Finishes should be provided to manage acoustics within a building. A combination of hard and soft finishes should be used to meet the needs of all individuals and the functional needs of the space. Floor, wall and ceiling surfaces should create different sound qualities that can be audibly detected by individuals. They should be designed to control ambient noise and absorb direct, reflected, and reverberated sound.

Reverberated sound can obstruct, distort and disorient individuals including persons who are deaf, deafened or hard of hearing, or persons with low to no vision. Acoustical cues should be provided to help individuals with independent navigation and *wayfinding*. The physical properties of floor, wall and ceiling surface materials should be considered when integrating acoustical cues into the design. Domed shaped ceilings tend to distort sound and can disorient persons navigating through the building.



## Requirements

### (1) Finishes:

Finishes should provide acoustic qualities that:

- (a) Control ambient noise;
- (b) Absorb and dampen direct, reflected and reverberated sound using carpets, acoustic panels, or upholstered furniture; and
- (c) Buffer external or exterior sound using double-glazed glass.

## 3.3.2. Card Access and Building Security Systems

### Rationale

Card access and building security systems should be usable by all persons. The type and location of card access and building security systems should add to the comfort, protection and safety of a building. The usability and accessibility of applicable building controls should be designed for persons with limited dexterity and fine finger control.



### Related Sections

- “2.1.1. Interior Accessible Paths of Travel”
- “3.3.3. Controls and Operating Mechanisms”

### Related References

- [Strategy and Standards for Office Space and Ergonomics - Building Services](#)
- [City of Toronto Corporate Security Access Control System Installation Standards](#)

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be connected to card access and building security systems to allow for a continuous, unobstructed route providing interior access to elements and spaces.

#### Controls and Operating Mechanisms

Controls and operating mechanisms should be designed to be *accessible* in design and placement. They should be designed to have *accessible* space and reach ranges over obstructions. Controls should have *operable portions or controls* that can be used with a closed fist without requiring tight grasping, pinching or twisting of the wrist. They should have *colour/brightness contrast* from adjacent surfaces so that persons with low vision can easily find and operate them. Where proximity scanning devices, or proximity sensors, are provided to control access cards, they should be capable of detecting an access card when tapped or placed closely and without any physical contact.

## Requirements

### (1) Accessible Path of Travel:

Card access and building security systems should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section “2.1.1. Interior Accessible Paths of Travel”.

### (2) Controls and Operating Mechanisms:

Card access and building security systems should provide controls and operating mechanisms that:

- (a) Have access cards that:
  - (i) Have *colour/brightness contrast*, or a distinct colour; and
  - (ii) Have a distinct texture on one side, or by using *tactile* characters and *Braille* to ensure easy orientation;
- (b) Are installed on wall surface that:
  - (i) Are between 600 mm to 1500 mm beyond the door swing when the door opens toward the control, or from any inside corner, “[Figure 3.3.2-A Card Access and Building Security Systems - Plan View](#)”; and
  - (ii) Are between 900 mm to 1050 mm *A.F.F.*, to the centreline of the control;
- (c) Include a proximity scanning device or proximity sensors that control card access;
- (d) Where a *tactile* keyboard, “[Figure 3.3.2-B Card Access and Building Security Systems - Elevation View](#)”, or other encoded entry or exit system is provided, it should have buttons that:
  - (i) Are raised;
  - (ii) Where numeric, have a telephone style key pad;

- (iii) Are equipped with a raised dot on the five key; and

- (iv) Have *tactile* characters for function keys; and

- (e) Have *accessible operable portions or controls* that meet the criteria in section “3.3.3. Controls and Operating Mechanisms”.

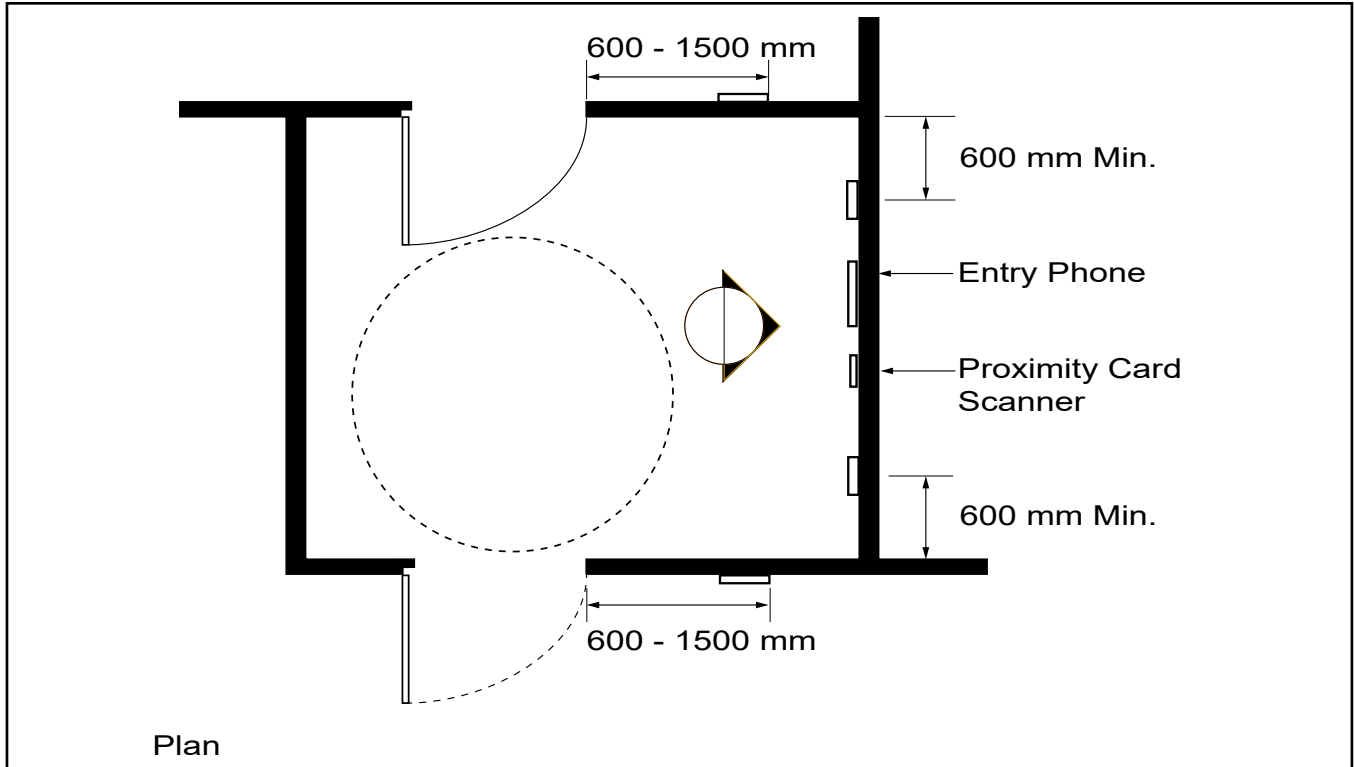


Figure 3.3.2-A Card Access and Building Security Systems - Plan View

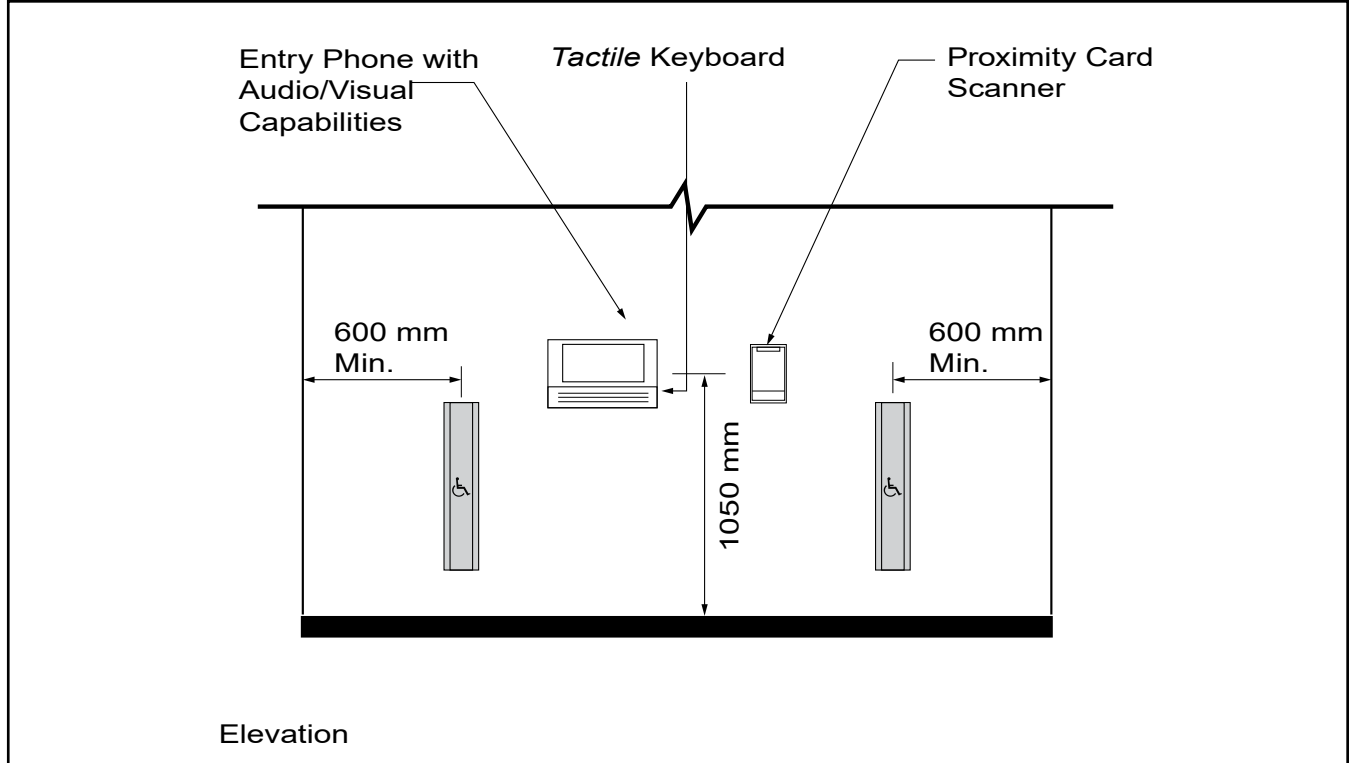


Figure 3.3.2-B Card Access and Building Security Systems - Elevation View

### 3.3.3. Controls and Operating Mechanisms

#### Rationale

Controls and operating mechanisms for the operation of building services or safety devices should be designed to be usable by all individuals where intended to be operated by the end-user.

#### Application

The scope of this section applies to controls and operating mechanisms including millwork hardware, controls, electrical switches and intercom switches intended to be operated by individuals, electrical power, thermostats and manual fire pull stations, *power door operators*, video conferencing systems, and all other controls.



#### Related Sections

- “2.1.1. Interior Accessible Paths of Travel”
- 2.2.3. Door Controls and Devices
- “3.2.1. Signage and Wayfinding Systems”

#### Related References

- [Reserved]

#### Key Considerations

##### Accessible Path of Travel

An interior *accessible path of travel* should be connected to controls and operating mechanisms to allow for a continuous, unobstructed route providing interior access to elements and spaces.

##### Clear Floor Spaces

*Clear floor spaces* should be provided at controls and operating mechanisms to create unobstructed, level floor areas that are sized to provide the space for persons using *mobility devices* to use the mechanisms independently without creating an obstacle. The size of the *clear floor space* should be adjusted depending on the intended approach (front, side).

##### Installation

Controls and operating mechanisms should be installed and mounted at a height that is operable by all individuals including persons using *mobility devices*, and persons of short stature. The mounting height should be *accessible* and have *accessible* space and reach ranges over obstructions, where provided. Where a mounting height range is permitted, install controls at the lowest possible height.

### Operable Portions or Controls

*Operable portions or controls* should be provided at controls and operating mechanisms. They should be usable with a closed fist without requiring tight grasping, pinching or twisting of the wrist. They should have *colour/brightness contrast* from adjacent surfaces so that persons with low vision can easily find and operate them.

### Requirements

#### (1) Accessible Path of Travel:

Controls and operating mechanisms should provide interior *accessible paths of travel* that:

- (a) Meet the criteria in section “2.1.1. Interior Accessible Paths of Travel”.

#### (2) Clear Floor Spaces:

Controls and operating mechanisms should provide *clear floor spaces* that:

- (a) Are 900 mm by 1500 mm for front approach, or 900 mm by 2200 mm for side approach.

#### (3) Installation:

Controls and operating mechanisms should be installed, “Figure 3.3.3-A Installation - Mounting Heights”, to:

- (a) Where millwork hardware is provided, be mounted between 860 mm to 1050 mm *A.F.F.*;
- (b) Where controls, electrical switches and intercom switches intended to be operated by individuals are provided, be mounted between 900 mm to 1050 mm *A.F.F.*;
- (c) Where electrical power, such as duplex receptacles are provided:

- (i) Be mounted between 460 mm to 1050 mm *A.F.F.*; and

- (ii) Be located on the front edge of work surfaces, or on a side wall 500 mm maximum from the front edge of the *accessible* portion of work surfaces;

- (d) Where thermostats and manual fire pull stations are provided, be mounted at 1200 mm *A.F.F.*;

- (e) Where *power door operators* are provided, meet the criteria in section 2.2.3. [Door Controls and Devices](#);

- (f) Where video conferencing systems, meet the criteria in this section;

- (g) Where all other controls are provided, be mounted between 900 mm to 1050 mm *A.F.F.*; and

- (h) Where an obstruction is provided in front of a control, have *accessible* space and reach ranges, “Figure 3.3.3-B Installation - Reach Range over an Obstruction”, over obstructions, that:

- (i) Are 860 mm maximum high; and
- (ii) Are 500 mm maximum deep.

#### (4) Operable Portions or Controls:

Controls and operating mechanisms should provide *operable portions or controls* that:

- (a) Have *colour/brightness contrast* from adjacent surfaces;
- (b) Are operable:
  - (i) Using one hand, without requiring tight grasping, pinching with fingers or twisting of the wrist, and with a force of 22.2 N maximum, in the case of a manual pull station; and
  - (ii) Using a closed fist and with a force of 22.2 N, in the case of all other controls;

- (c) Where possible, have sensory feedback such as audible and visual signals, and *tactile* characters;
- (d) Where instruction information is provided, such as those found at parking machines or at exercise equipment, detailing the use of key *operable portions or controls*, they should:
  - (i) Be clearly visible and in large print text;
  - (ii) Have *colour/brightness contrast* from adjacent surfaces;
  - (iii) Be mounted in close proximity to key *operable portions or controls*; and
  - (iv) Have *signage* that meets the criteria in section “3.2.1. Signage and Wayfinding Systems”.

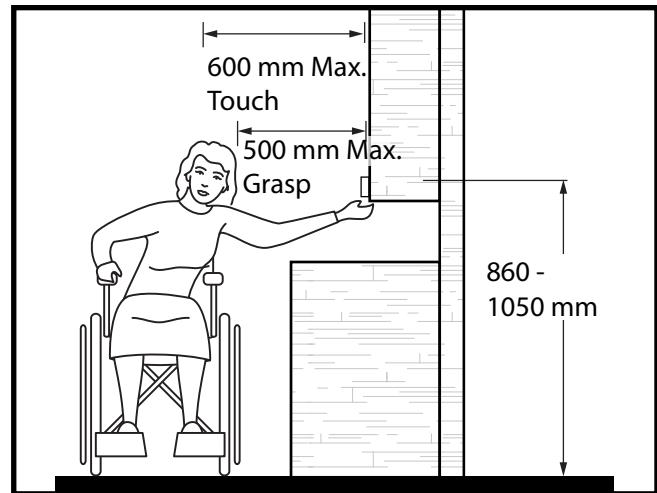


Figure 3.3.3-B Installation - Reach Range over an Obstruction

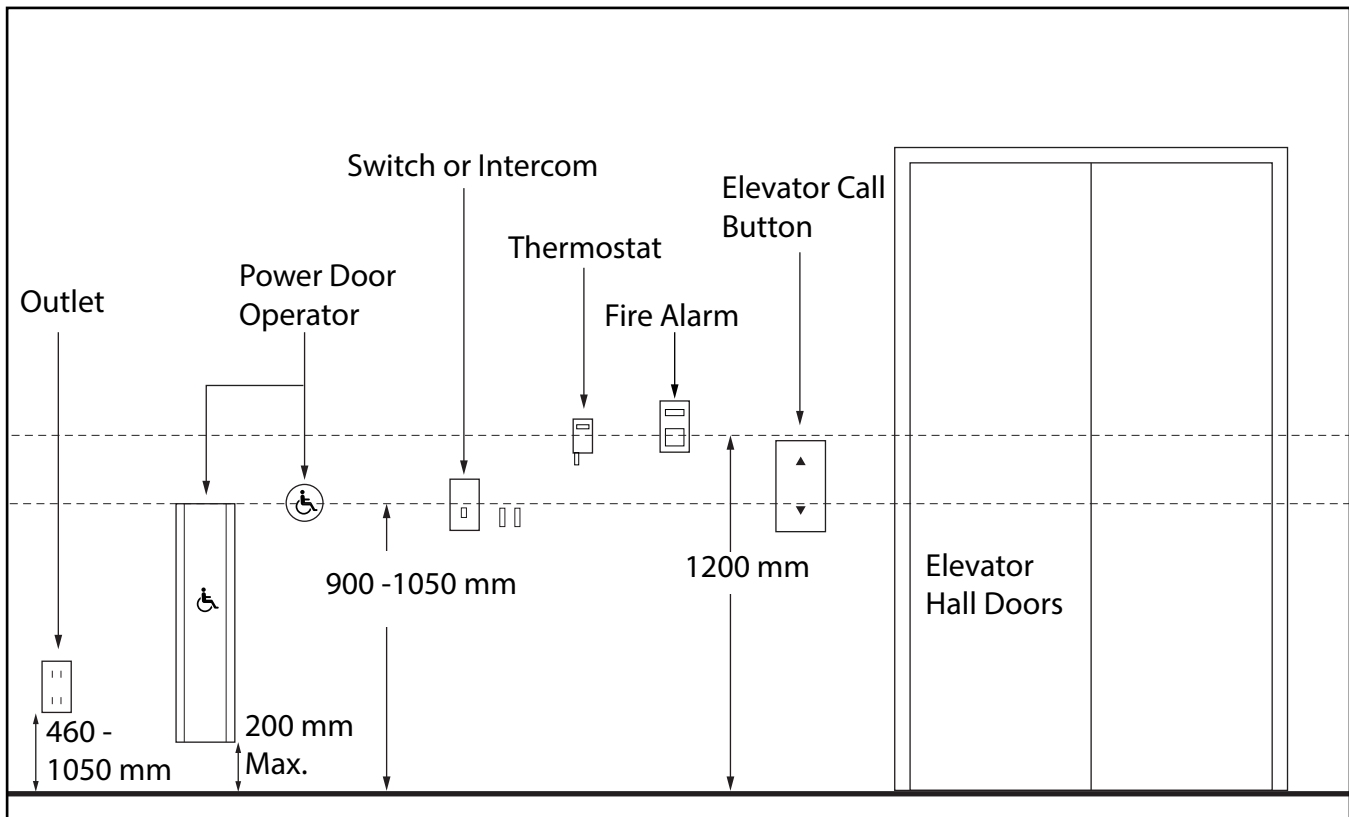


Figure 3.3.3-A Installation - Mounting Heights

### 3.3.4. Emergency Power

#### Rationale

Emergency power, or continual power systems, provide an independent source of electrical power that supports important systems on loss of primary power supply. The intent of emergency power is to maintain power or provide back-up electric power supply for outlets, charging devices, medical equipment, and two-way communication systems, and continued refrigeration of medication, etc. in emergency situations. An outlet on emergency power is required to provide power for persons with disabilities in commercial, institutional, and overnight accommodations, who need constant support from equipment such as a ventilator or oxygen concentrator generator.



#### Related Sections

- “2.1.5. Elevators”
- “2.3.8. Universal Washrooms”
- 2.4.10. Areas of Rescue Assistance
- “3.3.3. Controls and Operating Mechanisms”

#### Related References

- [Strategy and Standards for Office Space and Ergonomics - Building Services](#)

#### Key Considerations

##### Design

Emergency power should be designed to supply a building with the necessary power to function safely. Lighting, elevators and other life safety components, such as alarms and security systems should all function. Where buildings are designed to facilitate overnight accommodations, emergency power should be provided to the sleeping area so, that in case of an emergency, a person using a breathing apparatus, while they sleep, will not be at risk of losing power to their device. Controls and operating mechanisms should have operating components and/or systems during a power outage.

#### Requirements

##### (1) Design:

Emergency power, “[Figure 3.3.4-A Emergency Power](#)”, should be designed to:

- Have electrical power to ensure:
  - Minimum emergency lighting levels (lux) provided at required locations;
  - The use of designated fire-fighters elevators meets the criteria in section “[2.1.5. Elevators](#)”;



- (iii) The use of emergency call systems that meet the criteria in section [“2.3.8. Universal Washrooms”](#); and
  - (iv) Two-way communication systems, lighting and ventilation provided at *areas of rescue assistance* that meets the criteria in section [2.4.10. Areas of Rescue Assistance](#);
- (b) Where provided at a building or institution that accommodates overnight occupancy such as, interior specialized areas, have duplex electrical outlets and receptacles that:
- (i) Have at least one, in the case of at least one suite of a hotel that has an interior *accessible path of travel*; and
  - (ii) Are identified with a legible sign having the words EMERGENCY POWER OUTLET permanently mounted on the wall beside the receptacle;
- (c) Where provided, have controls and operating mechanisms that meet the criteria in section [“3.3.3. Controls and Operating Mechanisms”](#); and
- (d) Be located:
- (i) In all primary areas of the facility;
  - (ii) Along all *accessible paths of travel* to exits;
  - (iii) At designated safe holding areas; and
  - (iv) In occupancies that facilitate overnight accommodations with designated *accessible* rooms such as commercial, institutional, and hotels.

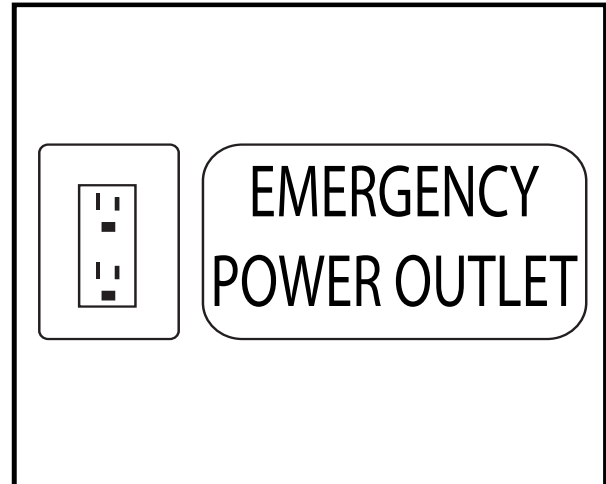


Figure 3.3.4-A Emergency Power

### 3.3.5. Heating, Ventilation and Air Conditioning (HVAC)

#### Rationale

Heating, ventilation, and air conditioning should be designed to be comfortable for everyone while considering individuals who have compromised circulatory systems.



#### Related Sections

- “3.3.3. Controls and Operating Mechanisms”

#### Related References

- [Reserved]

#### Key Considerations

##### Design

HVAC should be designed to have indirect air flow that is not directed towards fixed seating and/or workstations, or in the case of interior specialized facilities, towards a person lying in a bed. Fan mounts should be acoustically isolated to minimize noise from air handling systems to reduce ambient noise levels.

##### Controls and Operating Mechanisms

Controls and operating mechanisms should be provided for HVAC to include settings for temperature and humidity. Many individuals especially seniors and/or persons using *mobility devices* are predisposed to have difficulty sensing temperature differences because of poor circulation. When the ambient temperature is too high or too low, persons with poor circulation are susceptible to dehydration or hypothermia.

#### Requirements

##### (1) Design:

HVAC should be designed to:

- (a) Have indirect air flow; and
- (b) Have fan mounts that:
  - (i) Are acoustically isolated; and
  - (ii) Reduce ambient noise levels.

**(2) Controls and Operating Mechanisms:**

HVAC should provide controls and operating mechanisms that include:

- (a) Settings for temperature that are between 21°C to 26°C;
- (b) Settings for humidity that are between 30% to 40%, rounding up to the nearest whole number, humidity; and
- (c) Meet the criteria in section “3.3.3. Controls and Operating Mechanisms”.

### 3.3.6. Fire and Life Safety

#### Rationale

Fire and life safety within a building should include systems and controls for notification and/or assistance, *signage and wayfinding* systems, and *accessible paths of travel* for all individuals. They should help to maintain fire protection and emergency preparedness, especially for persons using *mobility devices*, and persons with limited mobility, persons with visual, hearing, speech and/or cognitive disabilities.



#### Related Sections

- 2.4.10. Areas of Rescue Assistance
- “3.3.7. Audible and Visible Signals”

#### Related References

- Office Modernization - Accessibility Toolkit

#### Key Considerations

##### Evacuation Plans

Evacuation plans should be provided as a part of fire and life safety. They should provide building evacuation information that are appropriate and specific to the individuals of the facility. The location of assistive devices or equipment for evacuation should be detailed, such as an evacuation chair.

##### Visible and Audible Signals

Visible and *audible signals* should include a two-stage fire alarm system that is linked directly to a fire hall to ensure a timely fire department response. Each stage of the alarm should have distinct sounds/tones so that they are not confused for other building service sounds. Alternatively, a direct connection to a fire alarm monitor or commercial security company should be provided. This will ensure that there will be a safe and efficient flow of individuals exiting the building. The audible and visual signals should also allow for strategies to provide the early warning of emergency situations, which may also be desirable for persons who are deaf, deafened, or hard of hearing.

*Audible signals* should include public address systems (announcements) to notify individuals of a fire or other emergencies and provide individuals with unassisted evacuation strategies, and/or direction to access *areas of rescue assistance*.

## Requirements

### (1) Evacuation Plans:

Fire and life safety should provide evacuation plans that:

- (a) Include horizontal exiting strategies, such as:
  - (i) Holding areas; and
  - (ii) Evacuation areas;
- (b) Identify *areas of rescue assistance* that:
  - (i) Contain the words “*Areas of Rescue Assistance*”; and
  - (ii) Meet the criteria in section 2.4.10. [Areas of Rescue Assistance](#);
- (c) Include a firefighter’s elevator; and
- (d) Include the location of assistive devices or equipment for evacuation, such as an evacuation chair.

### (2) Audible and Visible Signals:

Fire and life safety should provide audible and visible signals that:

- (a) Have a visual signaling component of a fire alarm;
- (b) Have two-stage fire alarm system that is linked directly to a fire hall, or linked to a fire alarm monitor or commercial security company;
- (c) Has distinct sounds, or tones;
- (d) Include a portable and vibrating signal;
- (e) Have strobe or flashing lights at workstations; and
- (f) Meet the criteria in section “3.3.7. [Audible and Visible Signals](#)”.

### 3.3.7. Audible and Visible Signals

#### Rationale

Audible and visible signals should be provided in all buildings to allow for adequate warning for all persons, especially those who are older, with disabilities, or who require more time for safe evacuation.

#### Application

The scope of this section applies to building systems related to emergency notification, fire and life safety, and security duress.



#### Related Sections

- “3.3.6. Fire and Life Safety”

#### Related References

- [18.5.3 \(Light, Colour and Pulse Characteristics\) of NFPA 72, “National Fire Alarm and Signaling Code”](#)

#### Key Considerations

##### Location

Audible and visible signals should be located to only have one visible at a time, unless they can be synchronized. Some persons with epilepsy are at risk of developing a seizure from seeing flashing lights created by unsynchronized and scattered visual signals that create a “strobe-light” effect.

##### Design

Audible and visible signals should be designed to include a two-stage fire alarm system that is linked directly to a fire hall to ensure a timely fire department response. Each stage of the alarm should have distinct sounds/tones so that they are not confused for other building service sounds. Alternatively, a direct connection to a fire alarm monitor or commercial security company should be provided. This will ensure that there will be a safe and efficient flow of individuals exiting the building.

The audible and visual signals should also allow for strategies to provide the early warning of emergency situations, which may also be desirable for persons who are deaf, deafened, or hard of hearing. Audible and visible signals with adjustable strobe frequencies are recommended for persons with epilepsy who are at risk of developing seizures.

## Requirements

### (1) Location:

Audible and visible signals should be located at:

- (a) Group A (assembly spaces) occupancies;
- (b) Group B (care and treatment, detention facilities) occupancies;
- (c) Group C (residential) occupancies:
  - (i) In the main living space;
  - (ii) In the main bedroom; and
  - (iii) In the main bathroom.
- (d) Group D (business and personal services offices)
  - (i) In private offices; and
  - (ii) Meeting rooms;
- (e) Group E (mercantile) occupancies;
- (f) A building or a portion of building intended for use primarily by persons who are deaf, deafened or hard of hearing;
- (g) Public and private corridors; and
- (h) Public and private washrooms.

### (2) Design:

Audible and visible signals should be designed, "Figure 3.3.7-A Audible and Visible Signals", to:

- (a) Have distinct sounds/tones for each stage of the two-stage system;
- (b) Have synchronized flashing rates;
- (c) Have only one signal visible at a time, even when the space is a *high-use area*;
- (d) Have two-stage fire alarm system that is linked directly to a fire hall, or is linked to a fire alarm monitor or commercial security company;
- (e) Have announcements that:
  - (i) Notify individuals of a fire or other emergency;
  - (ii) Provide individuals with unassisted evacuation strategies; and
  - (iii) Provide direction to access *areas of rescue assistance*;
- (f) Have adjustable controls for:
  - (i) Sound or volume levels; and
  - (ii) Strobe or flashing lights; and
- (g) Meet the requirements in [18.5.3 \(Light, Colour and Pulse Characteristics\) of NFPA 72, "National Fire Alarm and Signaling Code](#).

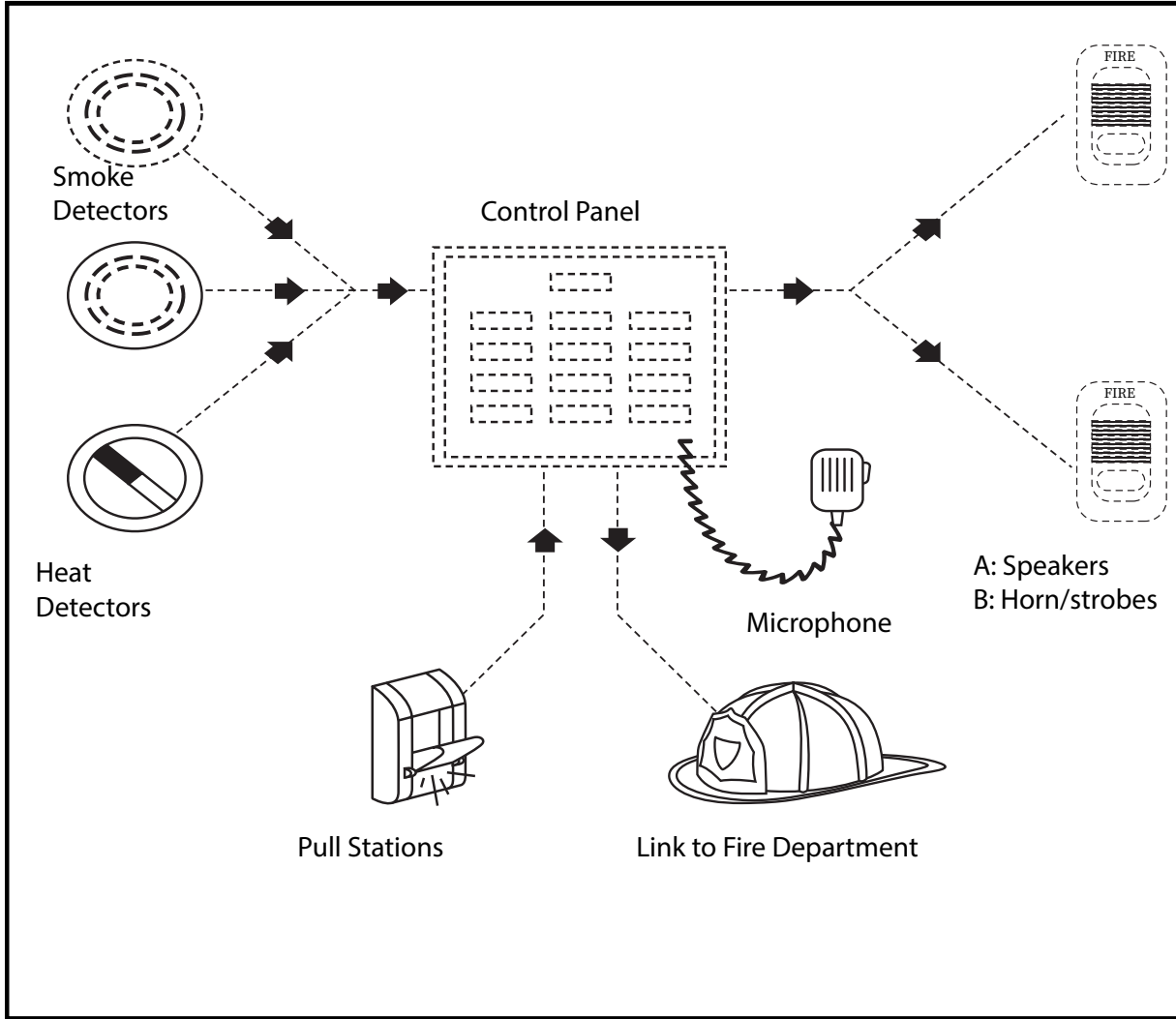


Figure 3.3.7-A Audible and Visible Signals



# Exterior and Interior Maintenance

# 4



# 4.1. Exterior Maintenance

## Section Summary

This section reviews the *accessible* design requirements for exterior *maintenance* intended for use by the public and City staff. Decisions made by facility managers regarding spatial use, security or *maintenance* can impact the accessibility and usability of a space. The intent of creating an *accessible* environment during the design stage could be compromised if exterior *maintenance* and clearances are not maintained.

## Contents in Section

### 4.1.1. General Exterior Maintenance

### 4.1.2. Construction Site Protection

### 4.1.3. Waste Handling

## 4.1.1. General Exterior Maintenance

### Rationale

General exterior *maintenance* should sustain the level of accessibility as per the related sections of the City of Toronto Accessibility Design Guidelines. To ensure that accessibility features and elements remain in place, *maintenance* manuals and checklists should be developed to include information regarding the design strategies that were considered when developing the accessibility features of the site and the implications for ongoing *maintenance* of the site.



### Related Sections

- 1.1. Exterior Paths of Travel
- 1.3. Parking, Vehicular Arrival and Departure Areas
- 2.2.1. Entrances
- "3.1.2. Exterior Lighting"
- "3.2.1. Signage and Wayfinding Systems"

### Related References

- [Reserved]

### Key Considerations

#### Equipment

Equipment should be a part of an exterior *maintenance* plan. Equipment including door controls and devices, such as *power door operators* that are used to integrate *accessible* elements to enhance their usability should receive quick repair when out of service.

#### Signage

Where general exterior *maintenance* is provided, *signage* should notify when equipment or an exterior *accessible path of travel* is out of service, and identify the duration of the interruption and an alternative route.

#### Exterior Lighting

Exterior lighting should receive general exterior *maintenance*. Artificial lighting such as bulbs located at exterior *accessible paths of travel* should be maintained on a regular schedule using bulbs of the same wattage for which the lighting was designed for.

### Obstructions, Protrusions, and Overhead Objects

Where provided, obstructions, protrusions, and overhead objects should receive general exterior *maintenance*. They should be checked regularly to reduce the risk of potential hazards. Overhead clearance and *cane detectability* should be provided.

### Snow Removal

Snow removal should be provided as a part of general exterior *maintenance*. Snow removal is important to control snow accumulation and melting, which can be problematic for persons who rely on the use of an exterior *accessible path of travel*, parking, vehicular arrival and departure areas, *entrances* and exits to access a site or facility. Ground surfaces should be maintained to be free of snow and ice. Snow accumulation should not impede an exterior *accessible path of travel*. It should be removed and relocated.

*Signage* should be provided to identify exterior *accessible paths of travel*, such as *trails*, pathways, boardwalks and *beach access routes*, or *multi-use trails*, that do not receive seasonal (winter) *maintenance*. Radiant heating should be provided for snow removal. It should be located at *entrances* that have additional features such as canopies. Radiant heating should be designed to automatically clear ice and snow where timely *maintenance* and snow clearing may be problematic.

## Requirements

### (1) Equipment:

General exterior *maintenance* should include equipment that:

- (a) Is maintained on a regular schedule; and
- (b) Receives quick repair when out of service.

### (2) Signage:

General exterior *maintenance* should include *signage* that:

- (a) Notifies when equipment or an exterior *accessible path of travel* is out of service;
- (b) Identifies the duration of the interruption and an alternative route;
- (c) Is located at exterior paths of travel to identify when paths of travel do not receive seasonal (winter) *maintenance*; and
- (d) Meet the criteria in section "3.2.1. Signage and Wayfinding Systems".

### (3) Exterior Lighting:

General exterior *maintenance* should include exterior lighting that:

- (a) Is maintained on a regular schedule;
- (b) Uses bulbs of the same wattage for which the lighting was designed for; and
- (c) Meets the criteria in section "3.1.2. Exterior Lighting".

**(4) Obstructions, Protrusions, and Overhead Objects:**

Where required, general exterior *maintenance* should include obstructions, protrusions, and overhead objects that:

- (a) Have overhead clearance;
- (b) Have *cane detectability*; and
- (c) Meet the criteria in section "1.1.1. Exterior Accessible Paths of Travel".

**(5) Snow Removal:**

General exterior *maintenance* should provide snow removal that:

- (a) Includes the removal of snow accumulation and melting, "Figure 4.1.1-A Snow Removal", that:
  - (i) Has designated snow accumulation areas that are clear from exterior *accessible paths of travel*;
  - (ii) Is removed completely after each snowfall;
  - (iii) Has consistent standards and coordination between divisions regardless of jurisdiction; and
  - (iv) Has sufficient catch basins, drainage systems, and run-offs to ensure rapid removal of water from melting snow or ice from all pedestrian routes;
- (b) At all exterior paths of travel that meet the criteria in section 1.1. Exterior Paths of Travel;
- (c) At parking, vehicular arrival and departure areas that meet the criteria in section 1.3. Parking, Vehicular Arrival and Departure Areas;
- (d) At *entrances* that meet the criteria in section 2.2.1. Entrances;
- (e) Has *signage* that:

- (i) Identifies exterior paths of travel that do not receive seasonal (winter) *maintenance*; and
- (ii) Meets the criteria in section "3.2.1. Signage and Wayfinding Systems"; and

- (f) Has radiant heating that:
  - (i) Is located at *entrances* with or without canopies;
  - (ii) Is designed to automatically clear ice and snow where timely *maintenance* and snow clearing may be problematic; and
  - (iii) Is maintained and monitored to ensure that run-off from melted snow does not accumulate in one condensed area and create patches of ice at an exterior *accessible path of travel* that meets the criteria in section "1.1.1. Exterior Accessible Paths of Travel".

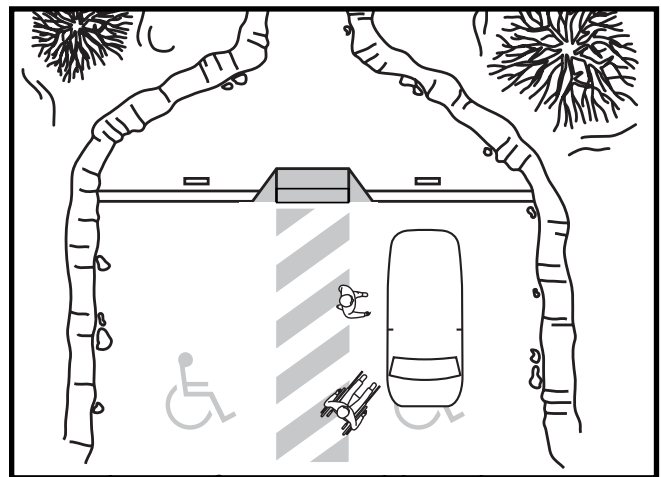


Figure 4.1.1-A Snow Removal

## 4.1.2. Construction Site Protection

### Rationale

Construction site protection should be designed to delineate an exterior *accessible path of travel* from any construction site and vehicular roadways to reduce the risk of injuries and/or accidents, and to ensure the safety for pedestrians and site workers travelling around the perimeter of the site.

### Application

The scope of this section applies to all construction sites and associated equipment including those that are used for a short period of time.



### Related Sections

- "1.1.11. Obstructions, Protrusions and Overhead Objects"
- "3.2.1. Signage and Wayfinding Systems"

### Related References

- [Reserved]

### Key Considerations

#### Hoarding

Hoarding including *barriers*, gates, viewing windows, and/or fencing should be provided for construction site protection. Obstructions, protrusions, and overhead objects including both temporary and permanent hoarding should not impede an exterior *accessible path of travel* and should be located to reduce the risk of potential hazards. Overhead clearance and *cane detectability* should be provided below any framing or bracing located above an exterior *accessible path of travel*, and short-term repair sites, such as *sidewalk* repairs, or at manhole access covers.

#### Signage

*Signage* should be provided for construction site protection to alert persons of any upcoming construction. At locations where an alternate exterior *accessible path of travel* is required, *signage* should be provided in advance to prevent a person from having to reverse their direction.

#### Maintenance

*Maintenance* should be provided for construction site protection. Where material and/or equipment, including pylons, are provided, they should not impede an exterior *accessible path of travel* and should be located to reduce the risk of potential hazards.

## Requirements

### (1) Hoarding:

Construction site protection should provide hoarding that:

- (a) Is temporary or permanent;
- (b) Delineates an exterior *accessible path of travel* from any:
  - (i) Construction site; and
  - (ii) Vehicular road way;
- (c) Surrounds the perimeter of the construction site;
- (d) Has highly visible and *cane detectable barriers*, "Figure 4.1.2-A Highly Visible and Cane Detectable Barrier";
- (e) Is stable and secure;
- (f) Where provided, has a minimum of one view port that is located 1050 mm on centre;
- (g) Maintains clear sight-lines to traffic lights and signals; and
- (h) Provide overhead clearance, "Figure 4.1.2-B Overhead Framing at a Construction Site", and *cane detectability* that meets the criteria in section "1.1.11. Obstructions, Protrusions and Overhead Objects".

### (2) Signage:

Construction site protection should provide *signage* that:

- (a) Is able to withstand all seasonal weather conditions; and
- (b) Meets the criteria in section "3.2.1. Signage and Wayfinding Systems".

### (3) Maintenance:

Construction site protection should provide *maintenance* that:

- (a) Ensures that material and/or equipment:
  - (i) Do not impede an exterior *accessible path of travel*; and
  - (ii) Are located to reduce the risk of potential hazards.

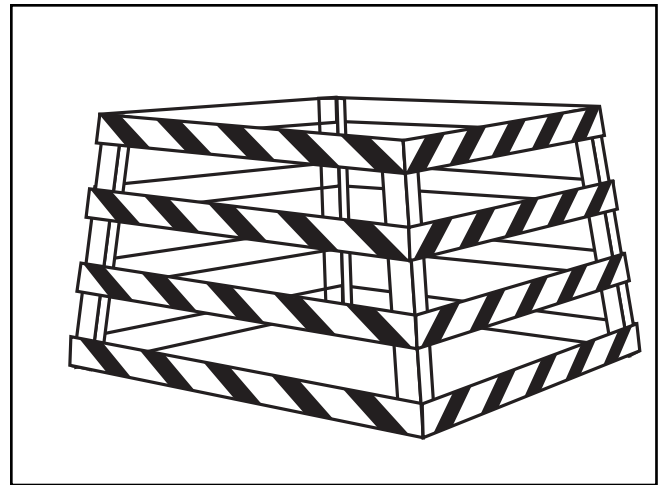


Figure 4.1.2-A Highly Visible and Cane Detectable Barrier

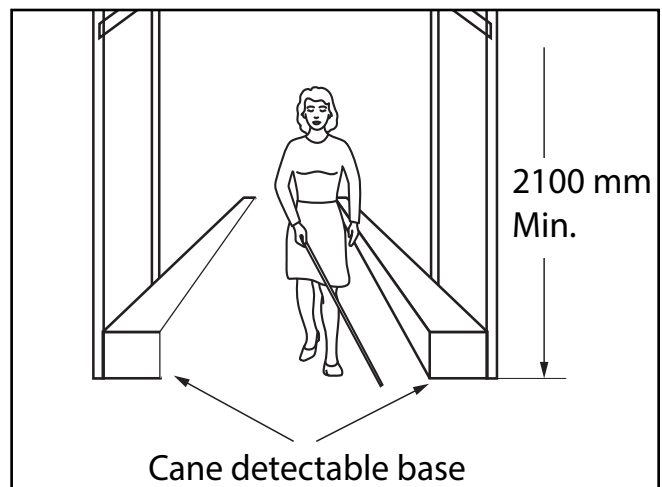


Figure 4.1.2-B Overhead Framing at a Construction Site



### 4.1.3. Waste Handling

#### Rationale

Waste handling is a crucial component of exterior *maintenance*. The overflow of waste or recycling items can create obstructions or increase the risk of tripping hazards along an exterior *accessible path of travel*. General exterior *maintenance* should consider the frequency of waste removal or the size of waste receptacles to reduce the risk of waste overflow.



#### Related Sections

- "1.1.1. Exterior Accessible Paths of Travel"
- "1.5.2. Waste Receptacles and Recycling Bins"

#### Related References

- [City of Toronto Requirements for Garbage, Recycling and Organics Collection Services for New Developments and Redevelopments](#)

#### Key Considerations

##### Accessible Path of Travel

An exterior *accessible path of travel* should be provided for waste handling to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

##### Design

Waste handling should be designed to include waste receptacles and recycling bins, and large industrial bins or containers.

#### Requirements

##### (1) Accessible Path of Travel:

Waste handling should provide an exterior *accessible path of travel* that:

- Meets the criteria in section "1.1.1. Exterior Accessible Paths of Travel".

##### (2) Design:

Waste handling should be designed to include:

- Waste receptacles and recycling bins that meet the criteria in section "1.5.2. Waste Receptacles and Recycling Bins"; and

- (b) Large industrial bins or containers that are located outside of the *accessible path of travel*.

# 4.2. Interior Maintenance

## Section Summary

This section reviews the *accessible* design requirements for interior *maintenance* intended for use by the public and City staff. Decisions made by facility managers regarding spatial use, security or *maintenance* can impact the accessibility and usability of a space. The intent of creating a fully *accessible* environment during the design stage could be compromised if interior spaces and clearances are not maintained.

## Contents in Section

### 4.2.1. General Interior Maintenance

## 4.2.1. General Interior Maintenance

### Rationale

General interior *maintenance* should sustain the level of accessibility as per the related sections of the City of Toronto Accessibility Design Guidelines. It should ensure that accessibility features and elements remain in place, *maintenance* manuals and checklists should be developed to include information regarding the design strategies that were considered when developing the accessibility features and the implications for ongoing *maintenance* of the facility. In addition, *maintenance* manuals should be developed to include information regarding the specific needs and *barriers* faced by persons with disabilities. Training for *maintenance* staff should address the following potential *barriers* within this section.



### Related Sections

- “2.1.1. Interior Accessible Paths of Travel”
- 2.7. Interior Materials and Finishes
- “3.1.1. Interior Lighting”
- “3.2.1. Signage and Wayfinding Systems”
- “3.3.1. Acoustics”

### Related References

- [Reserved]

### Key Considerations

#### Accessible Path of Travel

An interior *accessible path of travel* should be a part of the interior *maintenance* plan to allow for a continuous, unobstructed route providing interior access to elements and spaces. Interior paths of travel should be designed with intentional *clear floor spaces*, and clear widths. Regardless of the occupancy or use of a building, all interior *accessible path of travel* should remain clear and not become a storage space for various office equipment, furniture or other elements.

#### Temporary Signage

Temporary *signage* should be a part of the interior *maintenance* plan. *Signage* should be designed to be usable by all persons including persons with low or no vision. General interior *maintenance* plans should integrate strategies to consistently design and locate temporary *signage* to ensure they are legible and relevant.

#### Interior Lighting

Interior lighting should be a part of the interior *maintenance* plan. Burnt out bulbs should be replaced to avoid the creation of uneven lighting levels or dark areas.

Maintaining an evenly illuminated space increases the visual field and is particularly important for persons who are deaf, deafened or hard of hearing and who use visual forms of communication such as American Sign Language. The prevalence of energy efficient bulbs reduce the associated costs with providing even and adequate lighting levels. The affects of high lighting levels that may create a *barrier* for some individuals should be considered.

### Interior Materials and Finishes

Interior materials and finishes such as wall and floor surfaces should be a part of the interior *maintenance* plan. *Maintenance* staff may decide to wax or seal a typically non-*glare* floor surface (e.g., matte ceramic tile finish) using a high gloss polish finish. High gloss polish finishes increase the level of *glare* from surrounding light sources and create visual distortion for all persons particularly for those with low vision. The installation of carpeted surfaces should be used in *high-use areas*. Where provided, interior materials and finishes used should be fragrance-free to accommodate persons who have sensitivities to fragrances that are off-gassed.

Carpeted floor surfaces such as mats, runners and/or area rugs should receive general interior *maintenance*. They are often added in main circulation areas during seasonal (winter) months. Haphazard placement of carpets can create visual confusion and disorientation for persons with low vision or persons with cognitive disabilities. In addition, carpeted surfaces can become rolled and increase the risk of tripping hazards or inhibit the movement of persons using *mobility devices*. Carpeted surfaces should be carefully located and secured when used.

### Acoustics

Acoustics such as sound proofing should be a part of the interior *maintenance* plan. Where provided, they should be designed for the benefit of all individuals, especially persons with hearing impairments. A balance between soft and hard surface materials and finishes will help to absorb unnecessary sound. Where solid wall surfaces are provided they should be insulated for maximum sound proofing. Where as if fully glass panels are provided, two-ply glazing should be installed for sound proofing.

### Requirements

#### (1) Accessible Path of Travel:

General interior *maintenance* should include interior *accessible path of travel* that:

- (a) Meet the criteria in section “2.1.1. Interior Accessible Paths of Travel”.

#### (2) Temporary Signage:

General interior *maintenance* should be provided with temporary *signage* that:

- (a) Identifies where the *accessible path of travel*, feature or facility is located when there is a service disruption or temporary closure;
- (b) Is removed when no longer relevant;
- (c) Has alternate formats of the information when *tactile* characters can not be provided; and
- (d) Meets the criteria in section “3.2.1. Signage and Wayfinding Systems”.

**(3) Interior Lighting:**

General interior *maintenance* should be provided to interior lighting that:

- (a) Meets the criteria in section “3.1.1. Interior Lighting”.

**(4) Interior Materials and Finishes:**

General interior *maintenance* should be provided to interior materials and finishes that:

- (a) Meet the criteria in section 2.7. Interior Materials and Finishes.

**(5) Acoustics:**

General interior *maintenance* should be provided to acoustics that:

- (a) Meet the criteria in section “3.3.1. Acoustics”.

# Appendices

# 5





# 5.1. Appendix A - Recognition, References and Resources

## Section Summary

This section provides a complete list of internal and external collaborators, including project team and advisory committees, directly involved with the preparation and review of these guidelines. It includes related references, which is a list of reference documents that were cited within the text, as well as, the bibliography, which is a list of reference documents that were consulted or read throughout the duration of creating the document. Additionally, included are matrices, checklists, forms, pictogram references for *signage*, and construction specifications and drawings.

## Contents in Section

- 5.1.1. List of Collaborators**
- 5.1.2. List of Figures**
- 5.1.3. List of Tables**
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## 5.1.1. List of Collaborators

### Project Team

#### Project Sponsors

City Manager's Office – People and Equity

- Omo Akintan, Chief People Officer

Deputy City Manager – Corporate Services

- Josie Scioli, Deputy City Manager
- Patrick Matozzo, Executive Director of Corporate Real Estate Management

City Manager's Office - Strategic & Corporate Policy (SC)

- Gwen McIntosh, Division Head
- Sandra Rodriguez, Director

#### Project Management - Implementation

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- Joseph Salvagio, Manager
- Peter Tatsopoulos, Manager
- Sandro Magnone, Management Consultant
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City Planning (CP)

- Helen Bulat, Project Manager
- Mario Giambattista, Project Coordinator

People & Equity (PE)

- Debbie Burke-Benn, Director of Equity and Human Rights
- Mark Kim, Manager, Accessibility Unit

- Deirdre Boyle, Accessibility Consultant
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Corporate Real Estate Management – Project Management Office (PMO)

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- Oxana Robertson, Senior Project Manager

Parks, Forestry & Recreation (PF&R)

- Lorene Bodiam, Program Standards & Development Office
- Katy Aminian, Capital Projects Supervisor

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- Daphne Wee, Senior Engineer
- Leigh Sherkin, Project Manager

### City Divisional Advisory Committee Stakeholders

Children's Services (CS)

- Nino Dodaro, Program Manager
- Gail O'Donnell, Project Manager

City Planning (CP)

- Helen Bulat, Project Manager
- Mario Giambattista, Project Coordinator

City Clerk's Office (CC)

- Jim Suderman, Director of Information Access

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- Robert Klimas, Senior Engineer

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- Cory Lynch, Solicitor for Municipal Law

**Economic Development & Culture (EDC)**

- Jo Ann Pynn, Manager of Capital Assets & Heritage Facilities Maintenance
- Mariana Mota, Senior Policy Advisor

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- Irene Gryniewski, Director Corporate Building Portfolio

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**Senior Services and Long-Term Care (SS&LC)**

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**Municipal Licensing & Standards (MLS)**

- Pam Audette, Program Manager

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- Lori Ellis, Senior Project Coordinator

- Ruthanne Henry, Supervisor Project Coordinator

- Scott Laver, Supervisor of Natural Environment & Community Programs

- Susan Korrick, Capital Projects Supervisor

- Wendy Strickland, Ravine Strategy Project Manager

**Toronto Public Health (TPH)**

- Eric Ng, Health Equity Specialist

**Shelter Support & Housing Administration (SSHA)**

- Terence Frederick, Asset Management Coordinator

**Social Development, Finance & Administration (SDFA)**

- Costanza Allevato, Director

**Policy, Planning, Finance & Administration (PPFA)**

- Meg Shields, Director

**Toronto Paramedic Services (EMS)**

- Bik Chawla, Commander of Policy Projects & Process Improvement

- Ralph Hole, Commander of Station Projects

**Toronto Building (TB)**

- Dylan Aster, Program Manager

- Eric Sehr, Program Manager of Business Operations

#### Toronto Water (TW)

- Garry Boychuk, Manager of Capital Works Delivery
- Zackary Sayevich, Manager of Process Control Systems

#### Transportation Services (TS)

- Ann Khan, Manager of Active Traffic Management
- Chris Ronson, Project Manager
- Carly Hinks, Manager of Contract Development, Delivery and Inspections
- Daphne Wee, Senior Engineer
- Janet Lo, Senior Project Manager
- Jennifer Hyland, Project Manager
- Justin Bak, Project Manager
- Leigh Sherkin, Project Manager
- Mark van Elsberg, Project Manager

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- Valesa Faria, Director of Housing Secretariat
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### City Board & Agency Stakeholders

#### TTC (TT)

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#### Metrolinx (ME)

- Antonia Hammer, Senior Manager Universal and Sustainable Design

#### Waterfront Toronto (WT)

- Netami Stuart, Senior Project Manager

#### Toronto Parking Authority (TPA)

- Remy Iamonaco, VP Design + Construction
- Pat Lanni, Senior Engineer

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- Gail Rankin, Senior Manager, Facilities Management
- Elizabeth Sutter, Library Service Manager
- Winona McMorrow, Senior Services Specialist, Accessibility Services
- Darren Cooper, Manager, Accessibility

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- Noah Slater, Director, Capital Planning, Design & Engineering

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#### CreateTO

- Michael Whelan, Sr. Vice President. Development

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### CNIB

- Debbie Gillespie

### Pegasus

- Marie Perrotta, Founder & Director

### Private Citizens

- Al Reeves, Co-Founder, Nucleus Independent Living, and PFR Community Disability Steering Committee (CDSC) Member
- Elizabeth Hurdman, PFR AAC Member
- Craig Nicol

### Silent Voice Canada

- Ryan Parkinson

### Communications Disabilities Access Canada

- Nora Rothschild, Regional Coordinator (Ontario)

### R-Path

- Cathy Birch (Chair)
- Joe Knapper
- Lene Andersen
- Amanda O'Shaughnessy

## City of Toronto Committees for Update & Feedback

### Advisory Committees to Council

City of Toronto Accessibility Advisory Committee  
General Government and Licensing Committee

## Other City of Toronto Committees

Interdivisional Equity and Accessibility Committee (IEAC)  
Employee Disability Network (EDN)  
Park Forestry & Recreation - Community Disability Steering Committee

## Divisions by Service Area

### CSS – Community Social Services

- Children Services
- Court Services
- Economic Development & Culture
- Housing Secretariat
- Parks, Forestry and Recreation
- Public Health
- Seniors Services & Long-Term Care
- Shelter Support & Housing Administration
- Social Development, Finance and Administration
- Toronto Paramedic Services

### IDS - Industrial & Development Services

- City Planning
- Engineering and Construction Services
- Municipal Licensing & Standards
- Policy, Planning, Finance & Administration
- Toronto Building
- Toronto Fire Services
- Toronto Water
- Transportation Services

### CS - Corporate Services

#### Corporate Real Estate Management

- Corporate Services
- Facilities Management

- Real Estate Services
- Technology Services

### **CM – City Manager Divisions**

People and Equity

Governance & Corporate Strategy

### **CD - Council Divisions**

City Clerk's Office

Legal Services

### **Accessibility Consultant**

Human Space, a consultancy of BDP

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- Jesse Klimitz, Director
- Lorene Casiez, Accessibility and Wellness Practice Lead
- Haley Rae Dinnall-Atkinson, Accessibility Specialist

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#### Photo 2.6.6-A

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### Rationale

Related references include the reference documents that were cited within the text.

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## 5.1.7. Change Proposal Form

 <b>CHANGE PROPOSAL FORM</b> CITY OF TORONTO TORONTO ACCESSIBILITY DESIGN GUIDELINES	
Please submit all changes to:	
Corporate Real Estate Management Metro Hall 55 John Street, 2 <sup>nd</sup> Floor Toronto, ON M5V 3C6  <a href="mailto:tadg@toronto.ca">tadg@toronto.ca</a>	
For accommodation or assistance, please contact 3-1-1, or <a href="mailto:tadg@toronto.ca">tadg@toronto.ca</a>	
CONTACT INFORMATION	
<b>Name</b>	
<b>Company / Organization</b>	
<b>Address</b>	
<b>Phone</b>	
<b>Email</b>	
PROPOSED CHANGE	
Please provide a description of the proposed change (e.g. include section no., new or revised wording, etc.)	
REASON FOR CHANGE	
Please identify in detail the reason for change (e.g. incorrect spelling, unclear diagram, health and safety issues, etc.)	
ATTACH ADDITIONAL INFORMATION IF NECESSARY	

## 5.1.8. Construction Specifications and Drawings

Table 5.1.11-A Construction Specifications and Drawings

Drawing No.	Drawing Title
<a href="#">T-310.010-10</a>	Pedestrian Clearway Widths on Sidewalks
<a href="#">T-310.010-2</a>	Concrete Sidewalk with Boulevard
<a href="#">T-310.030-10</a>	Tactile Walking Surface Indicator and Curb Ramp Detail
<a href="#">T-310.030-11</a>	Tactile Walking Surface Indicator and Depressed Curb Detail
<a href="#">T-310.030-5</a>	Zebra Pavement Marking Detail At Signalized Intersections
<a href="#">T-310.030-7</a>	Signalized Intersection Configurations of Pedestrian Crossings
<a href="#">T-310.030-8</a>	Controlled Non Signalized Intersection Configuration of Pedestrian Crossings
<a href="#">T-310.030-9</a>	Location of Dropped Curbs at Controlled Intersections
<a href="#">T-900.200</a>	Pedestrian Bridge



## 5.1.9 Facility Checklists [Reserved]

## 5.1.10. Residential Application Matrix [Reserved]

## 5.1.11. Master Pictogram Reference for Signage [Reserved]



# 5.2. Appendix B - Application, Exceptions and Approvals

## Section Summary

This section provides applications, exemptions and approvals to achieve accessibility in both basic and *extensive renovations* of existing buildings. This section is to be used when the renovation is unable to meet requirements of the City of Toronto Accessibility Design Guidelines (TADG). Where compliance alternatives are required they should be implemented in compliance with the process outlined in section [“5.2.2. Compliance Alternative Approval Process”](#). In the event that the renovation compliance alternative noted in section [“5.2.3. Renovation Compliance Alternatives and Form”](#) cannot be achieved after exhausting all possible options, City staff should follow the *technically infeasible* exemption process noted in section [“5.2.4. Technically Infeasible Exemptions and Form”](#).

If a building is designated as a historical and heritage property and the accessibility requirement should impact the heritage value, an alternative solution for accessibility should be pursued. See section Introduction, subsection Guideline Application and Scope, ‘Historical and Heritage Properties’, for more details. Approval to proceed using the renovation compliance alternative must be obtained during the preliminary design phase of the project.

## Contents in Section

[5.2.1. Application Implementation Matrix](#)

[5.2.2. Compliance Alternative Approval Process](#)

[5.2.3. Renovation Compliance Alternatives and Form](#)

[5.2.4. Technically Infeasible Exemptions and Form](#)

## 5.2.1. Application Implementation Matrix

### Application

The intent of this section is to provide clarity on when the Toronto Accessibility Design Guidelines (TADG) is used in both an exterior and interior context. The Application Matrix further highlights where the TADG must be applied based on facility type and ownership. The last section identifies how TADG is implemented at the City of Toronto.

### Facilities

#### New Facilities (Leased or City Owned)

##### (1) New Buildings

TADG Requirements:

- (a) All newly constructed facilities, owned, leased or operated by the City of Toronto shall comply with the TADG.
- (b) TADG is encouraged for facilities and properties that are not owned or operated by the City. IE. Privately Owned, Agencies, Corporations, Commissions, and Adjudicative Bodies.

##### (2) Leased Buildings

TADG Requirements:

- (a) All of the City's newly leased premises shall comply with the TADG when:
  - (i) The lease is for a term equal to and or greater than 5 years or,
  - (ii) The public use of the facility is high or,
  - (iii) When the lease includes a new landlord fit-up inducement(s) such as extensive interior / exterior alterations requiring a building permit.

##### (3) Temporary Buildings

TADG Requirements:

- (a) All newly constructed temporary facilities owned or operated by the City of Toronto shall comply with the TADG.

Employee Designated Work Areas:

Unless otherwise listed in "Exceptions" all building types listed above, all areas intended for use by employees as well as visitors or users, must be designed and built for inclusivity in compliance with the Toronto Accessibility Design Guidelines.

UNDER INTERNAL REVIEW AND SUBJECT TO CHANGE

## Existing Facilities (Leased or City Owned)

### (1) Existing Facility Renovation, Retrofit or Alterations

TADG Requirements:

- (a) Category A: Existing facilities/properties undergoing an extensive (major) \* renovation as classified by the Ontario Building Code and Planning Act must comply with the Toronto Accessibility Design Guidelines.
  - (i) Example: Renovation of a public facing office within a Civic Centre to utilize and better serve the public. The renovation is extensive, thus requiring permit approvals from authorities having jurisdiction, and as such must comply with TADG.
- (b) Category B: Existing facilities/properties undergoing a minor, non-extensive or basic renovation or repair requiring the issuance of a building permit or zoning by-law compliance must comply with the Toronto Accessibility Design Guidelines.
  - (i) Example: Renovations to a public community centre kitchen or staff kitchen counters to be lowered to comply with access and approach, and as such must comply with TADG.
- (c) Category C: Any alteration, replacement and/or upgrade to an existing buildings mechanical systems (plumbing, HVAC,) electrical systems (power, lighting, life safety, security & audio-visual) and conveying systems (elevators, stairs, escalators, lifts), must comply with the requirements the Toronto Accessibility Design Guidelines.
  - (i) Example: A fire alarm notification device upgrade in a public or staff accessible waiting room area would require both an audible and visual notification device (i.e. horn / strobe) and must comply with TADG.
  - (ii) Example: Retrofit of an existing elevator within a building must comply with TADG and meet requires such as cabin requirements for mobility devices and two-way communication identified in TADG.

Note:

(1) All other renovations, retrofits & alterations not defined by Categories B, or C must comply with the TADG to the greatest extent possible.

(2) If any individual element, space or area defined by Categories B, or C that is deemed technically infeasible to comply with requirements of the TADG then it should seek a compliance alternative that provides the highest level of accessibility possible. Refer to Section 5 - Appendix B, Section 5.2.2, for TADG Compliance Alternative Approval Process to choose a suitable compliance path.

UNDER INTERNAL REVIEW AND SUBJECT TO CHANGE

**(2) New Facility Renovation, Retrofit or Alterations**

TADG Requirements:

- (a) All new additions to existing facilities, space or elements shall comply with the TADG.
- (b) An accessible path of travel must be provided to new additions, spaces or elements so that it can be accessed by the public and/or staff. This includes, if necessary, making alterations to the buildings existing main entrance, doorways and corridors so that compliance with the TADG requirements for Accessible Entrances & Exits and Accessible Paths of Travel is achieved.

**(3) Historical or Heritage Building Renovation, Retrofit or Alterations**

TADG Requirements:

- (a) All accessibility alterations to Heritage Facilities shall be approached so that they will be the least disruptive to the defining heritage features of the facility and assessed on a case-by-case basis by City staff to determine compliance with the TADG to the maximum extent feasible while following the “Standards and Guidelines for the Conservation of Historic Places in Canada.”

**Exterior****(1) Trails, Parks, and Public Squares or Amenities**

TADG Requirements:

- (a) All new exterior amenities, trails, parks and public squares shall comply with the requirements of the Toronto Accessibility Design Guidelines.
- (b) All existing exterior amenities, trails, parks and public squares being altered or upgraded shall comply with the requirements of the TADG to provide the highest level of accessibility possible having regard for physical barriers and technical constraints.(1)

Note:

If any individual element, space or area is deemed technically infeasible to comply with requirements of the TADG then it should seek a compliance alternative that provides the highest level of accessibility possible. Refer to Section 5 - Appendix B, 5.2.2, for TADG Compliance Alternative Approval Process to choose a suitable compliance path.

**(2) Urban and Natural Paths of Travel or Pedestrian Clearways**

TADG Requirements:

- (a) All new urban & natural paths of travel and pedestrian clearways shall comply with the requirements of the Toronto Accessibility Design Guidelines.
- (b) All existing urban & natural paths of travel and pedestrian clearways being altered or upgraded shall comply with the requirements of the TADG to provide the highest level of accessibility possible having regard for physical barriers and technical constraints.(1)

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**Note:**

If any individual element, space or area is deemed technically infeasible to comply with requirements of the TADG then it should seek a compliance alternative that provides the highest level of accessibility possible. Refer to Section 5 - Appendix B, 5.2.2, for TADG Compliance Alternative Approval Process to choose a suitable compliance path.

**(3) All other Exterior Elements (New or Existing)****TADG Requirements:**

- (a) All other new exterior elements/amenities described in Section 1 – Exterior shall comply with the requirements of the Toronto Accessibility Design Guidelines.
- (b) Application of the TADG to existing exterior elements/amenities being altered or upgraded shall comply with the requirements of the TADG to provide the highest level of accessibility possible having regard for physical barriers and technical constraints.(1)

**Note:**

If any individual element, space or area is deemed technically infeasible to comply with requirements of the TADG then it should seek a compliance alternative that provides the highest level of accessibility possible. Refer to Section 5 - Appendix B, 5.2.2, for TADG Compliance Alternative Approval Process to choose a suitable compliance path.

**Exceptions****(1) General Exceptions****Exceptions to TADG Requirements:**

- (a) TADG does not apply to facilities and properties that are not intended to be occupied on a daily or full-time basis including but not limited to:
  - (i) Pumping stations;
  - (ii) Storage sheds;
  - (iii) Power Stations;
  - (iv) Waste Transfer Stations; and
  - (v) Buildings of Group F Division 1 occupancy, as defined by the Ontario Building Code (latest edition with all amendments).
- (b) The requirements of the TADG do not apply to the following spaces / areas:
  - (i) Service rooms (electrical rooms, sprinkler rooms and mechanical rooms);
  - (ii) Elevator machine rooms;
  - (iii) Janitor rooms;
  - (iv) Service spaces (crawl spaces, attics, utility tunnels);
  - (v) Roof spaces without public access; and
  - (vi) Other similar utility and services areas identified in the Ontario Building Code.

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## (2) Renovation Compliance Alternative [RCA] Process

Exceptions to TADG Requirements:

- (a) Renovation Compliance Alternatives are permitted to achieve accessibility in both basic and extensive (Category A, B, and C – see above) renovations of existing buildings, properties or systems. When the renovation, individual element, space or area is deemed technically infeasible to comply with requirements of the TADG, a suitable renovation compliance alternative (RCA) requirement can be selected for compliance.
- (b) The renovation compliance alternative must provide the highest level of accessibility possible. RCA's should be reviewed on a case by case basis with City staff and follow the technically infeasible exemption process outlined Section 5 - Appendix B, 5.2.4, for TADG Compliance Alternative Approval Process to document a suitable compliance path.
- (c) Renovation compliance alternatives are identified in a square bracket with 'R-', found in Section 5 Appendix B, 5.2.3. For example, [R-1.1.1.(1)]. Refer to the Section 'How to Use this Guideline' for more details.

## (3) Technically Infeasible Exemption Process

Exceptions to TADG Requirements:

- (a) The term 'technically infeasible' refers to the renovation or replacement of a building element that cannot meet the requirements of the City of TADG and a suitable Renovation Compliance Alternative exemption could not be applied based on:
  - (i) Existing structural conditions that would require altering parts of the structural frame, such as a load-bearing member; and/or
  - (ii) Other existing major physical or site constraint prohibiting the necessary modification or addition of elements, spaces, or features for compliance with the Toronto Accessibility Design Guidelines.
  - (iii) If the proposed work is technically infeasible and if the renovation compliance alternative path [A] cannot be achieved after exhausting all possible options City staff must follow the technically infeasible exemption process described in Section 5 - Appendix B, 5.2.4, for TADG Compliance Alternative Approval Process to choose a suitable compliance path.

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## Implementation and Compliance

### Audits

Requirements:

- (a) All accessibility audits completed for City of Toronto owned facilities/properties shall use the TADG as the benchmark for the highest level of accessibility performance.
- (b) Implementation of alterations or upgrades required to improve accessibility based on audits shall be part of each City Division State of Good Repair program and shall include for all capital costs to implement the highest-level accessibility performance.

### Multi-Year Accessibility Plan (MYAP)

Requirements:

- (a) The City of Toronto Multi Year Accessibility Plan requires compliance with the TADG in order to meet its targeted commitments for improving accessibility throughout the City.

### City Funded Private or Public Developments, Spaces and Land (Section 37)

Requirements:

- (b) Compliance with the TADG for Section 37 Agreements and/or other legally binding agreements between developer and/or beneficiary organization and the City of Toronto is required where the City will occupy and operate, or lease out space, and recommended in all other areas of the development such as public spaces or common element amenity, commercial and retail spaces.
- (c) Any other development or agreement giving the City dedicated space or land for its use in delivering services to the public or occupied by its staff.

### Procurement Process

#### (1) RFP's and RFQ's Consultants + Vendors Contracts

Requirements:

- (a) Ensure that TADG compliance is part of Request for Proposal (RFP) or Request for Quotation (RFQ) for design consultants.
- (b) The City of Toronto, shall ensure compliance to the TADG during the preplanning, design, construction documents preparation and contracts administrative phase.

#### (2) Training Support and Education

Requirements:

- (a) Training and Support on How/When to use TADG and follow the Renovation Compliance Alternatives (RCA) and Technically Infeasible (TI) exemption process.

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**(3) Major Projects Review + Consultation**

Requirements:

- (a) Project review by the Toronto Accessibility Advisory Committee for large and or complex projects. Compliance with the City's Corporate Accessibility Policy and Multi-Year Accessibility Plan. Ref. <https://secure.toronto.ca/pa/decisionBody/321.do>

**(4) City Staff Delivering Capital Projects**

Requirements:

- (a) Declared on Project Charters prior to project approval or declared on Close-Out documentation when projects are completed.

**(5) Building Permits for City Owned Properties**

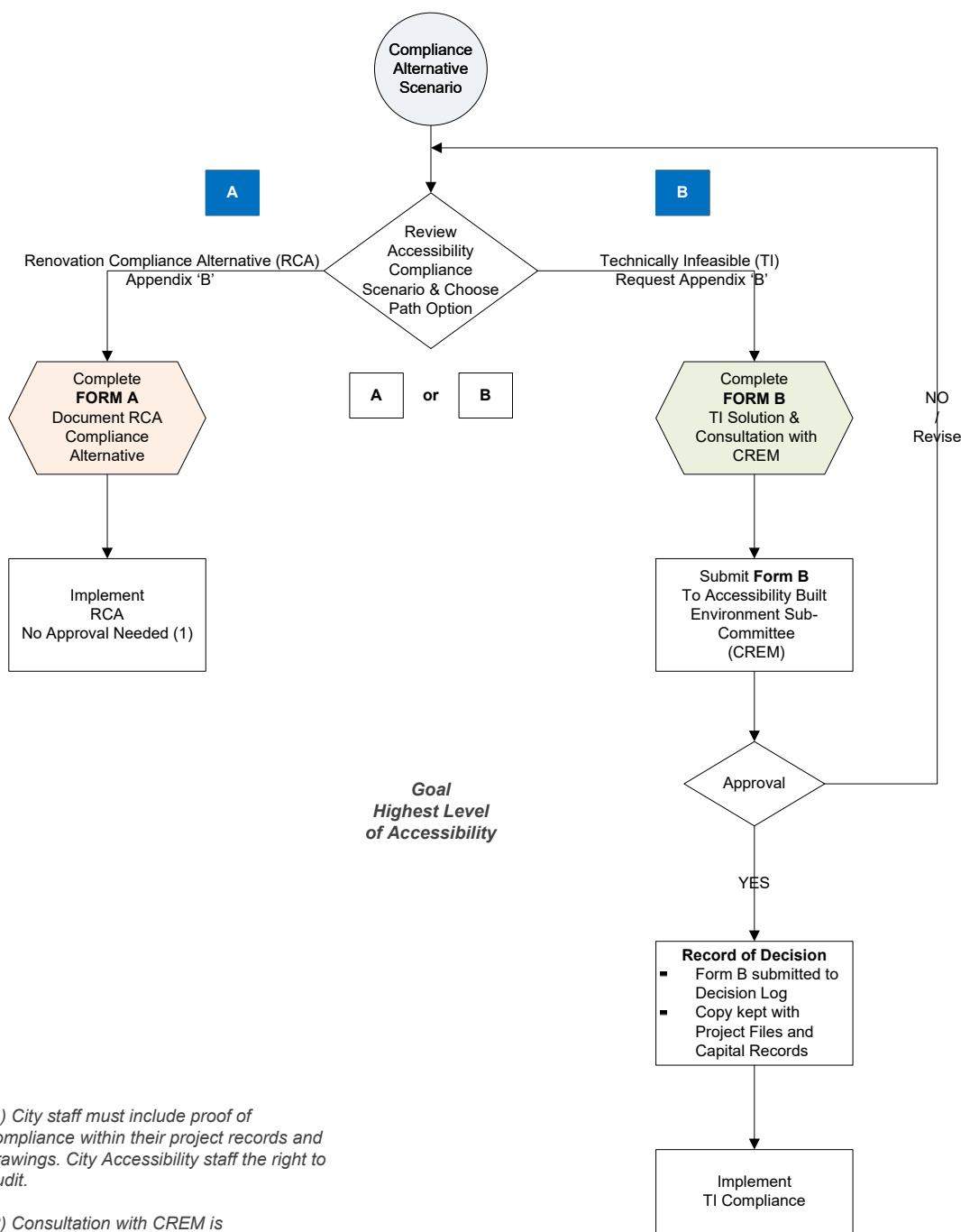
Requirements:

- (a) Declaration + Automatic Notification for Planning and Building Permit applications for City Owned properties.

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## 5.2.2. Compliance Alternative Approval Process

TADG – Compliance Alternative Approval Process



(1) City staff must include proof of compliance within their project records and drawings. City Accessibility staff the right to audit.

(2) Consultation with CREM is recommended to review and evaluate previous compliance decision log.

Version: May 17, 2021

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### 5.2.3. Renovation Compliance Alternatives and Form

Where the renovation of existing buildings becomes difficult to meet the requirements of the City of Toronto Accessibility Design Guidelines (TADG) or such guideline applications are claimed as *technically infeasible*, the renovation compliance alternatives section provides an alternate solution more suitable and in compliance with the Ontario Building Code minimum.

If a building is listed as heritage, the renovation compliance alternatives provided in TADG only apply if the requirement does not impact the heritage value. See section 'Historic Sites and Heritage Properties' for more details.

In both cases, approval to proceed using the renovation compliance alternative or *technically infeasible* exemption permission must refer to the procedure outlined in Appendix B and follow the procedure for approval and compliance documentation required.

In the text of this guideline, renovation compliance alternatives (RCA) are identified in a square bracket with 'R-' and the section number referenced. For example, [R-1.1.1.1]. Refer to the Section 'How to Use this Guideline' for more details.

#### [R-1.1.1. (1)(a)]

##### "1.1.1. Exterior Accessible Paths of Travel"

Where it is *technically infeasible* to provide an *accessible path of travel* (or a *pedestrian clearway*) that has a minimum clear width that is 1800 mm minimum for *local roads*, a reduction to existing conditions or 1500 mm, whichever is greater, is permitted.

#### [R-1.1.1. (1)(b)]

##### "1.1.1. Exterior Accessible Paths of Travel"

Where it is *technically infeasible* to provide an *accessible path of travel* (or a *pedestrian clearway*) that has a minimum clear width that is 2100 mm minimum for collectors and arterials, a reduction to existing conditions or 1800 mm, whichever is greater, is permitted.

#### [R-1.1.2. (1)(a)]

##### "1.1.2. Trails, Pathways, Boardwalks, and Beach Access Routes"

Where it is *technically infeasible* to provide an *accessible path of travel* (or a *pedestrian clearway*) that has minimum clear width dimensions, pinch points are permitted for a clear width that is 1800 mm minimum if path is for only pedestrians, 2700 mm minimum if path is for pedestrians and cyclists, and 3000 mm minimum if path is for pedestrians, cyclists, and *maintenance* vehicles.

#### [R-1.1.4. (2)(a)]

##### "1.1.4. Exterior Paths of Travel to Entrances and Exits"

Where it is *technically infeasible* to provide a secondary *entrance* or exit at grade level (i.e., not the principal *entrance* or one of the required barrier-free *entrances* as per the Ontario Building Code (OBC)) and the existing condition/site does not allow for a *ramp* as per this guideline, a sloped surface up to the door with flared sides that meets the OBC requirements for *curb ramps* is permitted. The width of the sloped transition should be the width of the exit or 1500 mm minimum, whichever is greater. The edges of the sloped transition should be demarcated with 70% *colour/brightness contrast* to identify the change in *slope* and the edges.

**[R-1.1.9. (2)(a)]**

**"1.1.9. Exterior Ramps"**

Where it is *technically infeasible* to provide an 1800 mm *ramp* width, a *ramp* as close to 1800 mm but no less than 1500 mm is permitted.

**[R-1.1.9. (2)(c)]**

**"1.1.9. Exterior Ramps"**

Where it is *technically infeasible* to provide a clear space of 2500 mm long by 2500 mm wide landing at straight run and at 90 degree turn locations and 2500 mm by the width of *ramp* at 180 degree turns, landings should be 1800 mm long by 1800 mm wide or 2500 mm long by the width of the *ramp*. A landing that is as large as possible should be provided.

**[R-1.1.9.(3)(a)]**

**"1.1.9. Exterior Ramps"**

Where a slope between 1:20 (5%) to 1:15 (6.7%) can not be provided, a *slope* between 1:15 (6.7%) to maximum 1:12 (8.3%) is permitted at interior *ramps* only.

**[R-1.3.1. (6)(d)]**

**"1.3.1. Off-Street Parking"**

Where it is *technically infeasible* to provide the vertical clearance of 2200 mm from the beams, pipes, or sprinkler heads to the surface for covered or underground 'Type A' and 'Type B' parking spaces, a reduction is permitted for a minimum 2100 mm vertical clearance.

**[R-1.3.1. (8)(d)]**

**"1.3.1. Off-Street Parking"**

Where it is *technically infeasible* to provide the vertical clearance of 2200 mm from the beams, pipes, or sprinkler heads to the surface for covered or underground parallel parking spaces, a reduction is permitted for a minimum 2100 mm vertical clearance.

**[R-1.3.1. (9)(d)]**

**"1.3.1. Off-Street Parking"**

Where it is *technically infeasible* to provide the vertical clearance of 2200 mm from the beams, pipes, or sprinkler heads to the surface for covered or underground *access aisles*, a reduction is permitted for a minimum 2100 mm vertical clearance.

**[R-1.3.2. (5)(a)]**

**"1.3.2. Passenger Pick-Up and Drop-Offs"**

Where it is *technically infeasible* to provide an overhead clearance of 5000 mm, an overhead clearance of at least 3600 mm is permitted.

**[R-1.3.2. (11)(a)]**

**"1.3.2. Passenger Pick-Up and Drop-Offs"**

Where it is *technically infeasible* to provide the vertical clearance of 2200 mm from overhead objects for covered or underground *access aisles*, a reduction is permitted for a minimum 2100 mm vertical clearance.

**[R-1.4.3. (1)(a)]**

**"1.4.3. Play Spaces"**

See 'Renovation Compliance Alternative' for "[R-1.1.2. (1)(a)]".

**[R-1.4.8. (1)]****"1.4.8. Balconies, Terraces and Patios"**

See 'Renovation Compliance Alternative' for "[R-1.1.4. (2)(a)]".

**[R-2.1.5. (1)(b)]****"2.1.5. Elevators"**

Where it is *technically infeasible* to provide an existing elevator cab size and the door clear width does not comply with current space requirements, the interior of the elevator cab should be renovated to meet the requirements in this section.

**[R-2.1.6. (1)(a)]****"2.1.6. Limited Use, Limited Application (LULA) Lifts"**

Where it is *technically infeasible* to provide a Limited Use, Limited Application (LULA) lift, a platform lift as permitted by the Ontario Building Code should be used.

**[R-2.2.1. (4)(a)(iii)]****"2.2.1. Entrances"**

Where it is *technically infeasible* to provide a clear turning space that is 2500 mm in diameter plus the width of the door within a vestibule, a minimum clear turning space that is 1800 mm in diameter plus the width of the door is permitted.

**[R-2.2.3. (1)(a)]****"2.2.3. Doors and Doorways"**

Where it is *technically infeasible* to provide a clear width that is 950 mm for doors, the minimum clear door width should meet current Ontario Building Code requirements.

**[R-2.2.3. (1)(c)]****"2.2.3. Doors and Doorways"**

Where it is *technically infeasible* to remove existing revolving doors, a door that meets the criteria in this section should be provided immediately adjacent to the revolving doors.

**[R-2.2.3. (7)(b)]****"2.2.3. Doors and Doorways"**

Where it is *technically infeasible* to provide doors that can be recessed or the provision of *cane detectable* guards would reduce the *accessible path of travel* to less than 1800 mm, then textural strips on the floor in the shape of the door swing that have *colour/brightness contrast* should be provided.

**[R-2.2.5. (1)(h)]****2.2.4 Door Controls and Devices**

Where it is *technically infeasible* to be installed on a wall, or a pedestal, the *power door operator* should be installed within the required distances and the available surface, such as mullion or glass.



### [R-2.3.1. (3)]

#### "2.3.1. Multi-Stall Washrooms"

Where it is *technically infeasible* to provide multi-stall washrooms that meet the criteria in this section, then at least one *universal washroom* located on the same floor level that meets the criteria in section "2.3.8. Universal Washrooms" should be provided.

### [R-2.3.2. (2)(a)]

#### "2.3.2. Accessible Water Closet Stalls and Enclosures"

Where it is *technically infeasible* to provide a stall door that has a minimum clear width of 950 mm, a minimum clear width opening of 900 mm should be provided.

### [R-2.3.2. (1)]

#### "2.3.2. Accessible Water Closet Stalls and Enclosures"

Where it is *technically infeasible* to provide *accessible water closet stalls and enclosures* that meet the criteria in this section, then at least one *universal washroom* located on the same floor level that meets the criteria in section "2.3.8. Universal Washrooms" should be provided.

### [R-2.3.3. (5)(a)]

#### "2.3.3. Ambulatory Water Closet Stalls and Enclosures"

Where it is *technically infeasible* to provide L-shaped grab bars, then the installation of two fold-down grab bars that are wall or floor mounted may be used provided the minimum clearance over the centre of the *water closet* is maintained meets the criteria in section "2.3.4. Accessible Water Closets" except for the clear floor spaces.

### [R-2.3.5. (5)]

#### "2.3.5. Accessible Urinals"

Where it is *technically infeasible* to provide vertical grab bars on either side of the urinal, a horizontal grab bar mounted at maximum 1200 mm *A.F.F.* should be provided.

### [R-2.3.6. (3)(a)(ii)]

#### "2.3.6. Accessible Lavatories"

Where it is *technically infeasible* to recess washroom accessories, they should have *colour/brightness* contrast from their background and be *cane detectable*.

### [R-2.3.8. (5)]

#### "2.3.8. Universal Washrooms"

Where it is *technically infeasible* to provide a clear turning circle that is 2500 mm in diameter, a minimum clear turning circle that is 1800 mm in diameter or greater is permitted.

### [R-2.3.8. (8)]

#### "2.3.8. Universal Washrooms"

[Reserved - Emergency Call Systems]

**[R-2.3.8. (9)(c)]****“2.3.8. Universal Washrooms”**

Where it is *technically infeasible* to provide space for an *adult change table*, a removable *adult change table* that is not stored in the room should be provided.

**[R-2.3.11. (3)]****“2.3.11. Accessible Change Room Stalls”**

Where it is *technically infeasible* to provide a clear turning circle that is 2500 mm in diameter, a minimum clear turning circle that is 1800 mm in diameter or greater is permitted.

**[R-2.3.13. (1)(a)]****“2.3.13. Interior Water Bottle Filling Stations and Drinking Fountains”**

Where it is *technically infeasible* to provide all new *accessible* interior water bottle filling stations and drinking fountains, a minimum of one *accessible* unit should be provided, where more than one water bottle filling station and drinking fountain is provided.

**[R-2.3.13. (4)(e)]****“2.3.13. Interior Water Bottle Filling Stations and Drinking Fountains”**

Where it is *technically infeasible* to provide existing drinking fountains that are *cane detectable* or recessed, *cane detectable* elements or guards around the existing drinking fountain should be provided.

**[R-2.4.2. (3)(c)(ii)]****2.4.2. Meeting and Conference Rooms**



Where it is *technically infeasible* to provide 100% of an entire meeting room table as *accessible* to persons using a *mobility device*, at least 25% of the table should be *accessible*, however at least one of each type (determined by function) of *amenities* within the meeting room should remain *accessible* and be connected to the *accessible path of travel*.

**[R-2.4.4. (1)(b)]****2.4.4. Queuing Guides and Waiting Areas**

Where it is *technically infeasible* to provide a clear turning circle that is 2500 mm minimum in diameter, a clear turning circle that is 1800 mm minimum in diameter or greater is permitted.

**[R-2.4.8. (1)(a)]****2.4.8. Kitchens and Kitchenettes**

Where it is *technically infeasible* to provide a clear turning circle that is 2135 mm minimum in diameter in the space, a clear turning circle that is 1800 mm minimum in diameter or greater is permitted.

	<b>RENOVATION COMPLIANCE ALTERNATIVE FORM</b> CITY OF TORONTO TORONTO ACCESSIBILITY DESIGN GUIDELINES	
Where the renovation or alteration to an existing building(s) or element becomes technically infeasible to meet the requirements of the City of Toronto Accessibility Design Guidelines, the renovation compliance alternative (RCA) section (Appendix B) provides an alternative equivalent solution which provides the highest level of accessibility possible. Note: all equivalent alternatives proposed must meet or exceed the minimum legislative requirement(s) of the Ontario Building Code and/or AODA applicable standard. Multiple RCA's on one project can be grouped/tagged and recorded on project documents for audit purposes.		

Name of Applicant	Phone
Division / Company	E-Mail

Project Designer	Phone
Division / Company	E-Mail

Project Details			
Project Title			
Project No.			
Project Type	<input type="checkbox"/> Renovation / Alteration <input type="checkbox"/> Exterior or Public Space <input type="checkbox"/> System / Controls Only <input type="checkbox"/> Other (Please Specify) _____	Project Phase	<input type="checkbox"/> Preliminary (Conceptual & Schematic) <input type="checkbox"/> Detached Design Development <input type="checkbox"/> Tender / Construction <input type="checkbox"/> Other (Please Specify) _____

Justification
1. City of Toronto TADG Renovation Compliance Section and being applied (please provide section / item no.)
2. Please describe the intent of the accessibility requirement.
3. Please describe the reason the Renovation Compliance Alternative applied.
4. Please describe the alternative Renovation Compliance Alternative design being proposed and/or the equivalent highest level accessibilities possible. How it meets the intent of the accessibility requirement(s) of the City of Toronto TADG, AODA standards and OBC requirements.

**ATTACH ADDITIONAL INFORMATION IF NECESSARY  
(DRAWINGS, BRIEFING NOTE, MEMORANDUM TO PROJECT FILE)**

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## 5.2.4. Technically Infeasible Exemptions and Form

The term *technically infeasible* refers to the renovation or *replacement* of a building element that cannot meet the requirements of the City of Toronto Accessibility Design Guidelines and a suitable renovation compliance alternative, noted in subsection “5.2.3. Renovation Compliance Alternatives and Form”, cannot be applied based on:

- Existing structural conditions that would require altering parts of the structural frame, such as a load-bearing member; and/or
- Other existing major physical or site constraints prohibiting the necessary modification or addition of elements, spaces, or features for compliance with the Toronto Accessibility Design Guidelines.

If the proposed work is *technically infeasible* and in the event that the renovation compliance alternative, noted in subsection “5.2.3. Renovation Compliance Alternatives and Form”, cannot be achieved after exhausting all possible options, City staff must follow the *technically infeasible* exemption process, noted in subsection “5.2.2. Compliance Alternative Approval Process” .

The process for exemption requires extensive documentation and justification by City staff with the support of their consultant or vendor team. Furthermore, the process requires the approval of the City’s governing accessibility body.

**TECHNICALLY INFEASIBLE FORM**  
CITY OF TORONTO  
TORONTO ACCESSIBILITY DESIGN GUIDELINES




The term ‘technically infeasible’ refers to the renovation or replacement of a building element that cannot meet the requirements of the City of Toronto Accessibility Design Guidelines and a suitable Renovation Compliance Alternative noted in SECTION 5.2.3. could not be applied based on:

1. Existing structural conditions that would require altering parts of the structural frame, such as a load-bearing member; and/or
2. Other existing major physical or site constraint prohibiting the necessary modification or addition of elements, spaces, or features for compliance with the Toronto Accessibility Design Guidelines.

Name of Applicant		Phone	
Division / Company		E-Mail	
Division Head		Signature	
Project Designer		Phone	
Division / Company		E-Mail	



**Project Details**

Project Title			
Project No. / Project Address			
Project Type	<input type="checkbox"/> New Construction	Project Phase	<input type="checkbox"/> Preliminary (Conceptual) + Schematic Design
	<input type="checkbox"/> Renovation / Alteration		<input type="checkbox"/> Detailed Design Development
	<input type="checkbox"/> Exterior Only or Public Space		<input type="checkbox"/> Tender / Construction
	<input type="checkbox"/> Systems / Controls Replacement Upgrade		<input type="checkbox"/> Other (Please Specify)
	<input type="checkbox"/> Other (Please Specify) _____		_____

**Justification**

1. City of Toronto TADG requirement (pleas provide section / item no.)
2. Please describe the intent of the accessibility requirement.
3. Please describe why achieving the accessibility requirement is technically infeasible and any Renovation Compliance Alternative could not be applied (Section 5.2.3.).
4. Please describe the alternative design being proposed and how it meets the intent of the accessibility requirement(s) of the Toronto Accessibility Design Guidelines. *(Note: All equivalent alternatives proposed must meet or exceed the minimum legislative requirements of the Ontario Building Code, and/or AODA applicable standards).*
5. Reference previous decision log on precedence if applicable.

**UNDER INTERNAL REVIEW AND SUBJECT TO CHANGE**

 <b>TECHNICALLY INFEASIBLE FORM</b> CITY OF TORONTO TORONTO ACCESSIBILITY DESIGN GUIDELINES 			
Divisional Information (Applicant)			
Name of Project Manager / Supervisor			
Phone		E-Mail	
Signature		Date	
Name of Manager			
Phone		E-Mail	
Signature		Date	
Name of Director			
Phone		E-Mail	
Signature		Date	
Name of T.I. Submitter			
Phone		E-Mail	
Signature		Date	
People & Equity, Occupational Health & Safety (Consulted)			
Name of Accessibility Consultant Staff			
Phone		E-Mail	
Signature		Date	
Name of Director / Division Head			
Phone		E-Mail	
Signature		Date	
Project Documents			
Required Documents		Site Review / Building Information	
<ul style="list-style-type: none"> <li>▪ Site Plans</li> <li>▪ Drawings (Floor Plans, Elevations, etc.)</li> <li>▪ HVAC and Plumbing Plans</li> <li>▪ Electrical / Emergency Lighting / Fire Alarm, Sprinkler and other Fire Safety Systems</li> <li>▪ Technical Specifications</li> <li>▪ Additional Document as Requested by Governing Body / Committee</li> </ul>		Site No.	
		Notes & Property Address / Building Name	
		Date	
Approval Decision of Governing Body / Committee			
Decision			
Approved by			
Signature		Date	

UNDER INTERNAL REVIEW AND SUBJECT TO CHANGE

