

CITY OF EDMONTON

ACCESS DESIGN GUIDE

Version 2



Edmonton



CITY OF EDMONTON

**ACCESS DESIGN
GUIDE**
Version 2, 2018



PREFACE

INTRODUCTION

An *age-friendly* city is an inclusive place where age and ability are not barriers to access services, programs, businesses or facilities. In 2010, Edmonton was officially accepted as a member of the World Health Organization's (WHO) Global Network of Age-Friendly Cities and Communities. Age-friendly Edmonton is a partnership of individuals and organizations committed to building a city that is happy, safe, friendly, warm and interesting for everyone of every age. Since 2013, Age-friendly Edmonton has been implementing the *Vision for an Age-Friendly Edmonton Action Plan* which was developed after extensive community consultation with seniors, their caregivers and key stakeholders.

The Age-Friendly Edmonton Outdoor Spaces and Buildings Committee was formed to address two goals:

- Parks, outdoor spaces, communities and buildings are designed to be age-friendly
- Parks, outdoor spaces, communities, walkways and buildings are maintained to ensure ongoing access by seniors

The development of this Access Design Guide was initiated to address these goals. Written to complement the existing City of Edmonton policies *C463: Accessibility to City of Edmonton Owned and Occupied Buildings*, *C466: Integration of Persons with Disabilities* and *C573A: Complete Streets*, this Guide aims to promote accessibility throughout exterior paths of travel, open spaces and interior facilities owned, operated or leased by the City of Edmonton. The guide outlines measures that exceed the requirements of the 2014 Alberta Building Code.

Additionally, the City has developed strategic level planning for all publicly owned open spaces across Edmonton through *Breathe: Edmonton's Green Network Strategy*. Breathe highlights a number of strategic directions which include making improvements to ensure open spaces are safe and inclusive, and ensure public access and connectivity throughout the network. *Barrier-free* buildings and streets enhance the mobility and independence of all people regardless of age, including those with *disabilities*. Design consideration should also include requirements for emergency response services.

[Additional reference documents to be used in conjunction with the Access Design Guide can be found in Appendix A. It is encouraged that designers also consider the Seven Principles of Universal Design when applying this Guide \(see Glossary\).](#)

APPLICATION OF THIS GUIDE

The Access Design Guide is intended for use when planning, designing, building and maintaining City-owned facilities, parks and spaces leased by the City of Edmonton. This includes facilities owned and operated by the City, as well as those built on City-owned land but operated by another organization subject to lease agreement terms. These guidelines shall be incorporated into the planning of all exterior spaces starting from neighborhood design. The Guide would also apply to renovation of City Facilities and Parks. They do not apply retroactively to existing City facilities that are not undergoing renovations.

If there are documents that provide specific design guidelines for a facility (i.e. transit design guidelines), this guide shall be used as a supporting document for the design of that facility.

Design professionals, the building and construction industry, government departments and the community as a whole are encouraged to implement this guide in all projects constructed within the City of Edmonton.

For Enquiries on code related items in this document, contact Technical Advisor Office of Safety Codes & Permits Inspections at 780-496-3149.

BACKGROUND

The City of Edmonton's Access Design Guide exceeds the 2014 Alberta Building Code requirements and is intended to be used in conjunction with the *Barrier-Free Design Guide*.

The Guide was developed through:

- Support from Age-Friendly Edmonton and its stakeholders
- Age-Friendly Edmonton Outdoor Spaces and Buildings Committee
- Experience acquired by The City of Edmonton through the planning and review of facilities
- Public Engagement with seniors through Age-Friendly Edmonton
- Consultation with City of Edmonton Departments
- Input from the City of Edmonton Accessibility Advisory Committee
- Other City of Edmonton guidelines, policies and documents
- Lived experience and knowledge of Edmontonians with disabilities
- Collaboration with City of Calgary Access Design Standards
- 2014 Alberta Building Code
- *Barrier-Free Design Guide 2017*
- Clearing Our Path – Creating *accessible* environments for people with vision loss by cnib

Many thanks for all of your assistance.



COMPOSITION

The guide is composed of three parts – Exterior, Interior and Maintenance.

- *Age-friendly specific items are highlighted in blue font*
- Where applicable, explanation or additional notes are included
- Supporting illustrations are incorporated throughout the Guide
- **Referrals to additional information for each section are provided next to each element**
- Descriptions of italicized words can be found in the glossary
- Links to references and hyperlinked documents throughout this document are included in Appendix A

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SECTIONS A-D

A GENERAL PUBLIC OPEN SPACE DEVELOPMENT

[Refer to Breathe: Edmonton's Green Network Strategy and Designing New Neighbourhoods: Guidelines for Edmonton's Future Residential Communities for additional policy guidance pertaining to connectivity and integration of open spaces at the neighbourhood, municipal and regional level.](#)

Special considerations must be made while designing public places and spaces to accommodate the aging population, needs of children and those of varying abilities. This section discusses the City of Edmonton's Access Design Guide as it relates to location of public *open spaces* with respect to other activity areas and connections.

This section covers:

- A.1. Neighbourhood design
- A.2. Park master planning
- A.3. Outdoor seating
- A.4. Picnic and warming shelters
- A.5. *Amenity* buildings (i.e. washrooms, concessions, lockers, etc.)
- A.6. Wayfinding / Signage (also refer to section I.9)
- A.7. Lighting
- A.8. Construction sites

A.1. NEIGHBOURHOOD DESIGN

- A.1.1 *Barrier-free* connections from neighbourhoods shall be provided to City parks and facilities, including but not limited to major attractions, *senior centres*, streets, green spaces, shopping and transit facilities.
- A.1.2 *Open spaces* shall be located along walking paths that are *accessible* by transit, within a maximum distance of 400 m from a *barrier-free* transit stop.
- A.1.3 *Open spaces* shall be located within 400 m of *senior centres* and housing complexes to provide opportunities to be active.
- A.1.4 Community gardens shall be available to be used by *seniors* and families for intergenerational activities.
- A.1.5 All playgrounds shall be designed to follow the City of Edmonton Playground Equipment Standards.

A.2. PARK MASTER PLANNING

- A.2.1 *Amenities* and activities shall be provided in the supply and development of parkland. Prioritize the provision of *amenities* for parks located near *senior centres*, recreation centres and medium-high density nodes to maximize use and benefit.
- A.2.2 Scenic outlooks shall be designed to be *barrier-free*.

A.2.3 To the extent possible, all parks shall be *accessible* by a *barrier-free path of travel* from adjacent communities.

A.2.4 To the extent possible, all park *amenities* shall be connected with *barrier-free pathways* that are not less than 1800 mm wide and with a cross slope of not more than 1:50 (2%).

Explanation: This will help ensure that *pathways* are able to accommodate individuals using *mobility aids*.

[Refer to section D.](#)

A.2.5 A continuous, preferably circuitous *barrier-free trail* with grades not steeper than 1:12 (8.3%) shall be provided through a park area. Best practice would be to provide a slope of 1:20 (5%), however it should be noted that over long stretches a 1:20 ramp may be difficult for some users.

A.2.6 All *pathways* shall be designed with a maximum 2% crossfall, to avoid puddles and ice build-up.

A.3. OUTDOOR SEATING

A.3.1 Provide seating adjacent to all *amenities* with views to points of interest in all parks as per the following recommendations:

- *Metropolitan parks:* Provide a minimum of three *seating nodes*.
- *District parks:* Provide a minimum of two *seating nodes*.
- *Community Parks:* Provide a minimum of one *seating node*.
- *Pocket parks:* Provide a minimum of one rest area (bench).

[If ramps or stairs are also provided, refer to sections D.5 and D.6.](#)

A.3.2 *Seating nodes* shall be located every 100 m along *pathways* and *trails* for *Metropolitan, District* and *Community parks*.

Explanation: Providing *seating nodes* at regular intervals accommodates persons who need areas of rest.

A.3.3 Seating shall be located with view towards activities or vistas. Scenic outlooks shall be provided with seating and handrails.

[Refer to sections D.1 and D.4.](#)

A.3.4 A variety of seating options which are protected from the elements and offer sun in winter and shade in summer shall be provided.

Explanation: Seating arrangements shall provide choice for people with limited mobility within defined rest areas. Clusters of benches will promote socialization. Consider at least one curved seating designed to facilitate and promote conversation within defined rest areas.



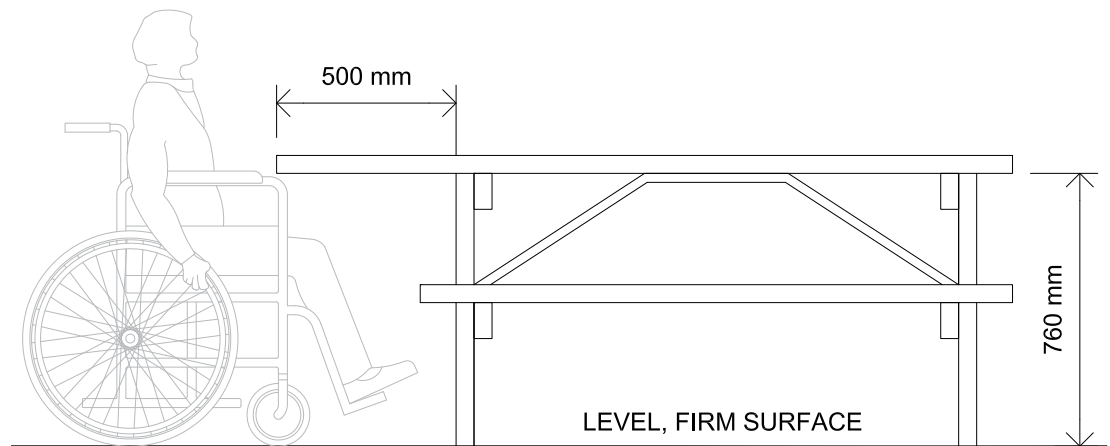
A.4. PICNIC AND WARMING SHELTERS

A.4.1 Shelters shall be approachable by persons using *mobility aids* by a paved level walk of not less than 1800 mm wide and with a cross slope of not more than 1:50 (2%).

Refer to sections A.3 and D.4.

A.4.2 All picnic areas shall include at minimum of 50% *barrier-free* (ADA compliant) picnic tables and a variety of seating options to promote socialization.

A.4.3 *Barrier-free* picnic tables are to be connected to a *barrier-free path of travel* on a level, firm surface with a minimum knee space of 750 mm wide, 500 mm deep and 760 mm high. Ensure tables are anchored to ground in order to prevent overturning.



A.4.4 If two cooking surfaces are provided one should be 915 mm high from the ground and the other at 760 +/- 50 mm from the ground with a minimum clearance of 685mm height under the cooking surface to allow for wheelchair access.

Explanation: The two different heights will provide choice of sitting or standing position.

A.4.5 Shelters shall be outfitted with a power outlet to allow for recharging of electric *mobility aids*. Vandalism should be a design consideration for these outlets.

A.5. AMENITY BUILDINGS (I.E. WASHROOMS, CONCESSIONS, LOCKERS, ETC.)

A.5.1 *Barrier-free* public toilets shall be available within a distance of not more than 400m from major areas of interest / *seating nodes*.

A.5.2 Doorways into *amenity* facilities shall be on a *barrier-free path of travel* with a minimum clear width of 920 mm in fully open position.

A.5.3 Entrances to park amenity buildings shall be equipped with power operated doors. Interior washroom entrances shall be either power operated or doorless (i.e., airport style).

A.5.4 Public washrooms shall provide a minimum of one *barrier-free* stall for each gender as well as a *barrier-free* gender neutral washroom.

[Refer to section H](#)

A.5.5 *If day lockers and/or bike lockers / racks are available ensure proper signage and locker doors shall consist of tactile and contrast lettering.*

[Refer to section I.9](#)

A.5.6 Bottle filling stations containing drinking fountains should generally be provided within high activity areas, well-used public squares/ plazas and at Transit Centres / LRT Stations.

A.6. WAYFINDING / SIGNAGE

[Refer to section I.9](#)

A.6.1 Signage shall be available to provide information such as slope of *pathways*, location of stairs or other barriers to mobility, rest areas, *barrier-free* paths, washroom locations, etc.

A.6.2 All signage including points of interest, directories, warnings and other important information indicated above shall be consistent with *cnib's Clear Print Guide*.

A.6.3 Wayfinding or Interpretive signage should be oriented vertically or tilted to be easily read by people in wheelchairs.

Explanation: It is important that they are positioned such that people in wheelchairs can see the information. It is also important to ensure there is adequate lighting to highlight signage when daylight is not available, or to have signage internally lit where appropriate.

A.6.4 Provide directional signage, tactile maps or digital information boards as appropriate to the context & volume of clientele. Ensure information about destinations, active mode connections, transit hubs, etc. are included outside the park or facility.

A.6.5 *Clear signage shall be provided to indicate priority seating, designated Age-Friendly or barrier-free seating.*

A.6.6 It should be noted that increasingly, society in general and persons with *disabilities* in particular are relying more on digital information from apps, websites etc. to better understand and navigate the world around them. While this doesn't preclude the need for physical signage, providing and updating of digital information is another important element to ensure the *accessibility* of public spaces and facilities.



A.7. LIGHTING

- A.7.1 Lighting design for *open spaces* and pedestrian lighting on major paths of travel shall adhere to City of Edmonton Policy *C576 Light Efficient Community Policy*.

A.8. CONSTRUCTION SITES

- A.8.1 Contractors and owners should reference The City of Edmonton's *Procedures For On-Street Construction Safety Manual*.

B SPECIAL PARK AMENITIES

This section covers:

- B.1. Seniors' activity areas
- B.2. Community gardens or planting beds
- B.3. Outdoor water parks / splash parks
- B.4. Temporary events and festivals

B.1. SENIORS' ACTIVITY AREAS

- B.1.1 Active areas shall be located adjacent passive areas to promote dynamic social environment and observation opportunities.
- B.1.2 Provide a variety of outdoor areas for social gathering such as games (e.g. chess tables, ping pong, etc.), seating areas designed for conversation and areas for culturally relevant activities (e.g. bocce ball, tai chi, etc.).
- B.1.3 Outdoor exercise equipment that can be used for a variety of ages and abilities shall be provided. Examples of equipment include stationary bicycle, a cross-trainer and / or a sit-up bench, spinning foot wheels, double leg press, striders / cross country ski machines, overhead reach (sit bench with curved pipes above).
- B.1.4 Locate specialized exercise equipment for active participation in proximity to children's playground to allow for concurrent passive surveillance with active use. If active equipment is not provided, add passive activity area.
Explanation: Locating *senior* activity area near children's playground will provide intergenerational interaction.
- B.1.5 Adult equipment with moveable parts must be located minimum 30 m away from children's playground pod.

B.2. COMMUNITY GARDENS

B.2.1 Provide *barrier-free* access to garden beds.

Explanation: Garden beds shall be designed with ease of access for people who require sitting in a wheelchair while gardening. Avoid the use of surface materials that might make it difficult for people using *mobility aids* like walkers, wheelchairs, etc.

B.2.2 Seating areas shall be available within or near the garden. These areas shall offer protection from the elements or provide shade.

B.2.3 Provide raised planting box(es) between 450 mm and 915 mm from the ground to accommodate a variety of users and abilities.

B.2.4 Watering source should be located in an appropriate area between 450 mm and 915 mm from the ground to accommodate a variety of users and abilities. The faucet should include a lever-style control for ease of use.

B.2.5 Planters shall not be more than 1200 mm in width and must provide adequate *barrier-free pathways* around the planting bed.

B.3. OUTDOOR WATER PARKS / SPLASH PARKS

B.3.1 Shaded seating areas and/or *barrier-free* picnic tables with clear sightlines to the splash parks shall be available.

Explanation: This will allow for comfortable viewing and intergenerational gathering as children are the major users of splash parks.

B.3.2 Surround deck and water play area surfaces shall have solid slip-resistant material.

B.3.3 *Colour contrasting Tactile Walking Surface Indicators* for changes in grade or surface material must be incorporated.

B.3.4 Access to *barrier-free* washroom and changeroom facilities, shall be within 100m, where possible, and clearly marked from the water park.

B.4. TEMPORARY EVENTS AND FESTIVALS

B.4.1 Electrical wires are a tripping hazard for everyone. Keep electrical wires out of paths of travel, or use cable protectors that are wheelchair *accessible* and are in bright/contrasting colours to alert people with low vision.

B.4.2 When portable toilets are provided for outdoor events on City-owned land, at least 10% of toilets provided shall be *barrier-free*. Provide a minimum of one *barrier-free* toilet if the 10% does not amount to one.

[When planning temporary events and festivals refer to Accessible Temporary Events, A Planning Guide by NC State University Centre for Universal Design.](#)



C VEHICULAR ACCESS

[Refer to Complete Streets Design and Construction Standards.](#)

Barrier-free vehicular access, parking stall location and design, and effective signage allow *seniors* and people with various abilities to travel to a venue by car or transit vehicle.

This section covers:

- C.1. Parking areas
- C.2. Passenger loading zones
- C.3. Signage
- C.4. Pedestrian interface with parking and buildings

C.1. PARKING AREAS

- C.1.1 *Barrier-free* parking shall be located within 50 m of *barrier-free* building entrances. If parking is located within a structure a *barrier-free path of travel* shall be provided to the nearest *barrier-free* entrance.
Explanation: Close access to *barrier-free* building entrances provides safe and convenient access for persons with limited mobility. To qualify for an *accessible* parking pass, an individual must be unable to walk without assistance for more than 50 m.
- C.1.2 Low floor *accessible* vehicles must be considered while designing speed bumps.
- C.1.3 Street parking stalls for people of all ages and abilities shall be arranged so that they can exit the vehicle in an area that is protected from vehicular traffic.
Explanation: A parking stall located on the left-hand side of a one-way street (for example) would require someone with a *disability* to disembark the vehicle unsafely onto traffic. If a barrier of some kind is installed between the parking stall and the street, it may be acceptable.
- C.1.4 Design consideration shall include a seasonal snow collection area to ensure parking stalls are not used for dumping snow.

C.1.5 Minimum width of *barrier-free* parking stall must be 3000 mm x 7000 mm. An *access aisle* of not less than 3000 mm shall be provided on one side of the stall.

Explanation: Wider stalls will better accommodate wheelchair modified vans with side lifts.

C.1.6 Courtesy parking stalls for *seniors* and families with young children shall be provided at all main entrances. Provide 3 courtesy parking stalls for the first 2500 m² of building floor area and 1 stall each for every additional 2500 m². In addition to the vertical signs consider including pavement markings in each stall.

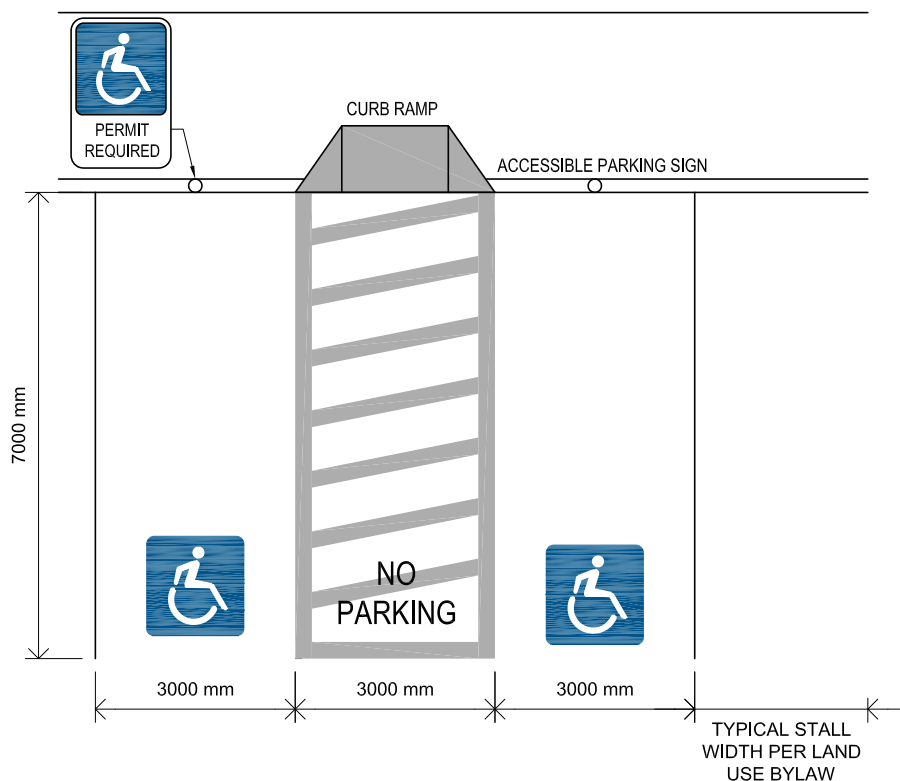
Explanation: Use and demand of the facility shall be taken into account while determining the number of courtesy parking. More courtesy parking shall be provided for facilities which are expected to be used by large number of seniors and young families.

C.1.7 *Barrier-free* and courtesy parking stalls and the *access aisles* adjacent to them shall be paved.

Explanation: A paved (i.e. hard surfaced) stall and access aisle makes it easier for someone to exit safely from a vehicle and travel to the building entrance.

C.1.8 *Barrier-free* and courtesy parking stalls in parking lots and streets shall be located adjacent to sidewalk *curb ramps*.

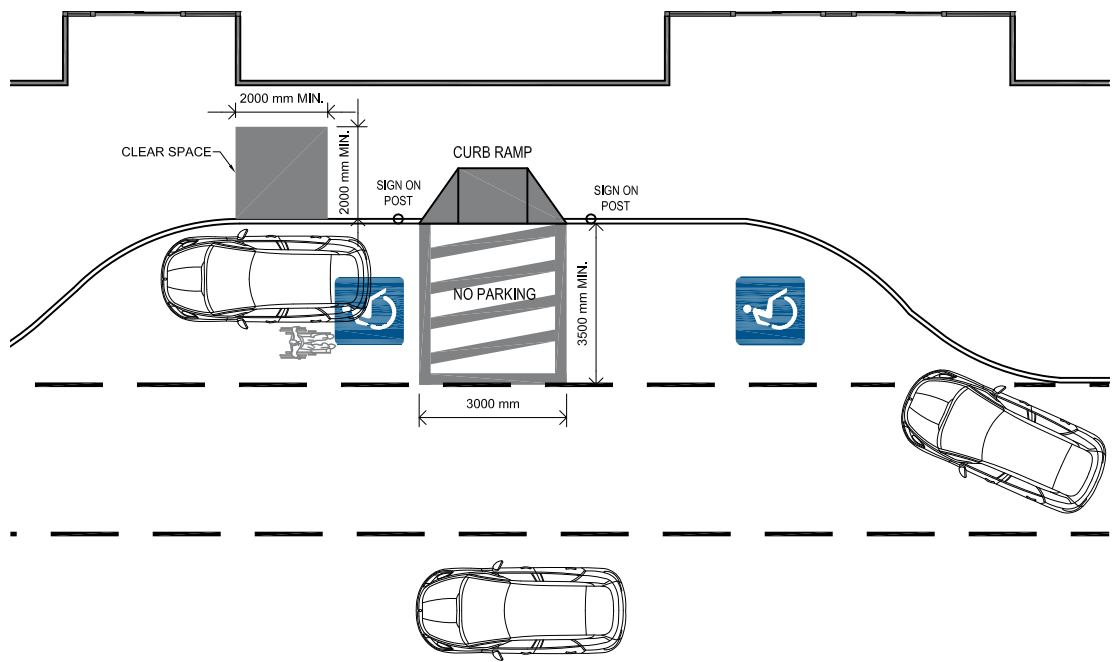
Explanation: A *curb ramp* allows for safe and easy travel to and from *barrier-free paths of travel*.



- C.1.9 *Barrier-free* parking areas shall be designed so that persons do not have to pass behind other parked vehicles.

Explanation: This increases the safety of persons using a manual wheelchair or other manual assistance devices such as walking aids including canes, crutches, braces and artificial limbs. One way to achieve this is to have the *barrier-free* parking stalls located adjacent to a walkway that leads directly to the *barrier-free* entrance.

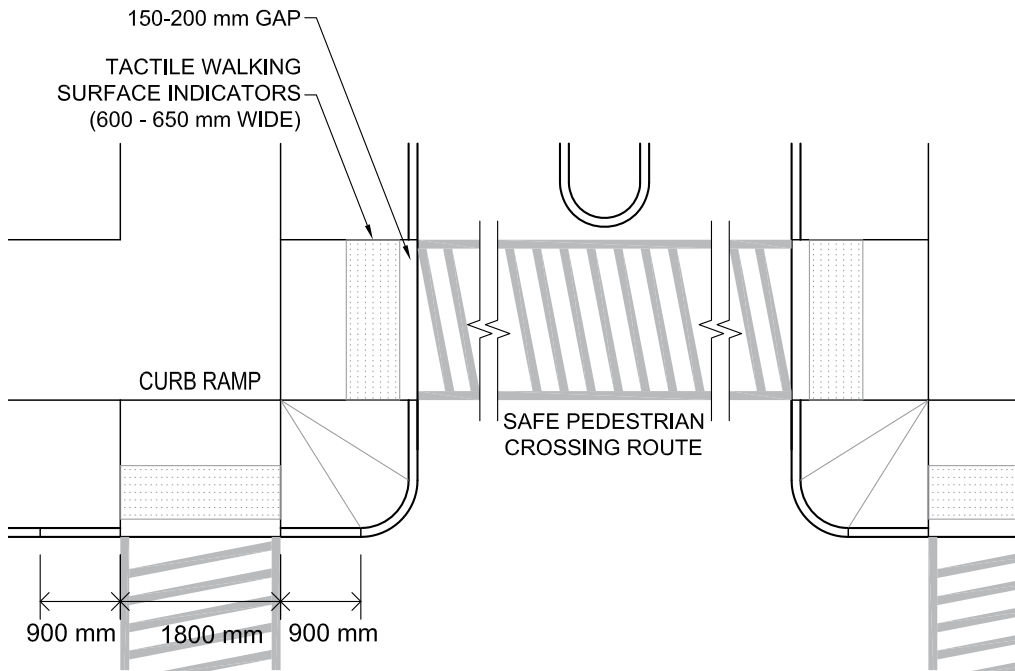
- C.1.10 Where feasible, provide *barrier-free* and courtesy parking spaces that are adjacent to the 'building side' of the parking lot to eliminate the need to cross any parking drive aisles.



- C.1.11 Crosswalks shall be at right angles to each other and shall have *Tactile Walking Surface Indicators* in contrasting colour, to provide predictability for individuals with visual impairments.



C.1.12 Curb ramps shall be aligned with crosswalks and include *Tactile Walking Surface Indicators* of contrasting colour.



C.1.13 Parking stalls shall be designed so that vehicle bumpers or other obstructions do not encroach on the *barrier-free path of travel* regardless of its width (e.g., providing wheel stops).

C.1.14 Level changes between pedestrian and parking areas shall be minimized to reduce *curb ramp slopes*.

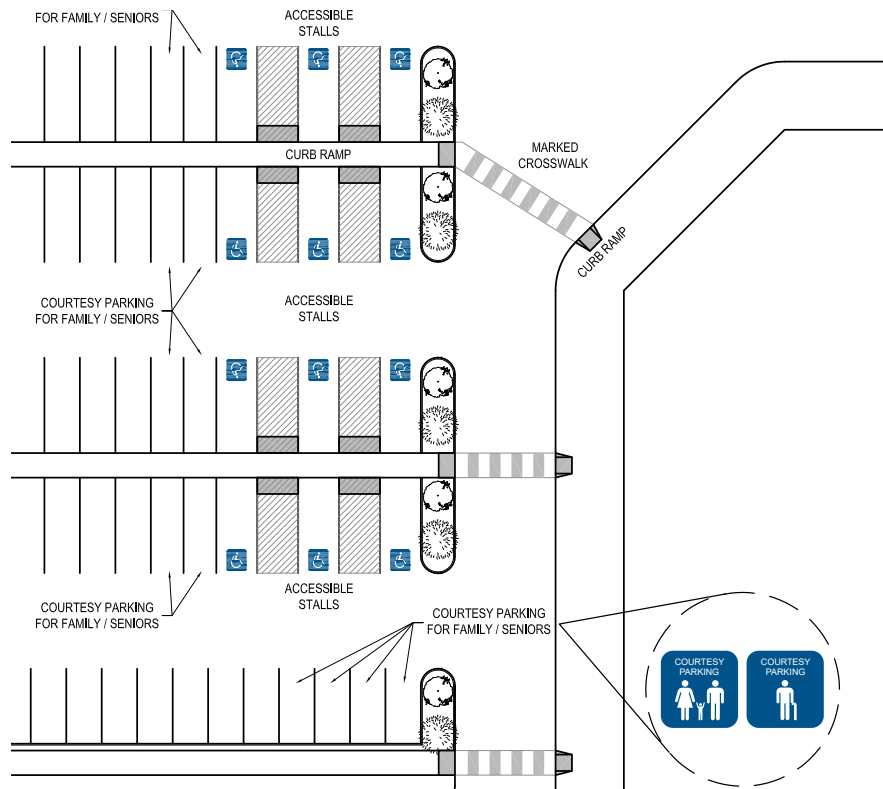
C.1.15 EPark machines shall be located on a *barrier-free path of travel* and adjacent to parking stalls (designated or public). The operable parts shall be between 800 and 1200 mm above ground.

Explanation: Universally designed EPark machines ensure everyone can pay for parking easily and conveniently. Ensure these are not placed on raised platforms or obstructing the access to or path of travel along sidewalks.



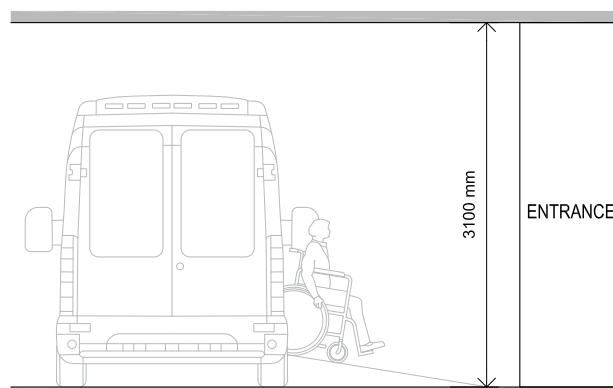
- C.1.16** If *barrier-free* / *courtesy* parking stalls are located across a driveway, a *pathway* connecting the parking stalls shall be designed so that a high contrast crosswalk connects the front entrance to the *barrier-free* / *courtesy* parking stalls.

Explanation: The connection will allow people to exit their vehicle into an access aisle and enter the *pathway* at the front of their vehicle to prevent traveling behind parked vehicles.



- C.1.17** The *pathway* shall connect pedestrians through to the end of the parking lot and connect any other adjacent lots, sidewalks or multi-use *trails* leading to the facility. If this *pathway* crosses a driveway, pedestrian crossing signs and painted markers shall be provided.

- C.1.18** A minimum 3100 mm vertical clearance shall be provided in parking garages to allow for oversized vehicles to drop off passengers.



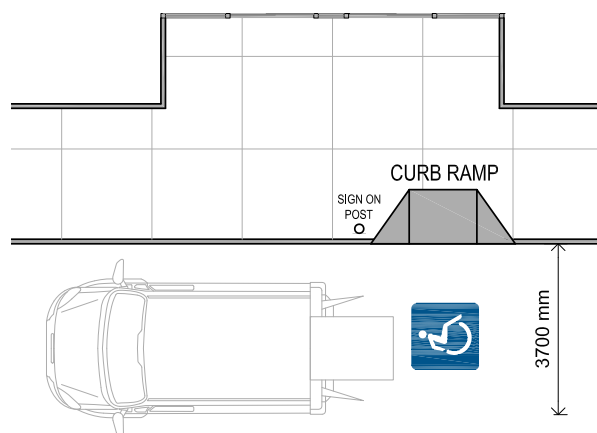
- C.1.19 If “staff only” and “visitor only” parking stalls are provided, *barrier-free* staff and / or visitor parking stalls must be considered in the development.

Explanation: The allocation of parking to staff and visitors with *disabilities* ensures equal access to parking stalls.

C.2. PASSENGER LOADING ZONES

- C.2.1 A dedicated passenger loading zone / lay-by that doesn't conflict with drive aisle, parking stalls and other loading zones shall be provided for support vehicles.

Explanation: Design of this space shall consider the use of facility and different types of vehicles (buses, DATS, rear / side loading vehicles) that will be used for drop off.



- C.2.2 The loading and drop off zone shall be minimum 3700 mm wide, 9000 mm long and located within 50 m of a building's *barrier-free* entrance. Ensure *curb ramp* is provided to access sidewalk from the dedicated loading zone and contains a *Tactile Walking Surface Indicator* with contrasting colour.

Explanation: Loading zones are roadside drop-off areas, separated from the flow of vehicular traffic and usually located in front of buildings along busy streets or roads. Their main function is to allow passengers to get in and out of vehicles safely and conveniently. They are especially beneficial for people with mobility limitations, *seniors*, persons with strollers or those loading or unloading large or heavy items. Where possible, it is recommended that building entrances adjacent to passenger loading zones be covered to provide protection from precipitation and to maintain a slip-free *barrier-free path of travel*.

- C.2.3 All passenger loading and drop off zones shall be clearly identified with at least one marked dedicated space for use by people with *disabilities*.



C.3. PEDESTRIAN INTERFACE BETWEEN PARKING AND BUILDINGS

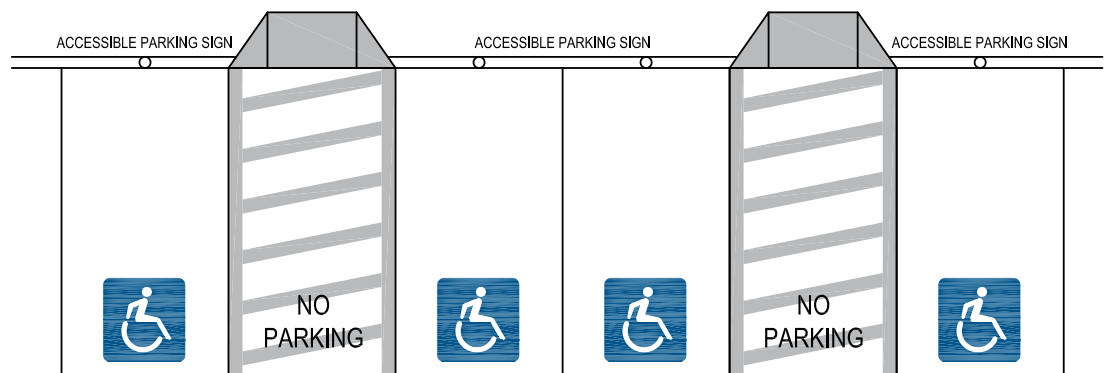
- C.3.1 A *barrier-free path of travel* must be provided from a *barrier-free* entrance or lobby to all levels of a parking structure.
- C.3.2 Surface material of *barrier-free path of travel* from parking area to building entrance shall have *colour contrasting* and distinctive pattern demarcation at changes in level and surface material.
- C.3.3 Lighting shall be provided around key areas such as entrances, *pathways* and access to parking.
- C.3.4 Seating areas with views to drop off / pick up areas, *accessible to those with limited mobility*, shall be provided outside the entrance.
- C.3.5 Exterior seating areas must be protected from sun, snow, rain and wind.

[Refer to section A.3](#)

C.4. SIGNAGE

- C.4.1 The international symbol of access shall be painted on the pavement of all *barrier-free* parking stalls with non-slip paint and displayed with a vertically mounted sign. The painted pavement signs shall be close to the driveway to ensure they are easily visible.

Explanation: Proper signage ensures that parking stalls are easily identifiable. It is important that the international symbol of access painted on the stall does not occupy the entire area. The more painted surfaces there are, the more likely the parking stall may become slippery.



- C.4.2 Courtesy parking stalls shall be marked with appropriate signage.
- C.4.3 If the location of designated parking stalls is not easily visible from a distance, appropriate directional signage shall be provided.

D EXTERIOR PATHS OF TRAVEL

All citizens should be able to use exterior paths of travel in the City of Edmonton safely, conveniently and independently. This section provides an overview of the guidelines for *accessibility* in exterior *barrier-free paths of travel*.

[Refer to Complete Streets Design and Construction Standards.](#)

This section covers:

- D.1. Paths of travel
- D.2. Curb ramps
- D.3. Obstructions
- D.4. Benches
- D.5. Ramps
- D.6. Stairs
- D.7. Handrails
- D.8. Cycle wheel ramps
- D.9. Patios/balconies
- D.10. Accessible pedestrian signals at signalized crossings

[Refer to section F.3](#)

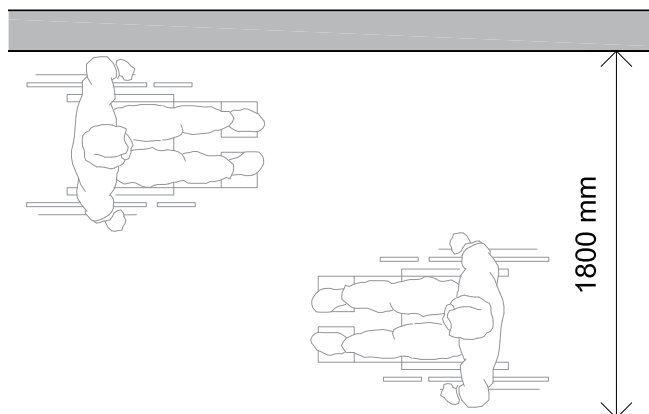
[Refer to section F.4](#)

[Refer to section F.5](#)

D.1. PATHS OF TRAVEL

- D.1.1 Exterior paths of travel shall be minimum 1800 mm wide to allow two wheelchair users to safely pass each other.

[Refer to Downtown & The Quarters Streetscape Design Manual.](#)



- D.1.2 Wherever an exterior *barrier-free path of travel* passes behind a loading or garbage pick-up area, visual warning signals shall be installed.

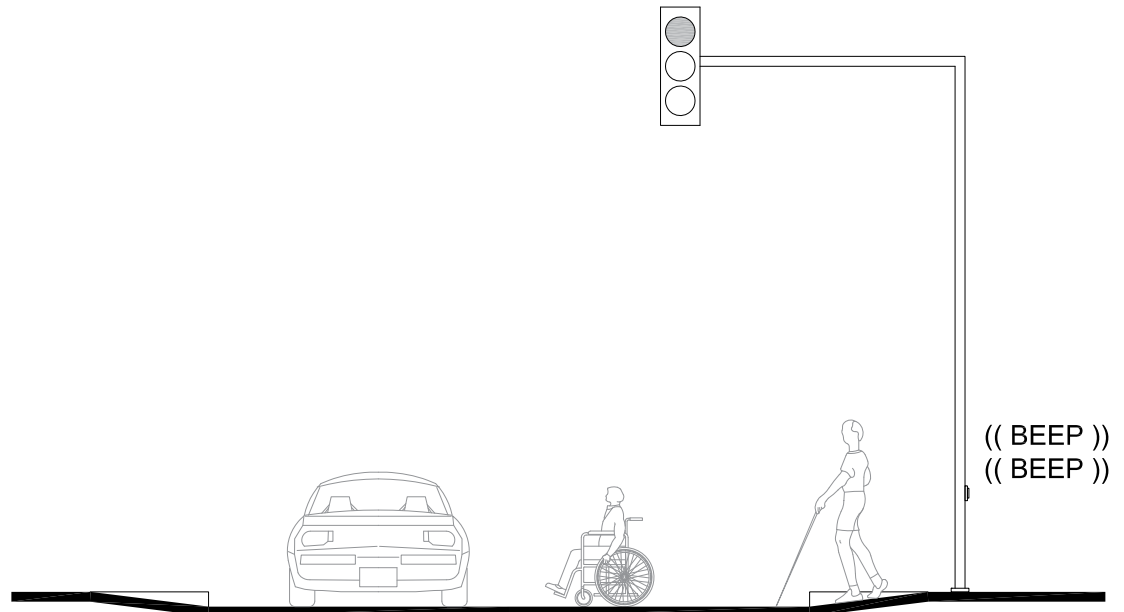
Explanation: Visual warning signals alert people with vision loss of the hazard of vehicles frequently backing up.



Curb ramps shall be constructed in accordance with The City of Edmonton's 'Design and Construction standards' and Complete Streets Design and Construction Standards.

D.2. CURB RAMPS

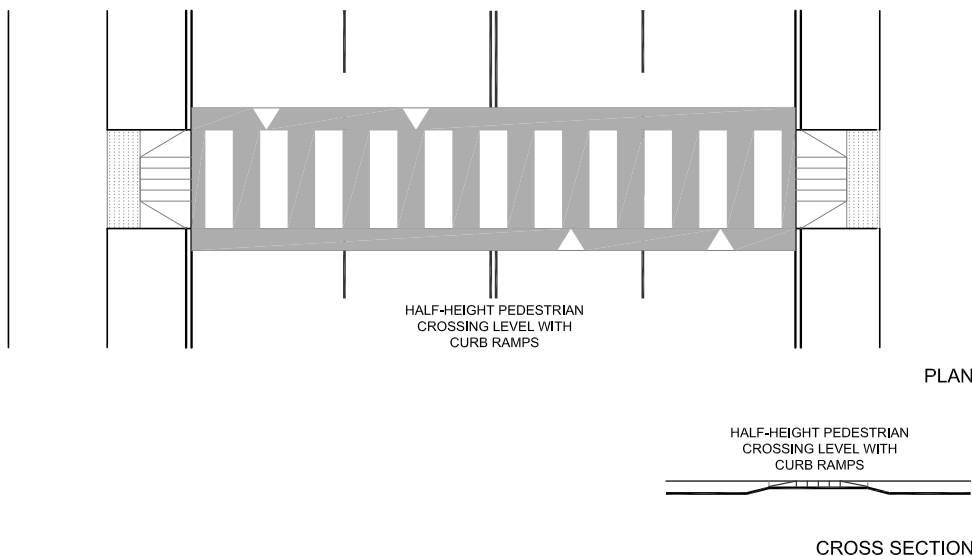
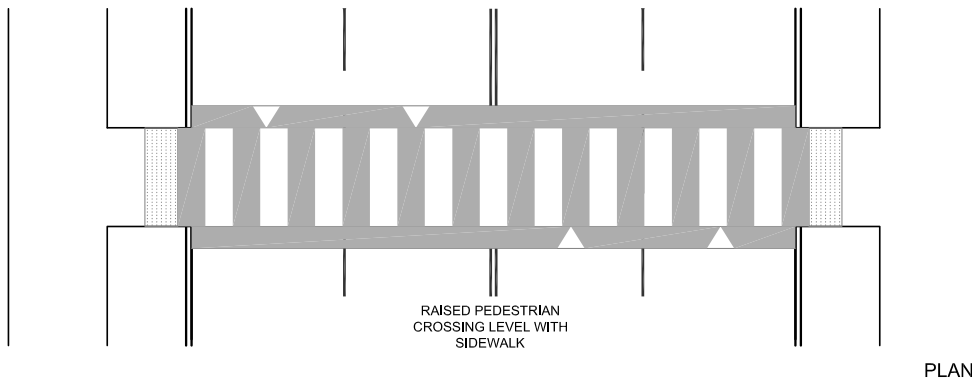
- D.2.1 Curb ramps shall be installed wherever an exterior *barrier-free path of travel* encounters a curb, such as at a roadway.
- D.2.2 Curb ramps shall be located so that they are aligned perpendicular to the intended path of travel.



- D.2.3 A 1500 mm x 1500 mm level surface shall be maintained on the sidewalk behind the *curb ramps*.
Explanation: 1500 mm x 1500 mm allows adequate space for a wheelchair user to wait for foot traffic to clear, before negotiating the ramp.
- D.2.4 Curb ramps shall line up with a *pathway* route crossing the street for visual continuity.
- D.2.5 Curb ramps shall contrast in colour and include *Tactile Walking Surface Indicators* to provide contrast from the surrounding sidewalk and road.
Explanation: Contrast in texture warns pedestrians with vision loss before walking onto street thereby enhancing safety of pedestrians.
- D.2.6 Drainage shall be designed to prevent water and snow accumulation at the bottom of *curb ramps*. Ensure catch basins are not located in front of *curb ramps* or entrances to *pathways*.

D.2.7 If raised pedestrian crossings are deemed safe for traffic calming (e.g. parking lots, high pedestrian traffic zones), they shall be designed one of two ways. Either designed so that the raised pedestrian crossing is at an elevation that is halfway between that of the sidewalk and the road, and with *curb ramps* at each end. Or designed so that the raised pedestrian crossing is at an elevation equal to the sidewalk with *Tactile Walking Surface Indicators* at each end of the walkway.

Explanation: The first option below provides some resemblance of a *curb ramp* that can be detected by people with vision loss. Although a change in elevation must be negotiated by people in wheelchairs, it is a lesser grade change than would normally be expected for a *curb ramp*. The second option maintains the ease of use for people in wheelchairs, but provides a tactile warning for people with vision loss that is *cane detectable* prior to crossing the road.

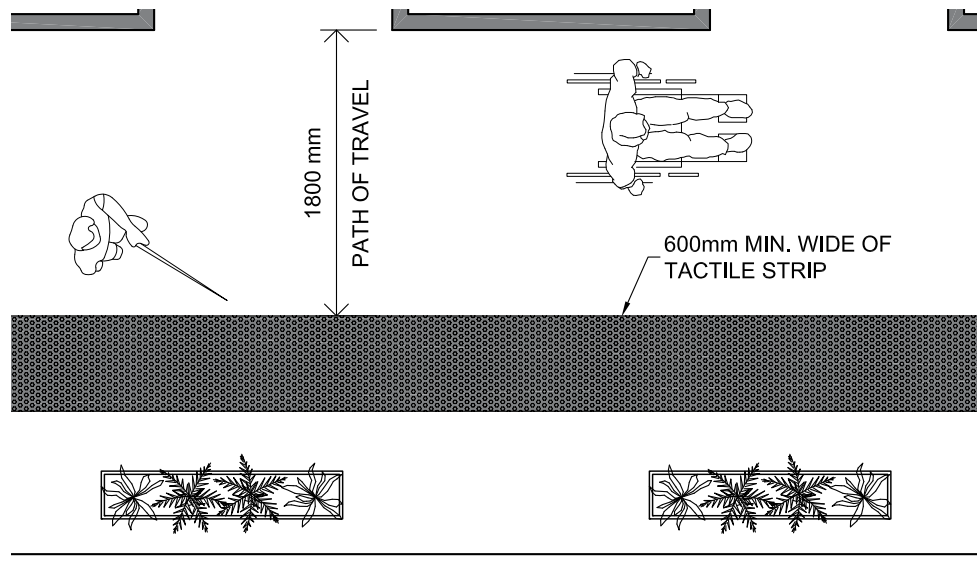
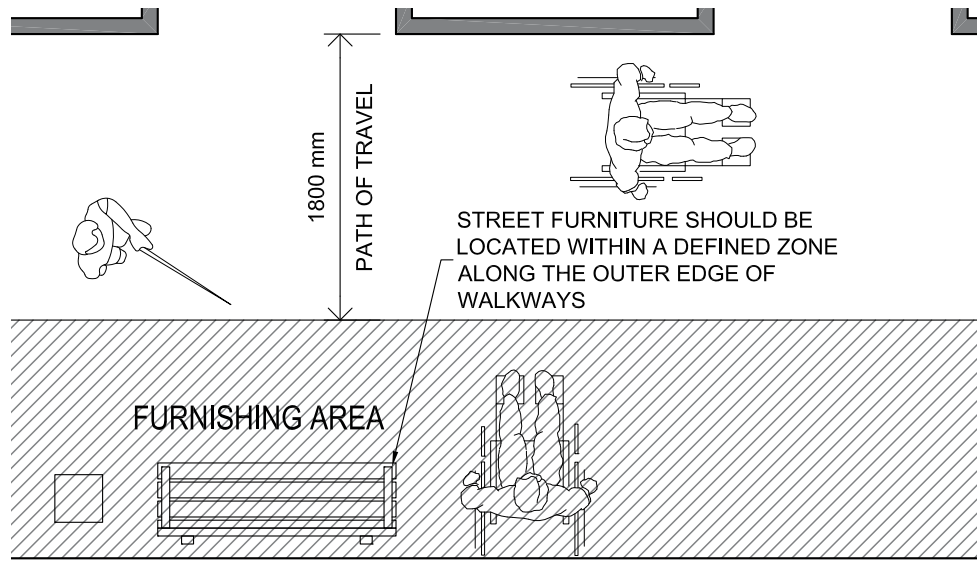


D.3. OBSTRUCTIONS

D.3.1 Any obstructions such as lamp posts, tree grates, trees, signposts, transformers, mailboxes, newspaper stands, trash containers, planters, bus shelters, benches, “sandwich board” signs and bicycle racks shall be placed in the furnishing zone in accordance with ‘*Edmonton Main Streets Guidelines*’ outside the minimum required width of the *barrier-free pathway*. Bike racks shall be placed to avoid locked bicycles protruding into the minimum required width.

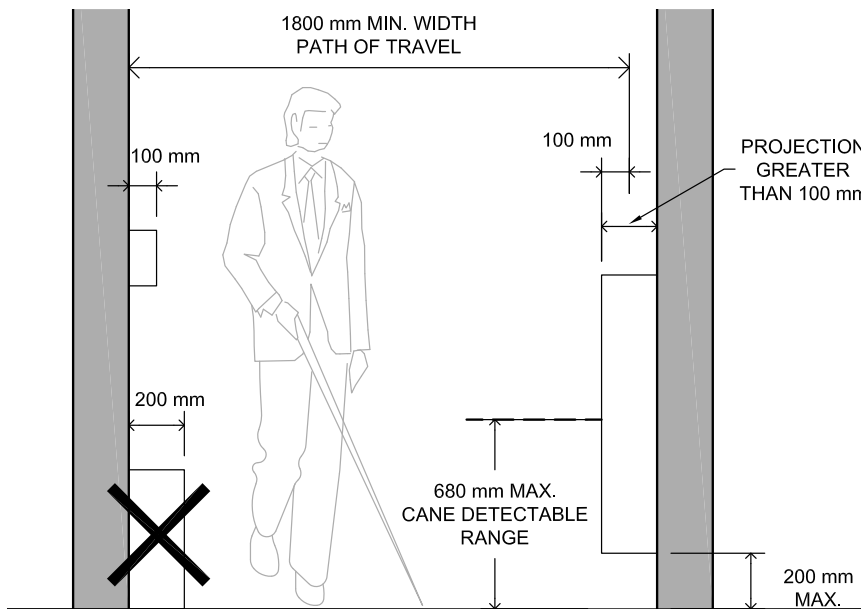
Explanation: The placement of the above items can present a hazard for persons with limited mobility and / or vision loss.

D.3.2 Wherever a furnishing zone or shared use space is located, a different material of contrasting color and texture shall be provided for the furnishing zone or a tactile warning strip of minimum 600 mm width shall be provided along the *barrier-free path of travel*.



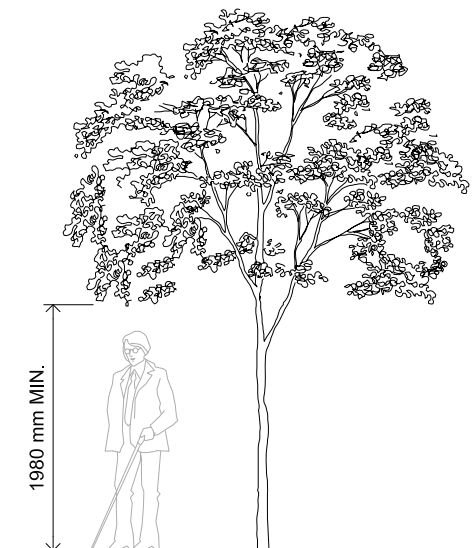
D.3.3 Objects taller than 680 mm and protruding into a *barrier-free path of travel* more than 100 mm from the wall shall extend to within 200 mm from the floor or ground for the entire length of the obstruction, in order to be *cane detectable*.

Explanation: In general, nothing is allowed to project more than 100 mm into any *barrier-free path of travel*, whether the path of travel is in a corridor, a room or a washroom. The exception to this is if the obstruction is designed to be *cane detectable*. This applies to both interior and exterior paths of travel.



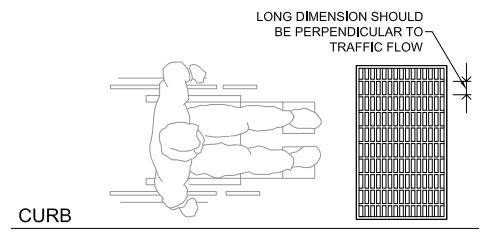
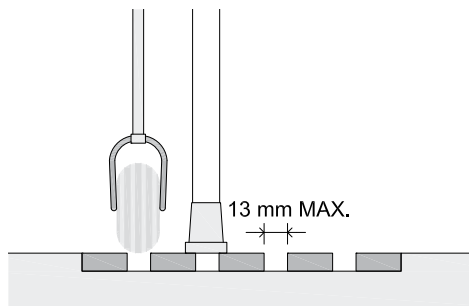
D.3.4 Tree branches and any overhead design elements shall not extend below 1980 mm in the *barrier-free path of travel*.

Explanation: Projections lower than 1980 mm above the ground are not detectable and therefore present a hazard.



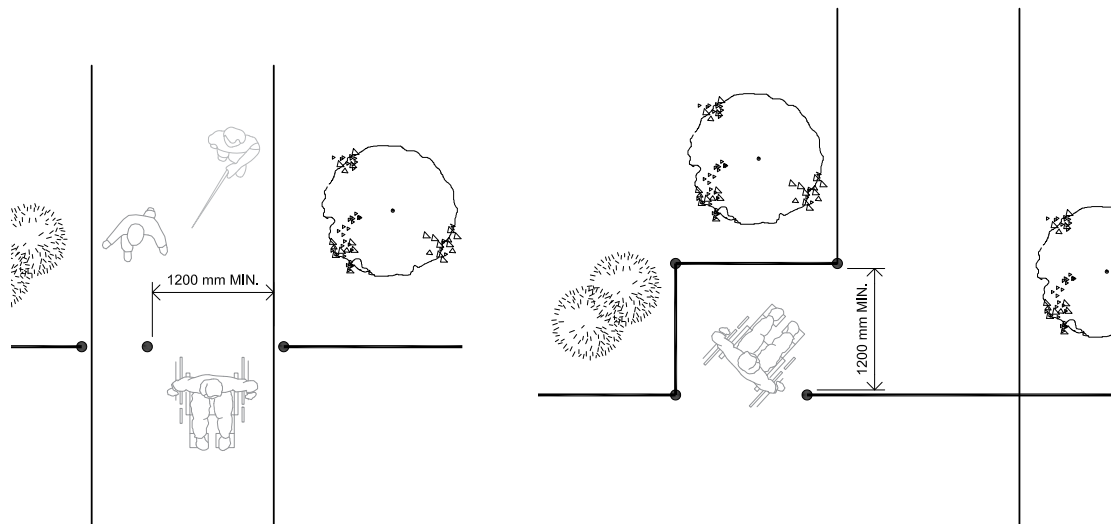
- D.3.5 Patio umbrellas in the open position and planters overhanging guardrails shall not obstruct the *barrier-free path of travel*.
- D.3.6 Guy-wires, chains, cables or ropes shall not be installed in *barrier-free paths of travel* to ensure they are not a hazard.
- D.3.7 Manhole covers, tree grates, electrical vaults and other access covers/ grates shall be placed adjacent to walkways, outside of the path of travel (unless prevented by site constraints). The maximum clear opening of gratings shall not exceed 13 mm.

Explanation: The long dimension of the openings shall be perpendicular to the path of travel. If small solid plates (like footprints) are placed in the direction of pedestrian traffic and spaced to accommodate an average stride, a person wearing high heels can cross gratings safely. Some grating on electrical vaults may be larger (as specified by EPCOR).



- D.3.8 Posts, bollards, maze gates or other devices designed to prevent or restrict vehicular access shall have a minimum clearance of 1200 mm from adjacent obstructions.

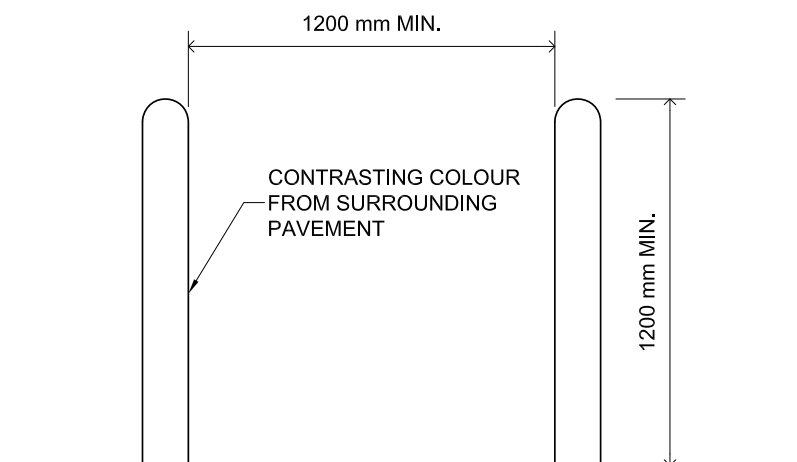
Explanation: A 1200 mm clearance allows access for wheelchair users and adapted or tandem bicycles used by people with physical *disabilities* and/ or vision loss.



- D.3.9 The minimum height of bollards and posts shall be 1200 mm and be a contrasting colour from the surrounding pavement. Ensure bollards do not impede into the *barrier-free path of travel* and a minimum clear space of 1200 mm is provided in between.

Explanation: *Colour contrast* improves visibility and the height requirement ensures the bollard or post is not a hazard for people with vision loss.

[Refer to the Canadian National Institute for the Blind \(cnib\) website for additional direction on colour selection.](#)



D.4. BENCHES

- D.4.1 A variety of bench designs with adequate heel space (minimum 150 mm) below the bench shall be placed adjacent to a *barrier-free path of travel*.

Explanation: Seating should provide adequate clearance underneath for ease of street cleaning. Providing adequate heel space makes rising from a seated position easier. This also provides space for people to put their feet and bags underneath and potentially even provide a place for service dogs to rest.

- D.4.2 Where provided, no less than 50% of benches shall be designed for *seniors* and allow for a mix of bench types (armrests / armless, backrests / backless) and heights in a seating area.

Explanation: Variety of types accommodates different abilities. Armless benches facilitate transferring from wheelchair to the bench.

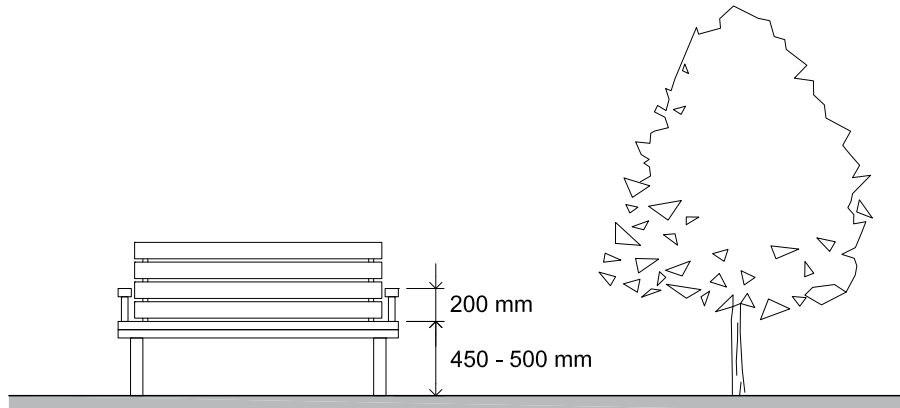
- D.4.3 An *age-friendly* bench shall have backrests and armrests. A variety of middle and end armrests and / or handles shall be provided to push off of and keep balance.

- D.4.4 Benches shall be ergonomic to allow comfortable seating for a long period of time and anchored to the ground to avoid overturning.

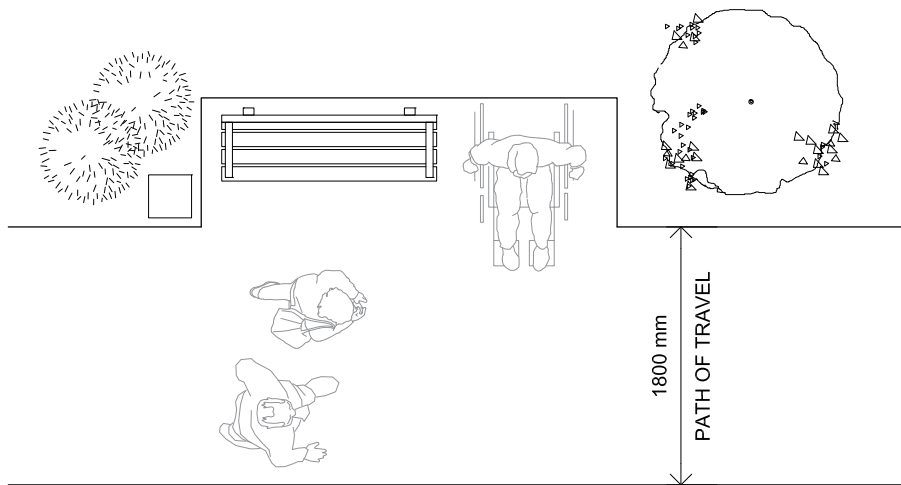
Explanation: High backrests, comfortable materials / textures and protection from sun in summer and wind in winter provides for comfortable seating.



- D.4.5 The seat height shall be between 450 mm and 500 mm from the ground. Optimum height of seating for *seniors* is 460 mm.
- D.4.6 Height of armrests for benches with backrests shall be 200 mm from top of seat. Lower armrests can be provided for benches without backrests as they are primarily used as handles to push off of.



- D.4.7 A level and firm ground surface of minimum 850 mm x 1200 mm size shall be available adjacent to the bench to accommodate a wheelchair or stroller.



- D.4.8 Seat surfaces of benches shall be anti-slip material. Avoid using materials that will stay cold in winter months (e.g. wood is preferred over metal or concrete).
- D.4.9 Seat surfaces shall be pitched or perforated to shed water, but shall not drain out onto walking surfaces where surface water or ice may create a hazard.
- D.4.10 Seat surfaces and vertical supports shall be designed to avoid accumulating snow and debris.
- D.4.11 Benches shall provide *colour contrast* from the surrounding area.

D.5. RAMPS

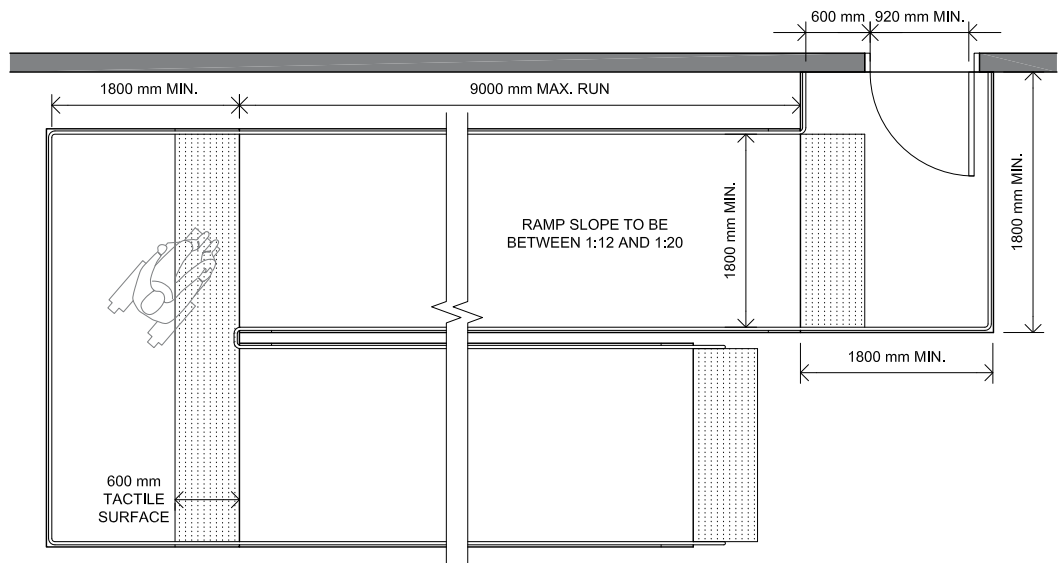
[Refer to section F.3](#)

- D.5.1 Exterior ramps and stairs shall be protected from rain, snow and ice, or maintained free of snow and ice through regular maintenance or appropriate heating and drainage systems installed beneath the ramp or stair surface.
- D.5.2 Ensure both stair and ramp accesses are provided for the same path of travel.
- D.5.3 *Non-glare materials shall be used on the ramp surface.*
- D.5.4 Width of ramp at any point shall not be less than 1800 mm and provide intermediate landings.
Explanation: The 1800 mm is applied to allow two wheelchair users to pass one another in a ramp. The intermediate landing serves as a resting point for someone using a long ramp.
- D.5.5 All landings shall be a minimum of 1800 mm long x 1800 mm wide.
Explanation: Landing width of 1800 mm x 1800 mm is applied to accommodate larger wheelchairs and scooters.
- D.5.6 *Tactile Walking Surface Indicator of contrasting colour shall be provided to mark the beginning, landings and end of a ramp.*
- D.5.7 Ramp slope is preferred to be between 1:12 and 1:20.

[Elements apply to both exterior and interior ramps.](#)



D.5.8 The maximum cross slope of ramp surfaces shall be 1:50 (2%).



[Refer to section F.4](#)

D.6. STAIRS

D.6.1 Nosings and leading edge of landings shall have a tactile finish with *colour contrast* and distinctive pattern from stairs to demarcate the leading edge of the tread and landing.

D.6.2 Risers shall be beveled not more than 60 degrees with respect to the tread surface to ensure the tread edge is clearly visible in descent.

D.6.3 Changes in elevation at stairwells shall be indicated by a *Tactile Walking Surface Indicator* of contrasting colour.

Explanation: The tactile surface serves to warn a person who is vision impaired that there is a change and possible tripping hazard with the walking surface.

D.6.4 Include seating on all landings (top, bottom, middle) where possible for multiple runs of stairs.

[Refer to section F.5](#)

D.7. HANDRAILS

D.7.1 Handrail material shall be splinter and rust proof. Best practice is to avoid metal for exterior railings.

Explanation: Metal railings can become too hot in summer to grasp. Use of alternate materials which mitigates this shall be explored.

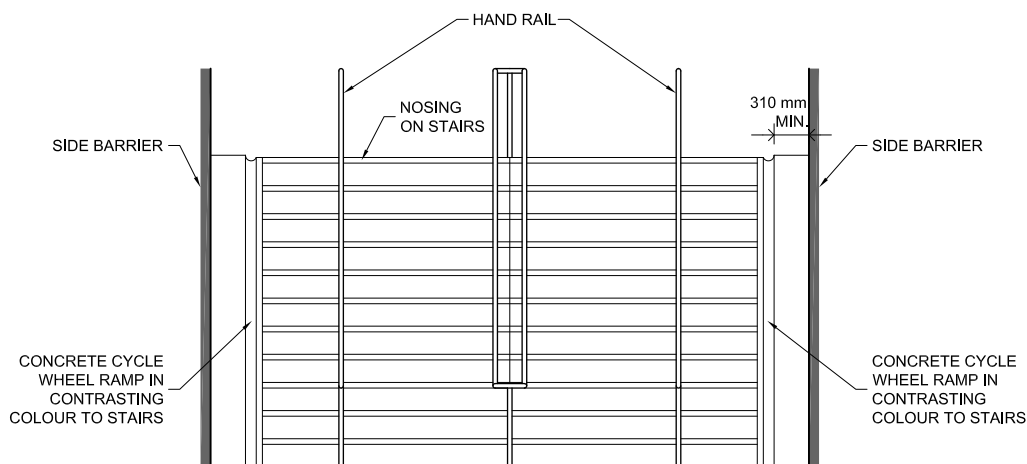
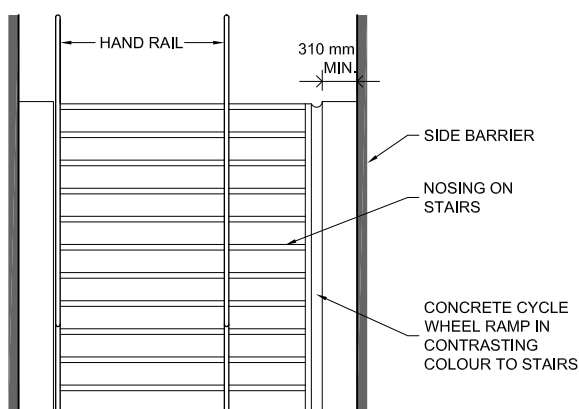
D.7.2 Where guards are provided at viewing platforms, provide additional handrails between 865 mm and 965 mm height from the ground.

Explanation: This additional handrail can be used as a support for stability by less able users. Ensure that sightline is not obstructed by these handrails from wheelchair viewing height.

D.8. CYCLE WHEEL RAMPS

D.8.1 Consider the use of cycle wheel ramps for internal locations, within a building or facility (LRT station/interchange etc.), and external to link shared paths and other *trails* throughout the city.

Explanation: This type of ramp can make stairs *accessible* to cyclists by enabling them to go up or down staircases without having to physically carry their bike. While they do provide many benefits to cyclists, if not properly designed, these types of ramps could potentially be very dangerous to people with *disabilities* or the elderly for a variety of reasons. Some options for cycle ramps are shown below.



D.9. PATIOS/BALCONIES

D.9.1 Exterior patios and balconies shall be *accessible* from adjacent interior and exterior *barrier-free paths of travel*.

D.9.2 A minimum clear turning diameter of 1800 mm shall be provided on a balcony/patio to ensure a wheelchair user has the ability to change directions.

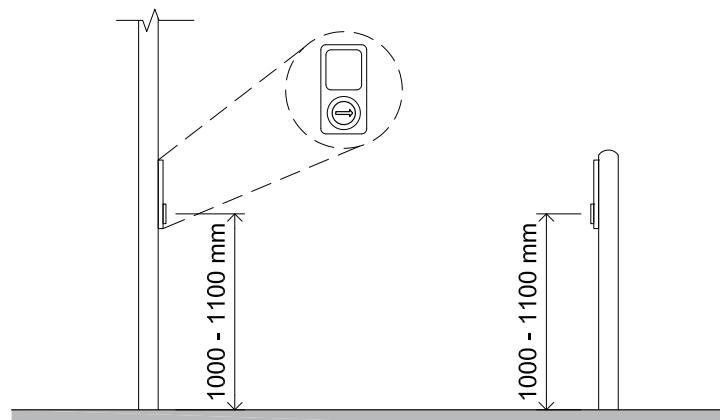


- D.9.3 Planter boxes and other obstructions on a patio or balcony must not project into the *barrier-free path of travel*.

D.10. ACCESSIBLE PEDESTRIAN SIGNALS AT SIGNALIZED CROSSINGS

Well-designed signalized intersections direct pedestrians safely across a road, preventing them from walking into traffic. The *accessible* pedestrian signal acts as confirmation of the traffic flow and as a directional indicator for people with vision loss. It also indicates how much time a person has to cross the street.

- D.10.1 Push buttons shall have the ability to be activated using any part of the arm or hand.
- D.10.2 All traffic signals shall be set to allow sufficient time for pedestrians, especially children and seniors, to complete the crossing safely.
- D.10.3 Push buttons shall be located on the side of the pole parallel to the sidewalk and ideally at a height of 1000 – 1100 mm above the ground, as site conditions permit. If it is not possible to locate the push buttons on the main pole an additional shorter pole should be installed to ensure that the push buttons are located as close to the pedestrian waiting area as possible.



- D.10.4 Push buttons that activate visual pedestrian signals shall also operate the audible pedestrian indicators.
- D.10.5 Provide push buttons with tactile directional arrows in standardized locations at crosswalks so people with vision loss can readily find them.



- D.10.6 Audible pedestrian signals and countdown timers shall be installed and activated as required, at all new signalized intersections that accommodate pedestrians. These audible signals shall be set to allow sufficient time for pedestrians and visibly impaired to cross safely.
- D.10.7 The sound cue shall be clearly audible above the ambient noise of the signalized intersection area.
- D.10.8 One audible sound unit shall be installed at each end of a crosswalk which sounds for the full duration of the walk.
- D.10.9 Audible signal posts shall constantly emit a slow, intermittent temporal pattern of sound, which is distinguishable from the crossing signals.

Explanation: This sound will indicate the presence of the crosswalk and the location of the push button to a person with vision loss, and will serve as an audible beacon on the opposite side of the road.





INTERIOR GUIDE

SECTIONS E-J

E BUILDING ENTRANCES

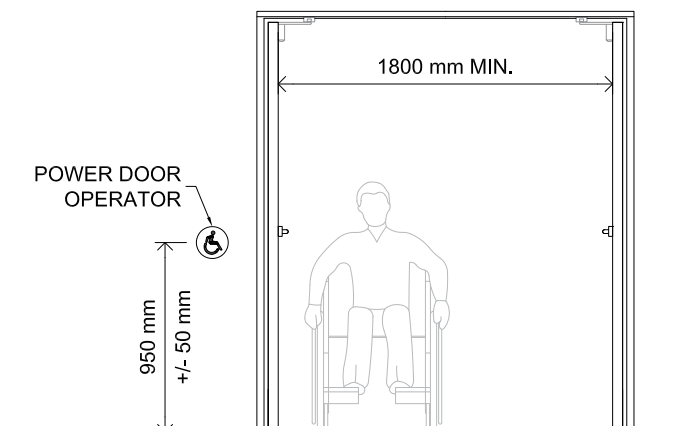
All *barrier-free* entrances must be easily identifiable. Design consideration should include mitigation of seasonal weather conditions, such as strong winds and drifting snow, to ensure normal operation of entrance doors in all weather.

This section covers:

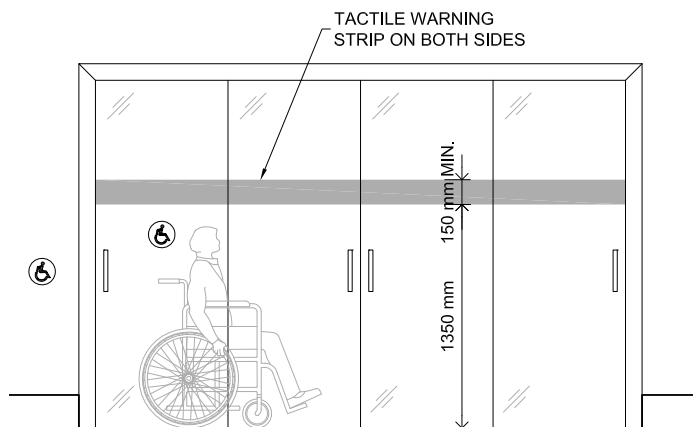
- E.1. Entrances
- E.2. Service dog relief areas

E.1. ENTRANCES

- E.1.1 Every entrance intended to be used by the public or by employees shall be *barrier-free*.
- E.1.2 In an existing building, a sign with both visual and tactile lettering shall be installed far ahead of any obstruction at all non *barrier-free* entrances, to clearly indicate the location of the *barrier-free* entrance.
- E.1.3 Drainage shall be directed away from the entrance.
- E.1.4 *All barrier-free entrances shall be provided with power door operators. Best practice is to provide automatic sliding doors.*
- E.1.5 If an entrance has a power door operator, and there is a vestibule immediately inside the doors, the vestibule doors shall also be equipped with a power door operator.
- E.1.6 Power door operator push buttons shall be installed at 950 +/- 50 mm above finished floor, measured to the centre line of the device.



- E.1.7** *Barrier-free* entrance doors shall have a large well marked push button that is easily visible, which is located far enough from the door to avoid user being struck by the operating door.
- E.1.8** If doors are not equipped with power operators in an existing building, doors shall be lightweight and easy to pull / push.
Explanation: This mostly applies to renovation to an existing City of Edmonton facility. Efforts shall be made to install power door operators to comply with *barrier-free* requirements during renovations.
- E.1.9** Ensure that doorway width is not less than 920 mm when door is in the open position.
- E.1.10** Entrance vestibule shall have a minimum clear space of 1500 mm between the set of doors in open position.
- E.1.11** All doors in a *barrier-free path of travel* shall have a clearance of 600 mm on the pull side and 300 mm on the push side beyond the latch side of the door whether the door is in a *suite* or not.
- E.1.12** Door release hardware shall be installed between 800 mm and 1100 mm above the finished floor.
Explanation: This ensures a wheelchair user or child is able to reach door release hardware.
- E.1.13** In any set of two or more doors or gates side by side, the door opening shall alternate between right and left hand operations to allow a choice depending on ability of the user.



- E.1.14** When turnstiles or revolving doors are provided, a swing door with an automatic door control shall be placed immediately to one side of the revolving door or turnstile.
- E.1.15** Door, threshold and door frames shall contrast in colour to floor and wall surface for easy identification.



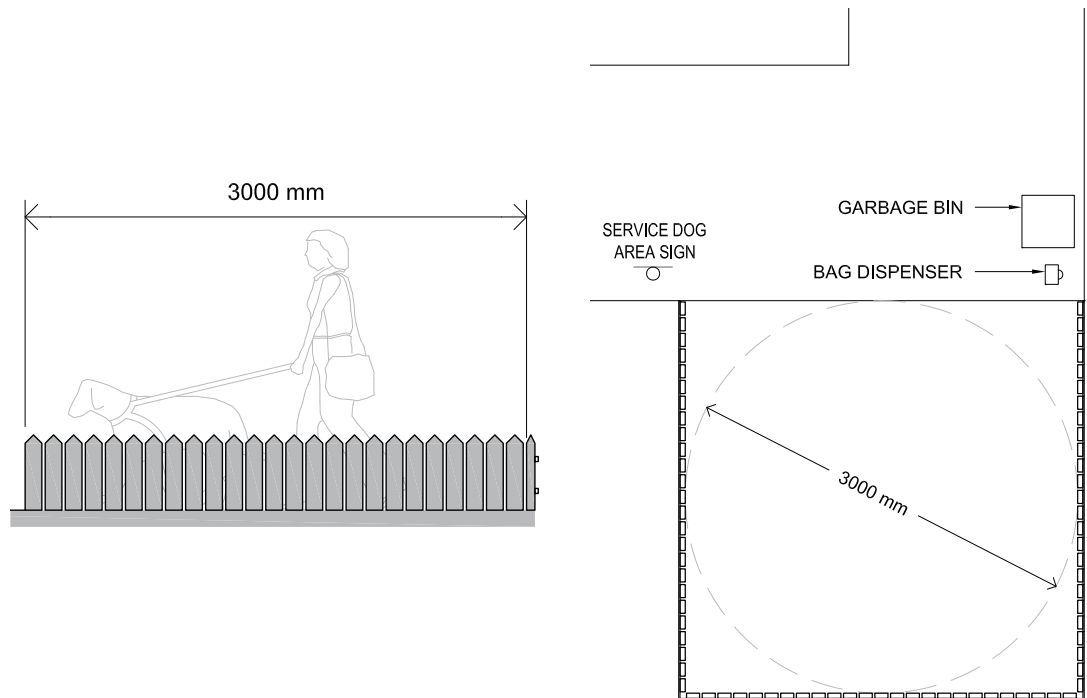
[Refer to cnib's Clearing Our Path: Creating Accessible Environments for People with Vision Loss for more details.](#)

E.2. SERVICE DOG RELIEF AREAS

E.2.1 A service dog relief area shall be provided within 50 m from at least one barrier-free entrance of a facility and be connected to a barrier-free path of travel.

E.2.2 The dedicated relief area shall be approximately 7.4 m² (3 m in diameter circle).

Explanation: Service dogs accompanying their owners on trips will reasonably require a relief area at entrances and bus/train terminals where passengers are provided the opportunity to disembark. A 7.4 m² area allows a service dog on a 5 foot leash to circle its handler prior to relieving itself. Organic mulch or grass works well in a relief area, but service dogs are also trained to relieve themselves on hard surfaces like concrete. Other considerations for relief areas include locating the area away from high-traffic areas, providing a garbage can for hygienic disposal of waste, and providing a water source to facilitate the cleaning of the area by building staff. Operators may also consider providing plastic bags for cleanup. Tactile signage shall be provided which explains what the area is and to remind users to clean up after their dogs. Requirements for tactile signage stated in this document shall be followed.



F INTERIOR PATHS OF TRAVEL

This section covers:

- F.1. Paths of travel
- F.2. Doors and doorways
- F.3. Ramps
- F.4. Stairs
- F.5. Handrails
- F.6. Elevators
- F.7. Areas of refuge

[Refer to section E.1](#)

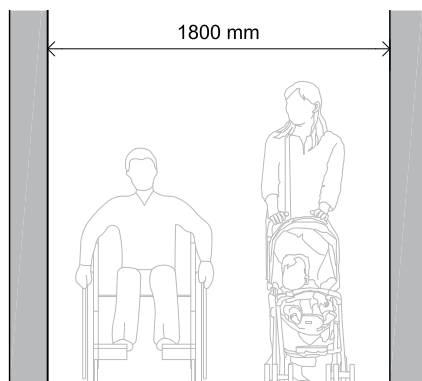
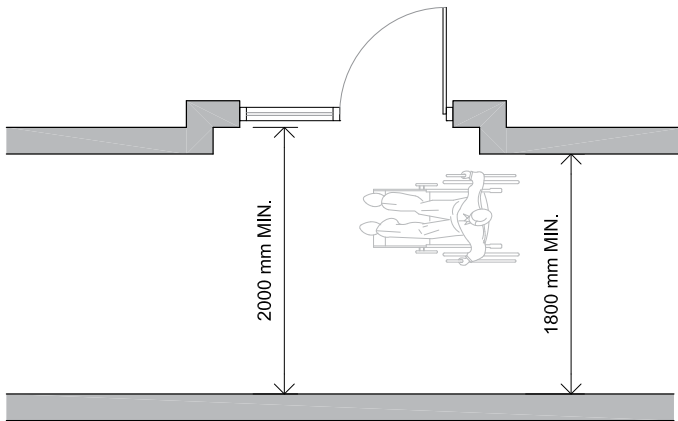
[Refer to section D.5](#)

[Refer to section D.6](#)

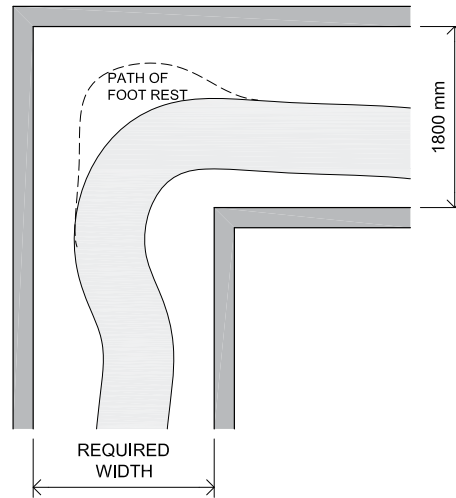
[Refer to section D.7](#)

F.1. PATHS OF TRAVEL

- F.1.1 Minimum width of 2000 mm shall be provided at *access* to corridors and *amenities* located along the corridor, to accommodate a turn using a *mobility aid* / scooter / stroller and two *mobility aids* / scooters / strollers to pass each other.

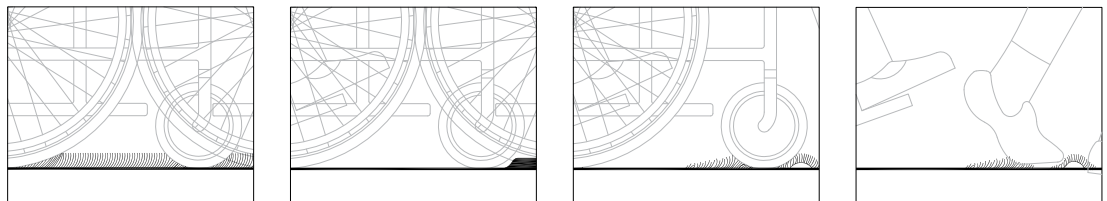


- F.1.2 A *barrier-free path of travel* shall be 1800 mm wide in a public corridor or a corridor used by the public that serves floor areas with an estimated occupant load of more than 200, and in *suites* or rooms with an estimated occupant load of more than 200.



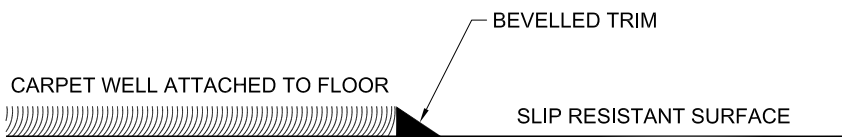
- F.1.3 Where a *barrier-free path of travel* turns a corner, the corner shall be designed to allow a person using a *mobility aid* to turn in a clear space that has a diameter of not less than 1800 mm.
- F.1.4 Provide a minimum width of 2000 mm for approach to a counter from the side corridor. Clear space shall be provided to get both front and back wheels of a *mobility aid* within 150 mm of a recessed counter or work surface.
- F.1.5 All columns shall have *colour contrast* to the adjacent surfaces to ensure high visibility.
- F.1.6 Carpet on floor, stairs or ramp surfaces shall be securely attached.
Explanation: Surface finishes along circulation routes shall not impede pedestrian movement, particularly for persons with mobility impairment, wheelchair users or people with vision loss. Carpets with a tight weave, low pile and firm underlay are recommended.

All interior obstructions in a barrier-free path of travel shall be designed in accordance with Section D.3.



F.1.7 All floor finishes shall be stable, slip-resistant, non-glossy and designed to reduce glare. Pattern design shall be kept to a minimum. The coefficient of friction shall be no less than 0.5 when wet or dry.

Explanation: Slip-resistant, non-glossy and stable surfaces make for an easier *pathway* for all users, in particular people with vision loss who may be negatively impacted by high-gloss and unstable surfaces. Surface glare and busy patterns can distort perception and generate confusion.



F.1.8 All changes in elevation and surfaces including ramps, landings and treads shall be indicated using colour and tactile contrast.

F.1.9 Where wall surfaces include mirror or glass, a horizontal warning strip such as vinyl film or graphics of minimum 150 mm width shall be provided at 1350 mm above floor level.

Explanation: This contrasting warning strip helps prevent collision of users with the wall surface.

F.1.10 All storeys and mezzanines must be reachable by a *barrier-free path of travel* served by an elevator or other elevating device.

Explanation: For example, it is considered unnecessary to provide a *barrier-free path of travel* to the upper floor of a fire hall where spaces are for firefighters only. However, if the public are permitted into these areas from time to time (e.g. school tours, etc.), a *barrier-free path of travel* should be provided.

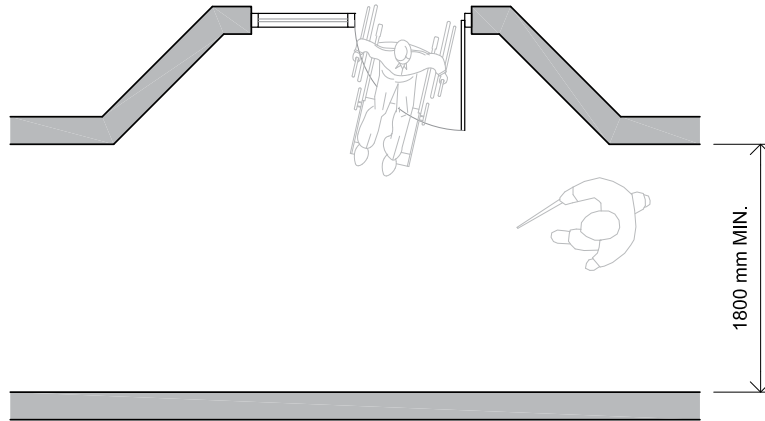


[Refer to section E.1](#)

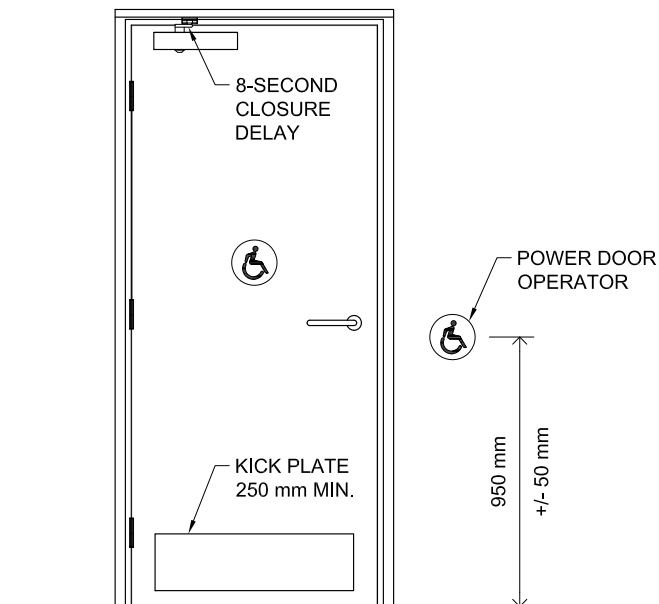
F.2. DOORS AND DOORWAYS

F.2.1 Where a door swings into a *barrier-free path of travel*, it shall be recessed so that it does not reduce the minimum required width of the *barrier-free path of travel*.

Explanation: This can create a hazard for people with vision loss, especially automatic swing doors. The *barrier-free path of travel* may be made wider to accommodate the width of the door that swings into the path.



F.2.2 Where provided, manual door openers shall be mounted at a height of 800 mm to 1100 mm from the finished floor. **Best practice is to make all doors to public spaces / amenities automatic.**



F.2.3 Clearance gap between the door handle and a door panel shall be a minimum of 50 mm.

Explanation: A clearance of 50 mm ensures that those with limited hand functions can open the door.

- F.2.4** Automatic doors shall have a master control that can control the door closers, keeping the door open for a minimum of eight seconds, with the door held at an angle between 70 – 90 degrees.
Explanation: Master controls also allow the door function to reverse, if an object interrupts the door's closing motion.
- F.2.5** Kick plates shall be *colour contrasting* with the door panel.
- F.2.6** Provide a minimum clear space of 2590 mm wide and 2440 mm deep inside doorway where possible, so that a scooter can drive into a room, make a turn and drive out. If the doorway is located at the centre of the wall the width of the clear space can be reduced to 2440 mm.
- F.2.7** Glass doors shall include a contrasting strip of colour and texture (i.e. etched glass) of minimum 150 mm wide for the entire width of door and at a starting height of 1350 mm from the finished floor. This strip should be installed on both sides of the glass.

F.3. RAMPS

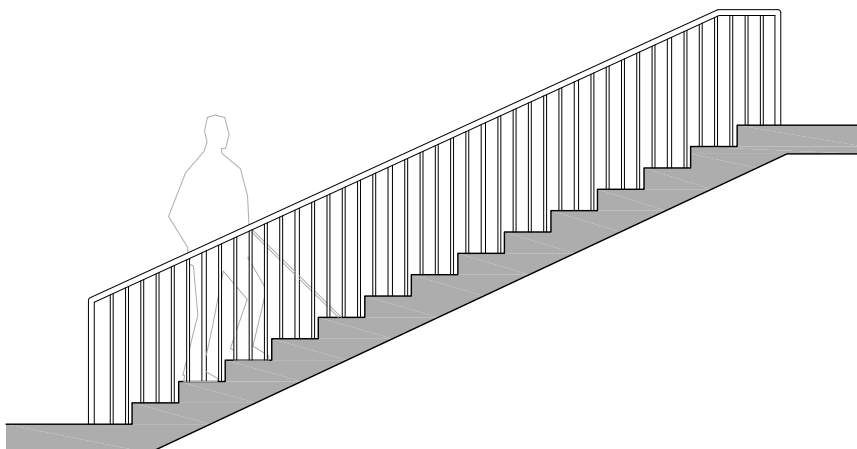
- F.3.1** An elevator or lift shall be provided if there is a change in elevation of more than 1.2 m and the elevation change is within a building.
Explanation: A ramp with a 1:20 slope negotiating an elevation change of 1.2 m will be 24 m long plus the length of landings. At this size, the length of the ramp can become just as much of an obstacle as the slope of the ramp. Though an elevator or lift is required only for interior scenarios, it is advised to provide the same amenity for exterior ramps.

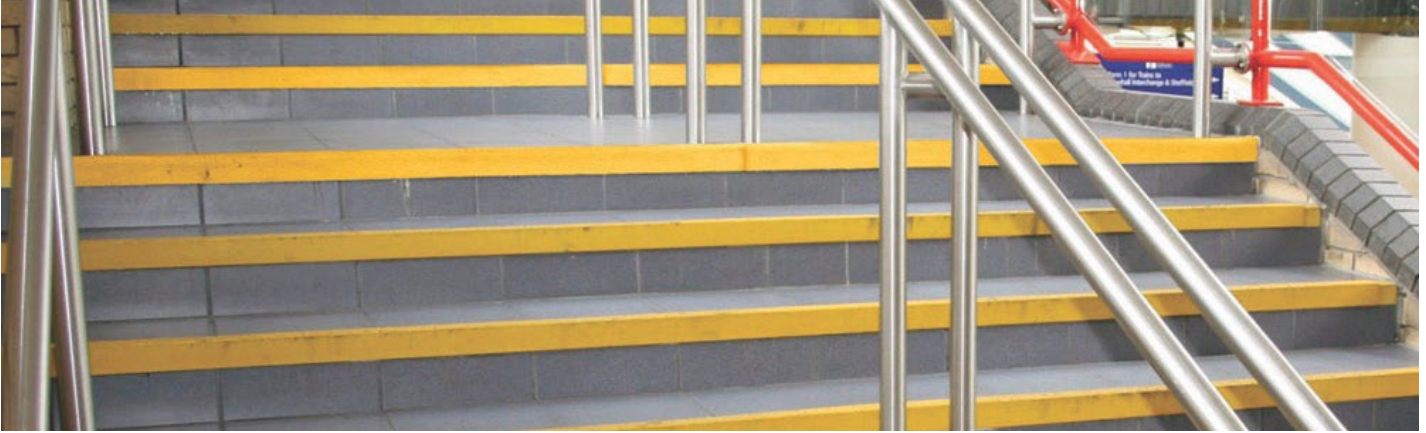
[Refer to section D.5](#)

F.4. STAIRS

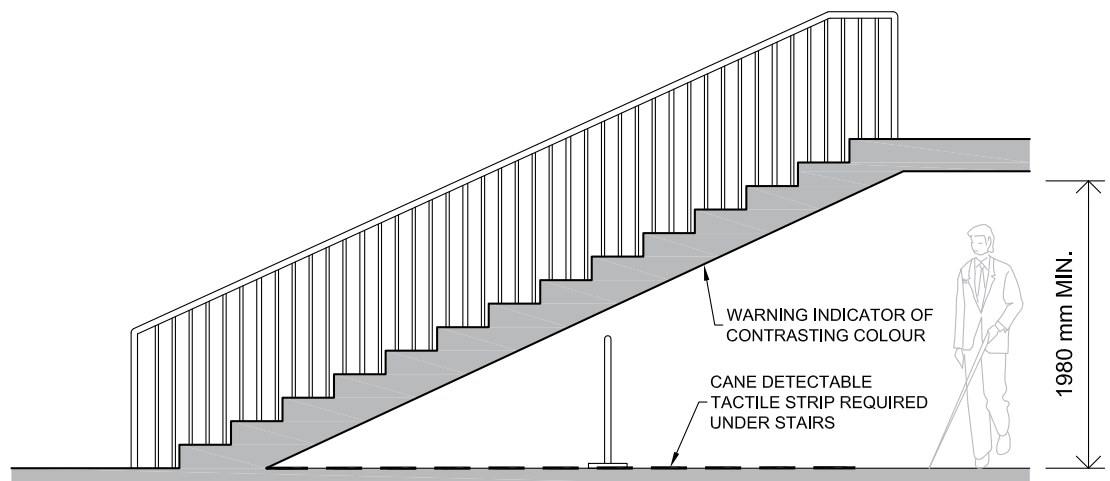
- F.4.1** A flight of stairs shall have uniform dimensions and no open risers.
Explanation: Light can shine through open risers causing glare and can be more difficult to detect with a cane making it difficult for people with vision loss to negotiate.

[Refer to section D.6](#)



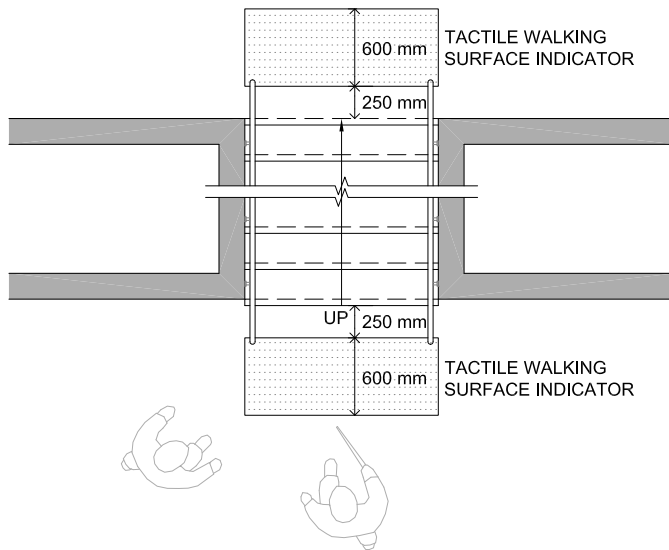


- F.4.2 Nosings and leading edge of landings shall have a tactile finish with *colour contrast* and distinctive pattern from stairs to demarcate the leading edge of the tread and landing.
- F.4.3 Risers shall be beveled not more than 60 degrees with respect to the tread surface to ensure the tread edge is more clearly visible in descent.
- F.4.4 Minimal pattern shall be used for floor finish on stairs.
Explanation: Heavily patterned flooring surfaces can create figure-ground confusion and hide the definition of nosings.
- F.4.5 Illumination shall be positioned to minimize glare and shadow.
- F.4.6 A *cane detectable* barrier shall be used to prevent access to areas under an open staircase.
Explanation: A *cane detectable* barrier prevents a visually impaired person from inadvertently colliding with the underside of an open / cantilevered staircase.



F.4.7 Changes in elevation at stairwells shall be indicated by a *Tactile Walking Surface Indicator* of contrasting colour.

Explanation: The tactile surface serves to warn a person who is visually impaired that there is an elevation change and possible tripping or fall hazard with the walking surface.



F.4.8 Wherever backs of stairwells are in the public area, there should be a warning indicator of contrasting colour to alert a potential safety hazard.

F.5. HANDRAILS

F.5.1 Handrails shall be splinter and rust proof, located on both sides of stairs and ramps and shall contrast in colour and brightness to the wall or surrounding area.

[Refer to section D.7](#)

Explanation: Handrails on both sides of a stairway or ramp allow for safe travel in both directions. *Colour contrast* makes the handrail easier to see and navigate for all users, especially people with vision loss.



F.5.2 All handrails shall terminate to the wall or ground and have a consistent system of tactile cues, such as notches, dimples, grade 1 braille, raised numbers or other texture changes within the last 300 mm at both ends of the handrail before it changes direction to the ground or wall.

Explanation: This indicates to people with vision loss that they are approaching the beginning or end of the stairway or ramp.

F.5.3 If railings are provided at two different heights, ensure that view between the railings is unobstructed.

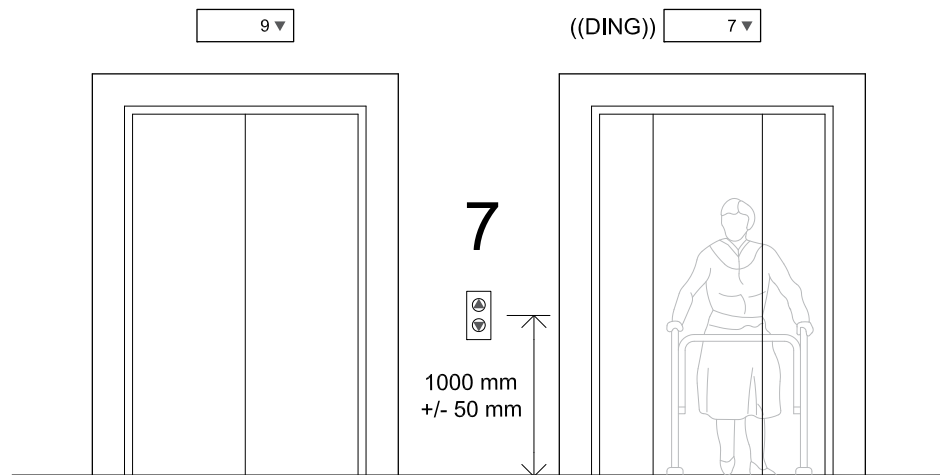
F.5.4 Ensure guards and/or handrails are installed at viewing platforms and windows with views. At areas without fixed seating, provide guards to lean on to.

F.6. ELEVATORS

F.6.1 The minimum clear space in front of elevator doors shall be 1800 mm.

F.6.2 Call buttons shall be installed at 1000 +/- 50 mm above the finished floor, measured to the centre of the panel.

F.6.3 All elevator waiting areas must have choices for seating in close proximity. Signage showing priority seating for people with limited mobility shall be provided.

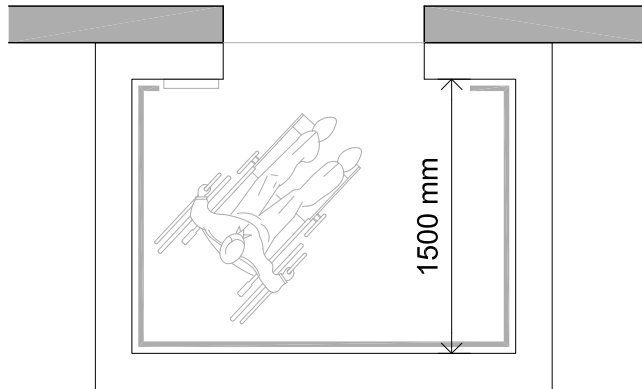


F.6.4 Call buttons shall be located on each wall between elevators and shall be easily identifiable by *colour contrast* and raised symbols.

F.6.5 Call buttons shall protrude to enable a user to push with any part of the hand.

[For signage details, refer to section I.9.](#)

- F.6.7 Elevator doors shall begin to close after a minimum of 8 seconds from the fully open position.
- F.6.8 Elevator shall have a minimum inside car dimension of 1500 mm to accommodate the turning of a wheelchair.



- F.6.9 Audible communication system shall be available for the visually impaired for accessing elevator. Inside the elevator car, audible announcements identifying the direction of travel shall be provided.
- F.6.10 *Colour contrast* shall be used to differentiate the floor registration button panel from the elevator car background or wherever it is located.

F.7. AREAS OF REFUGE

- F.7.1 An area of refuge shall be provided in all buildings where there is a *barrier-free path of travel* above or below the first storey.

Explanation: An area of refuge is a safe waiting area for evacuation. In the event of a fire, an area of refuge provides a well-known place for firefighters to help anyone unable to use stairs to exit the building.





- F.7.2 Areas of refuge shall be designed to accommodate not less than 1.5 m² of area for each person in a wheelchair and 0.5 m² for accompanying ambulatory attendant. Assume 10% of the total occupant load of the floor to be *mobility aid* users.

Explanation: Areas of refuge include safe zones and elevators (and adjoining safe zone) intended for use by firefighters to evacuate persons with *disabilities*. Although the sizing of the area of refuge is based on the number of *mobility aid* users and their ambulatory attendants, the area of refuge is also intended to be used by people who do not use a *mobility aid* but are nonetheless unable to use exit stairs. It is acknowledged that many people using *mobility aids* do not have an attendant with them at all times, and therefore it is assumed that the space allotted for ambulatory attendants might not be used in a real emergency.

- F.7.3 The firefighter elevator shaft must be kept free of smoke which can be accomplished by mechanically pressurizing the shaft.
- F.7.4 All exits that can be reached by a person in a wheelchair shall provide a *barrier-free path of travel* to the exterior.
- F.7.5 The area of refuge shall be identified by directional and identification signage and the International Symbol of Access for disabled persons.
- F.7.6 Areas of refuge shall be identified on all publicly displayed floor evacuation plans and be included in evacuation procedure documents and the building's fire safety plan.

G INTERIOR SPACES FOR VARIOUS USES

This section covers:

- G.1. General
- G.2. Amenities
- G.3. Rest/waiting areas
- G.4. Places of assembly
 - Seating
- G.5. Recreation facilities
 - Exercise areas
 - Aquatic pools
 - Ice rinks and dry slabs
 - Golf courses and driving ranges
 - Athletic parks
- G.6. Edmonton Transit
 - General
 - Building Entrances
 - Interior Benches
 - Ramps, Stairs and Elevators
 - Interior Spaces
 - Washrooms
 - Public Communications and Pay Telephones
 - Communication and Security
 - Transit shelters
 - Platforms
 - Other general outdoor design (e.g. benches, crosswalks, park n' ride, etc.)
- G.7. Lighting and Acoustics
 - Lighting
 - Acoustics

G.1. GENERAL

- G.1.1 Provide day lockers with tactile contrast lettering and/or bike storage space inside facilities.
- G.1.2 Provide at least one designated quiet area with seating within each public facility.



- G.1.3** Provide secure wheelchair storage, scooter and stroller parking near main *barrier-free* entrances of public facilities.

Explanation: This storage area shall be located where individuals feel comfortable leaving their mobility devices.

- G.1.4** Ensure that services are easily *accessible* and *barrier-free* counters are provided, including tenant spaces which serve the public. At best, services shall be located on the ground floor of a facility.

Explanation: Where possible, the path travel from the front entrance area to the service counter/ambassador shall be as clear and short as possible.

- G.1.5** Sound mitigating materials and strategies (e.g. materials with high noise absorption on walls, ceilings, etc.) shall be included in the design for areas where excessive noise may be generated and within larger areas such as reception and lobby (e.g. children's play areas, choir, fitness rooms, games rooms, etc.).

Explanation: Hearing loop technology shall be added to major activity zones. Best practices include at least one enclosed area preferably with a lowered ceiling for social activities, sound absorbing material within games/choir rooms, and minimized use of sound reflecting materials within entry / waiting areas.

G.2. AMENITIES

- G.2.1** Activity rooms designed to accommodate various functions using furniture that is easy to set up in a variety of configurations to meet specific user needs should be provided in *senior centres*, recreational facilities, and community centres. Ensure adequate acoustic separation from adjacent spaces. These rooms are ideally located adjacent to other *amenity* spaces (e.g. kitchen).

- G.2.2** Activity rooms shall be located on the main level or shall be easily *accessible* by an elevator or *barrier-free* entrance.

- G.2.3** Ensure fitness areas are combined with a variety of seating / social areas and *barrier-free* washrooms and changerooms are located nearby.

G.3. REST / WAITING AREAS

- G.3.1** Provide seating areas within the building particularly on long paths of travel to *amenity* spaces.

- G.3.2** Ensure waiting areas are *accessible* to those with limited mobility and provide a variety of seating options including seating with high backrests, variety of side arms (two, one, none), etc. to accommodate all abilities.

- G.3.3** Waiting area(s) with priority seating for patrons with limited mobility shall be provided with an unobstructed view towards drop-off and pick-up areas near *barrier-free* entrance.

G.3.4 Provide clear signage for priority seating, designated *accessibility* and *age-friendly* seating.

G.3.5 Provide clear floor space adjacent to seating to accommodate a *mobility aid* or stroller.

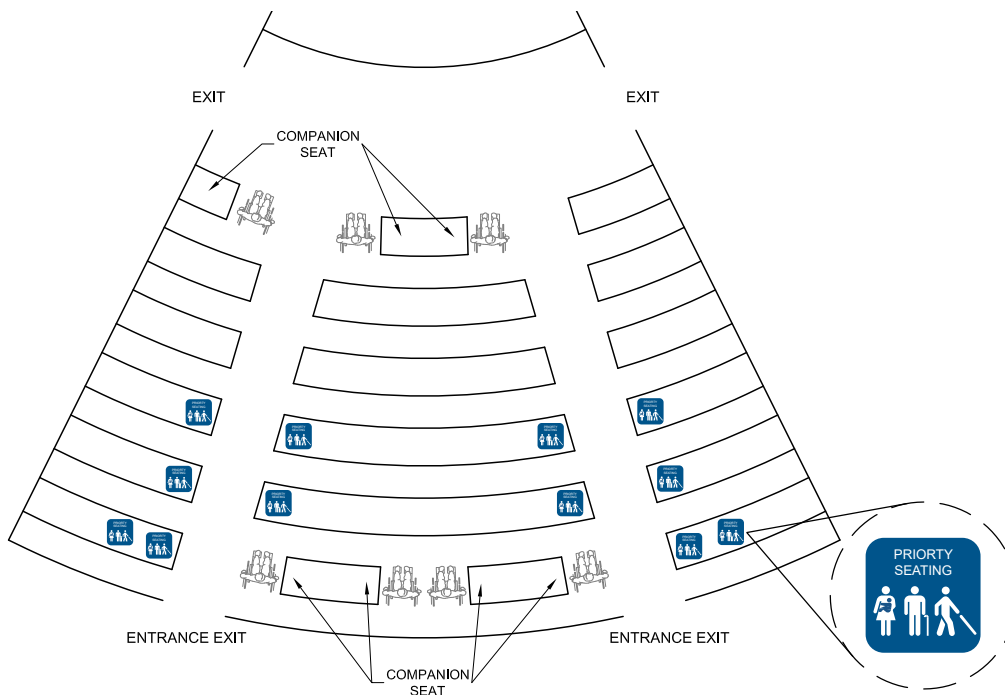
G.4. PLACES OF ASSEMBLY

Seating

NUMBER OF FIXED SEATS	SPACES FOR WHEELCHAIR USERS
2 – 100	4
101 – 200	5
201 – 300	6
301 – 400	7
401 – 500	8
501 – 900	9

For parking, exterior paths of travel, entrances, interior paths of travel, special interior features, washrooms and changerooms refer to the respective sections in this document.

If the number of fixed seats exceeds 900, the number of wheelchair designated spaces shall be equal to 1% of total fixed seating spaces or number of designated spaces required by *Barrier Free Design Guide*, whichever is higher.



- G.4.2 Each wheelchair designated space shall be provided with one companion seating, which is removable, beside it.
- G.4.3 Provide courtesy seating along the aisles for *seniors* and for persons with various *abilities*.
- G.4.4 Provide lighting in aisles for *wayfinding*.
- G.4.5 Seating and armrests shall have contrast colour with surrounding surfaces and include signage where required.
- G.4.6 Places of assembly shall be designed to limit glare for the audience.
Explanation: If a speaker/presenter is in front of a window or have lights shining from behind, this will create glare for the audience.
- G.4.7 All places of assembly shall be designed to enhance hearing ability, preferably by providing *induction loop system*.

G.5. RECREATION FACILITIES

Spectator seating in recreation facilities must be provided in accordance with Section G.4.

Exercise areas

- G.5.1 *Inclusive fitness equipment* shall be provided that is useable by people with varying abilities. Provide *low-impact active equipment within existing fitness areas and buildings (e.g. senior centres, community centres)*.
Explanation: Examples include exercise equipment that does not require transferring from wheelchair to machine (cables, dumbbells etc.), swing away seating, lightest setting on weight machines suitable for individuals who are not used to exercising or may have low strength levels (2.5–5 lbs.), portable wheelchair blocks, hand hooks/grips, combination of upper extremity and lower extremity options for cardio equipment, alternative formats used for descriptions of controls on exercise equipment (raised buttons, audible cues on equipment, large print, pictures).
- G.5.2 Any *inclusive fitness equipment* that could reasonably be used by a person in a wheelchair shall be *accessible* by a 1500 mm wide *barrier-free path of travel* and shall have a clear floor space of not less than 920 mm x 1220 mm beside the equipment.
Explanation: If handrails are provided, they should be properly positioned to facilitate transfer to and from exercise equipment. A level 1500 mm wide path ensures there will be sufficient wheelchair clearance to exercise equipment and a clear floor space beside it facilitates the transfer process.

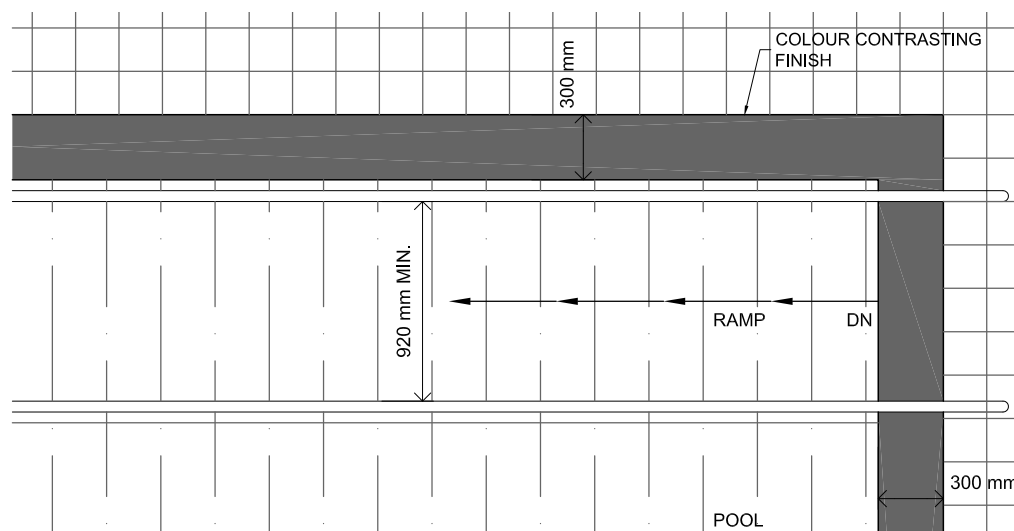
- G.5.3 Raised exercise mats at a recommended height of 450 mm from finished floor shall be available as an alternative to stretching on the floor for wheelchair users and others with reduced mobility.
- G.5.4 Ensure there are programs / diagrams to clearly identify the safe use of all equipment.
- G.5.5 Floor surfaces shall be designed to be low impact with adequate cushioning.
- G.5.6 Tracks with clear lane markings and one lane of minimum 1500 mm wide shall be included around the perimeter of the exercise area.
Include benches at regular intervals to provide areas of rest.

Aquatic pools

Barrier-free swimming pools, hot tubs, saunas and steam rooms can be essential for people of all ages and abilities who may rely on aquatic activities as a form of rehabilitation or exercise to benefit their health and well-being.

- G.5.7 A zero depth/sloped entry or ramp with handrails shall be provided for entering the swimming pool. Alternate means of pool entry may be deemed acceptable if demonstrated to be inclusive in daily practice.

Explanation: If a pool does not have a zero depth/sloped entry, the method of pool entry shall include a ramp with handrails, wide enough to accommodate a large wheelchair. If a pool lift is considered in the planning stages in which a ramped access can be included in the design, then a ramp is preferred because it will better serve the varying needs of people getting into and out of a swimming pool. Sloped access is the ideal means of entering/exiting all new pool basins.



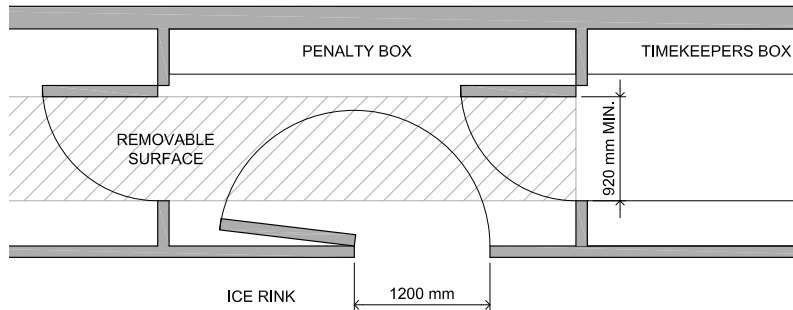
- G.5.8** If a ramp is installed, it shall be installed at the shallow end of the pool with a minimum clear width of 920 mm inside handrails.
- G.5.9** Pool markings shall be a contrasting texture in addition to colour. This tactile feature offers swimmers with vision loss an additional level of information.
- G.5.10** A *colour contrasting* finish of 300 mm shall be provided around pool edges.
- G.5.11** If a pool has a hot tub, a ramp shall be provided for entry into the hot tub. If a ramp is not feasible, a lift must be provided.
Explanation: All *amenities* should be available for use by people of all abilities to allow universal access into the body of water.
- G.5.12** If a pool has a sauna/steam room, a 1500 mm diameter of clear space shall be provided inside.
Explanation: All amenities should be available for use by people of all ages and abilities and a 1500 mm clear floor space allows for wheelchair maneuvering. People using a sauna/steam room with a wheelchair may transfer onto the bench and park the wheelchair outside the room so it does not become hot. The clear floor space inside must be positioned to allow a transfer. A space to park the wheelchair outside in close proximity to the sauna entrance must not impede the route of travel.
- G.5.13** Provide warm pool areas suited for wading and light activity.
- G.5.14** Locate warm, shallow pools adjacent to washrooms and changerooms on a *barrier-free pathway*.

Ice rinks and dry slabs

[Refer to Sledge Hockey Accessibility: Design Guidelines for Arenas \(Hockey Canada\).](#)

This section is referring and applies to arena designs in general with a focus on elements to support sledge hockey. It is important that ice rinks that are designed for sledge hockey consider the needs of people with various abilities including players, spectators, families, visitors and staff. Design consideration for changeroom size should include accommodating wheelchairs, sledges and hockey equipment bags.

- G.5.15** All changeroom elements shall be designed as previously referenced throughout this guide (washroom, shower, etc.).
- G.5.16** *Barrier-free* access to player's benches, penalty boxes and timekeeper's box shall be provided in ice rinks.



G.5.17 Player's benches, penalty boxes and timekeeper's box shall have clear acrylic in the lower part of the boards.

Explanation: A clear acrylic in place of white boards in front of the player's benches, penalty boxes and timekeeper's box ensures ice is visible to everyone.

G.5.18 The player's benches must have two doors which open fully, each having a minimum 920 – 1200 mm clear width in open position, leading onto the ice surface.

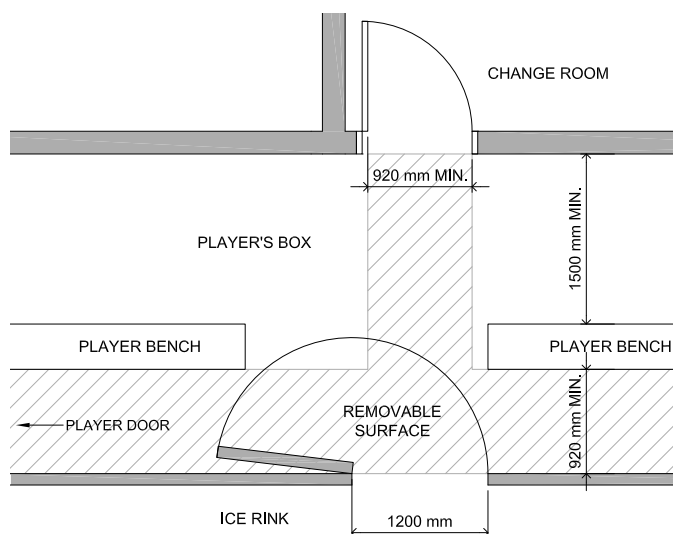
G.5.19 The player's bench areas shall be designed to have removable benches or shall have a minimum of 920 mm between the bench and surrounding boards or walls.

Explanation: Removable benches provide room to maneuver sledges.

G.5.20 A removable flooring surface, such as acrylic, shall be installed from changeroom through to space between player's bench and outer board and run entire length in front of the bench.

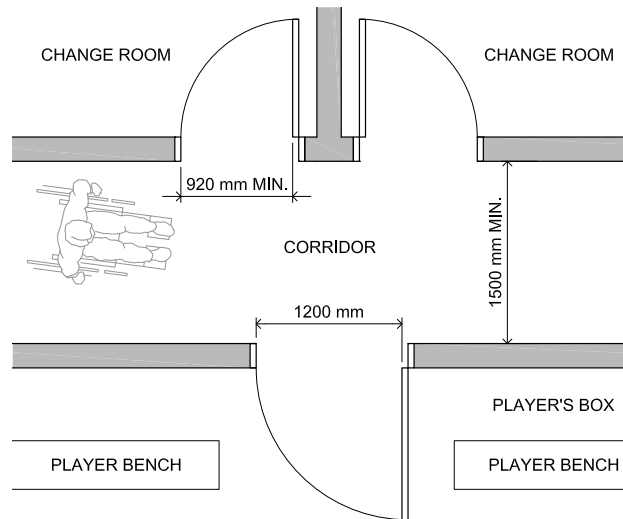
Explanation: This will allow sledge hockey players the ability to glide from the changerooms to the ice surface.

G.5.21 Minimum 1500 mm clear *barrier-free* space shall be provided between the changeroom and bench within player's box.



- G.5.22** Where a corridor is provided between changeroom and player's box, the corridor shall be minimum 1500 mm wide.

Explanation: This space allows coaches or parents in a wheelchair to maneuver within the corridor.



- G.5.23** Level access onto the ice surface shall be provided from player's benches, penalty boxes and other access points.

Explanation: A minimal threshold onto the ice allows for quick access and egress, required when changing players, without needing assistance or lifting by another person.

Golf courses and driving ranges

- G.5.24** A *barrier-free pathway* shall connect all key elements of the golf course, such as from the parking lot to the clubhouse, to adjacent cart paths between tee boxes, fairways, putting greens and driving range.

- The surface of the *pathway* shall be firm and stable.
- If there's curbing on the golf cart path to prevent golf carts from entering certain portions of the fairway or to reduce erosion, openings of at least 1800 mm wide shall be provided at safe intervals.
- Pathways* shall be a minimum of 1800 mm wide.

Explanation: A *barrier-free path of travel* designed to provide access to all the elements, spaces and buildings within the site boundaries of the golf course ensures that people with limited mobility can participate in playing golf. Generally, outdoor surfaces such as pavement, stones, crushed and compacted stone and rubberized surfaces are considered to be firm and stable. Sand, pea gravel and wood chips/mulch are not firm and stable and should not be used. If required, applicants may be asked to demonstrate a chosen product is firm (does not compress underfoot) and stable (endures weather conditions and does not shift).

Athletic parks

G.5.25 A *barrier-free pathway* of minimum 1800 mm wide shall connect all elements of an athletic park, including the parking, sports fields, baseball diamonds, running tracks, spectator areas and washrooms.

Explanation: A *barrier-free* route of travel designed to connect all the elements, spaces and buildings within the site boundaries of the athletic park ensures people of all ages and abilities can access the outdoor sport(s) *amenities*.

G.6. EDMONTON TRANSIT

People with *disabilities* should not have to rely solely on specialized transportation services for travel. Having an *accessible* public transit system relieves the burden on those services. The City of Edmonton recognizes the needs of community members, of all ages and abilities, related to public transit and has implemented design changes to accommodate them. With an *accessible* transit system people of all ages and abilities will have alternate means of travel.

The following City of Edmonton documents should be followed for all Edmonton Transit projects. This guide shall be used as a supporting document.

- *Transit Oriented Development Guidelines*
- *LRT Design Guidelines*
- Transit Centre Design Guidelines
- *Edmonton's Transit Strategy*

General

- G.6.1** Clear signage indicating the following shall be provided:
- location of *barrier-free* entrance to the station and platform,
 - *barrier-free path of travel* throughout the station including elevator,
 - help phones
- G.6.2** All handrails shall have *colour contrast* from the wall and installed in accordance with Section F.5.
- G.6.3** All glass partitions, panels and shelters (bus stops, transit centres and LRT stations) shall be provided with minimum 150 mm wide horizontal warning strips for the full width of the panel. This can include corporate branding decals and shall be at a minimum height of 1350 mm from finished floor.
- G.6.4** A *barrier-free path of travel* with a minimum width of 2100 mm (3000 mm preferred) is required throughout the station site (e.g. parking stalls, bus stops, LRT stations, LRT platform).



- G.6.5 Pedestrian *pathways* at level rail crossings shall be smooth and level across the tracks and provide visual and auditory cues.
- G.6.6 Tactile *Walking Surface Indicator* of contrasting colour shall be provided at entrance locations to the LRT pedestrian crossing covering the entire width of the crossing entrance.
- G.6.7 All interior and exterior lighting shall minimize glare and backlit areas.

Interior Benches

Refer to *section D.4*.

Building Entrance

Refer to *section E*.

Ramps, Stairs and Elevators

Refer to *section F*.

Interior Spaces

Refer to *section G*.

Washrooms

Refer to section H.

- G.6.8 Consider providing one gender neutral *barrier-free* washroom in addition to female and male washrooms. Where washrooms are non-gender specific, provide at least two *barrier-free* washrooms.

Public Communications, Pay Telephones and Security

- G.6.9 Emergency telephones shall be provided at all transit stations, LRT stations and City owned pedways.
- G.6.10 Audio and visual announcements related to delay or change of service and emergencies shall be provided at all LRT stations.

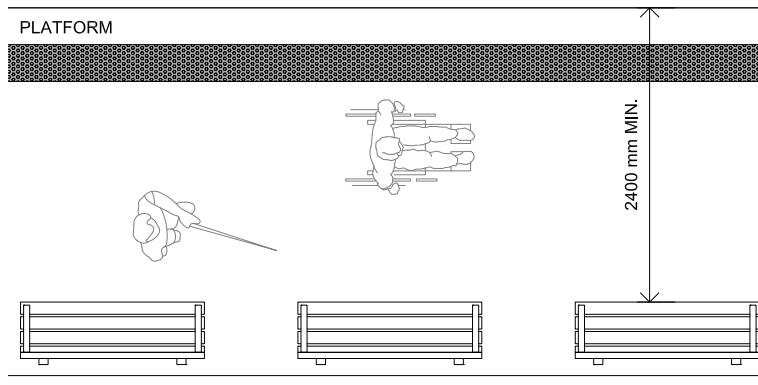
Transit shelters

Transit shelters serve as waiting locations and drop off points in an *accessible* transit system including major transfer points (i.e. LRT Stations, Transit Centres and bus stops) throughout the network.

- G.6.11 A *barrier-free path of travel* shall be provided from a pedestrian walkway and/or drop-off point to the entrance of a transit shelter.
- G.6.12 Transit shelters shall have a minimum 1500 mm x 1500 mm clear space outside the entrance to the shelter.

Platforms

- G.6.13** LRT platform furniture shall be a minimum of 2500 mm from the edge of the platform.



Other general outdoor design

(e.g. benches, crosswalks, park n' ride etc.)

- G.6.14** LRT platform shall be designed and constructed such that the clearance shall not exceed 50 mm horizontally and 75 mm vertically from any train-door position.
- G.6.15** LRT platform edges shall consist of a 300 mm wide unglazed ceramic tile with non-slip surface, and minimum 600 mm wide yellow tactile warning tile.
- G.6.16** All pedestrian ramps connecting to the platforms shall have 1800 mm clear width.

[Refer to sections A – D.](#)

G.7. LIGHTING AND ACOUSTICS

Lighting

- G.7.1** Ensure that light is evenly distributed to minimize shadow on all indoor circulation routes, workstations, worksurfaces. Lighting levels shall be increased to emphasize areas of potential hazard and information (entrances, exits, stairs, ramps, escalators and signage).
Explanation: Consistency in the levels of illumination is a primary concern for people with vision loss, since their ability to adjust from one level to another is often slow.
- G.7.2** At best ensure all light sources minimize direct and indirect glare from nearby reflective surfaces. At minimum ensure this is provided for areas highly used by *seniors*. Avoid high intensity lighting as they can add unnecessary glare and leave an image on the retina of individuals with poor vision.



G.7.3 Natural daylight shall be used where possible to illuminate entrances, corridors and workspaces, however design must include glare mitigation strategies (e.g. blinds).

G.7.4 Provide multi-level lighting in activity rooms.

Acoustics

The acoustic properties of materials used in interior passageways shall be a design consideration. Some sound reverberation aids people with vision loss by providing a sense of the size of the space and the location of walls or openings, while some sound absorption helps people who have hearing loss by reducing background noise. Consideration for the intended use of the space, safety and the basic *principles of universal design* should guide design decisions that affect the acoustics of a room or space.

The minimization of ambient noise and reduction of layering of different sounds improve a person's ability to hear. People with hearing loss require spaces to be acoustically designed to reduce background noise and echoes.

G.7.5 The heating ventilation and air conditioning system (HVAC) shall be designed to consider the acoustic needs of the space.

G.7.6 Speakers (except those required for the fire alarm system) shall not be placed near important areas of in-person communication, such as information or service desks.



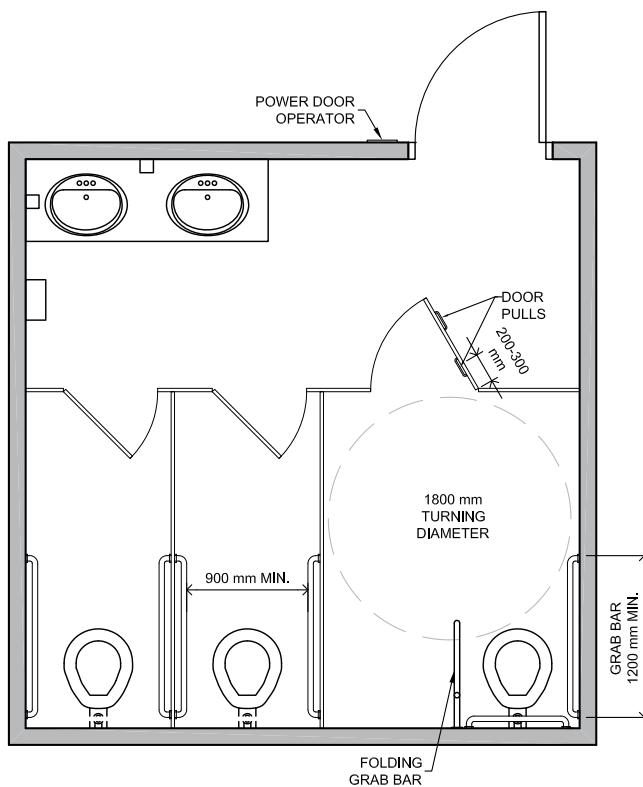
H WASHROOMS AND CHANGEROOMS

This section covers:

- H.1. General
- H.2. Washroom entrances
- H.3. Washroom fixtures
- H.4. Universal self-contained changerooms
- H.5. Public changerooms

H.1. GENERAL

- H.1.1 *Barrier-free* washrooms shall be provided on every floor which is *barrier-free accessible*.



- H.1.2 In existing facilities, where gender specific washrooms are provided, minimum one self-contained *barrier-free* gender neutral washroom shall be provided in addition to the required *barrier-free* stalls.
- H.1.3 In new facilities, provide gender neutral washrooms for all occupants and a minimum of two self-contained *barrier-free* washrooms on every *barrier-free accessible* floor.



- H.1.4 Changerooms in all facilities shall include a self-contained *barrier-free* changeroom.
- H.1.5 Baby change tables shall not be located inside *barrier-free* washrooms but should be provided in both gender neutral and/or gender specific washrooms.
- H.1.6 A minimum clear turning space of 1800 mm diameter shall be provided inside the *barrier-free* washroom.

Signage shall be provided in accordance with section I.9.

H.2. WASHROOM ENTRANCES

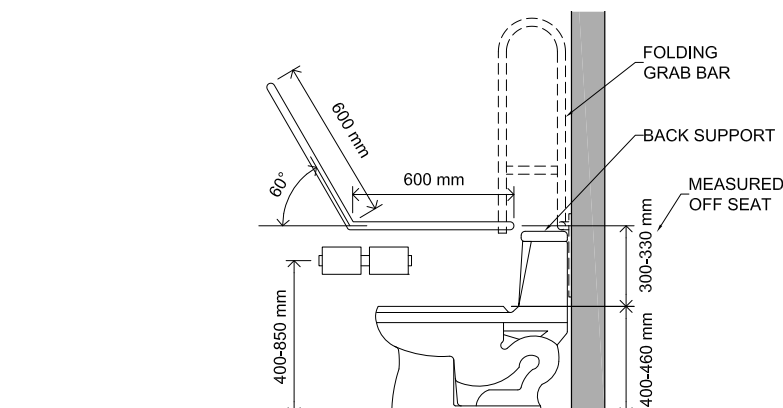
- H.2.1 Provide doorless entrance to the washroom facility (e.g. L-shaped entrance), where possible.
- H.2.2 Doorless entrances with an L-configuration shall have only one turn with clear corner and a minimum depth of 1200 mm.
Explanation: L-shaped entrances should be as wide as possible to enable easy wheelchair access/egress. Minimizing the number of turns will reduce the risk of persons with low vision from getting disoriented.
- H.2.3 Doors leading into washroom facilities containing *barrier-free* stalls and self-contained universal toilet rooms shall be equipped with power door operators. Avoid providing two doors in quick succession.
Explanation: Washroom door shall be wide and easy to approach (not recessed in a narrow hallway).
- H.2.4 Doors of *barrier-free* washroom stalls shall be designed to swing outwards and shall be equipped with spring or gravity hinges that slowly close the door.
- H.2.5 **Doors and stall partitions shall have colour contrast to the floor and wall finishes to be easily recognizable.**
- H.2.6 In a public washroom facility a minimum 920 mm clear space in front shall be provided when a stall door is in open position.

H.3. WASHROOM FIXTURES

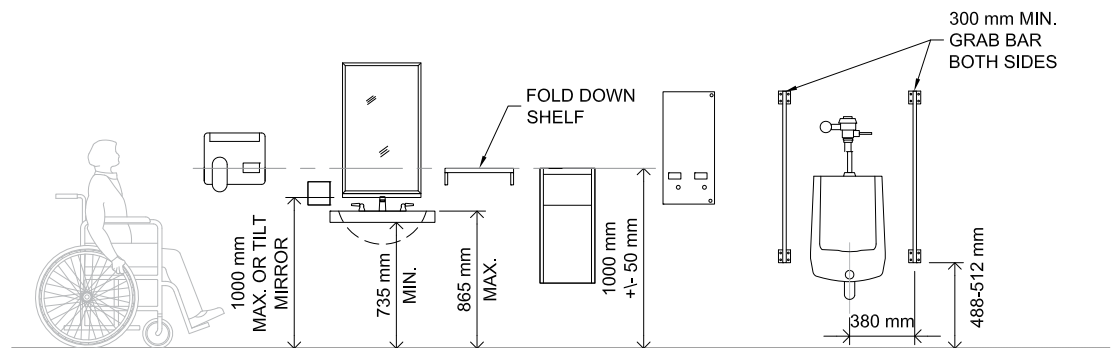
- H.3.1 Depending on the expected facility usage, ensure there are a variety of heights of toilets, lavatories, soap, towel and dryer fixtures to suit various mobility and ages. Wall mounted folding step stool shall be installed for children and those of varying abilities to reach lavatories. If the lavatories are located in a counter, the *barrier-free* lavatory shall be located near the wall with soap and paper towel dispenser / dryer located on the adjacent side.
- H.3.2 Ensure washroom fixtures like waste receptacles are either recessed or located such that it does not obstruct use of other fixtures.
- H.3.3 Waste receptacles shall be installed such that the opening to the receptacle is at a height of 1000 +/- 50 mm to the finished floor.

Note: Where possible, it is recommended that waste receptacles be recessed into the wall to ensure there are no obstructions in the barrier-free path of travel.

- H.3.4 Washrooms provided for public use shall provide a wall-mounted sharps disposal container with opening at a height of 1000 +/- 50 mm above the finished floor and within 450 mm forward reach of a wheelchair user.
- H.3.5 Soap and paper towel dispensers / hand dryers shall be mounted 1000 +/- 50 mm above floor level and within 500 mm horizontal reach from the front edge of the lavatory, or on a wall adjacent to the lavatory within 500 mm horizontal reach of a wheelchair user.
- H.3.6 The towel dispenser / hand dryer shall be automatic or single-function so that only one hand and one movement is required to release the towel.
- H.3.7 Provide *colour contrast* between faucets and surfaces in which they are installed. Counters shall be contrasting in colour with the wall to be easily recognizable.
- H.3.8 Automatic faucets shall be used.
- H.3.9 Minimum 900 mm clear width shall be provided in all non *barrier-free* toilet stalls.
- H.3.10 Ensure higher toilets that align to the top of a wheelchair's seat height are installed within the *barrier-free* stall.
- H.3.11 Provide suitable room for a side transfer to the toilet.
Explanation: If the lavatory is located on the same wall, ensure there is adequate space between the lavatory and toilet.
- H.3.12 Provide angled grab bar on one side of the toilet and drop down grab bar on the opposite side to provide options for people with various mobility.
- H.3.13 Grab bars for stability of patrons shall be provided in all other water closets, where possible.
- H.3.14 Grab bars shall have a diameter of 25 – 40 mm and shall be able to resist up to 300 lbs. vertically or horizontally.

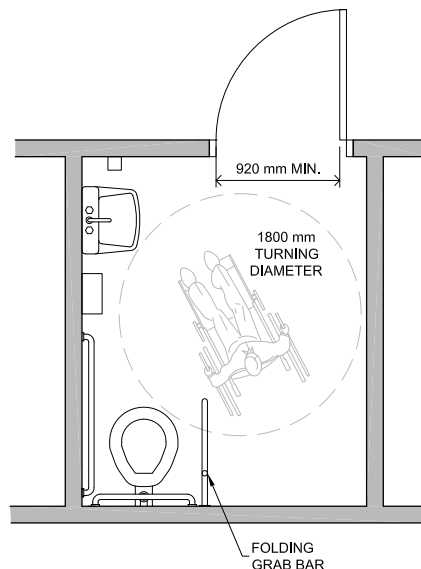


- H.3.15 Where provided, toilet seat cover dispensers shall be mounted 1000 +/- 50 mm above floor level.
- H.3.16 The toilet paper dispenser shall be installed below the grab bar such that the centre of the toilet paper holder is between 400 mm and 850 mm above the finished floor.
- H.3.17 In all cases, the toilet paper roll shall be positioned so that the farthest edge of the dispenser is positioned within 500 mm horizontal reach of a person seated on the toilet.
Explanation: A person should be able to reach toilet paper roll without leaning too far off the toilet.
- H.3.18 Provide automatically operated flush valves for toilets and urinals. Back up flush option shall be easily *accessible* to a wheelchair user.
- H.3.19 There shall be no sharp or abrasive surfaces under *barrier-free* lavatories and hot water and drain pipes shall be configured to protect against contact.
- H.3.20 Provide a fold down shelf near the sink.



Note: Call buttons enable a washroom user to call security in the event that the washroom user falls or encounters some other situation that requires assistance.

- H.3.21 Where buildings are staffed with full-time security, call buttons shall be installed in all universal washrooms.



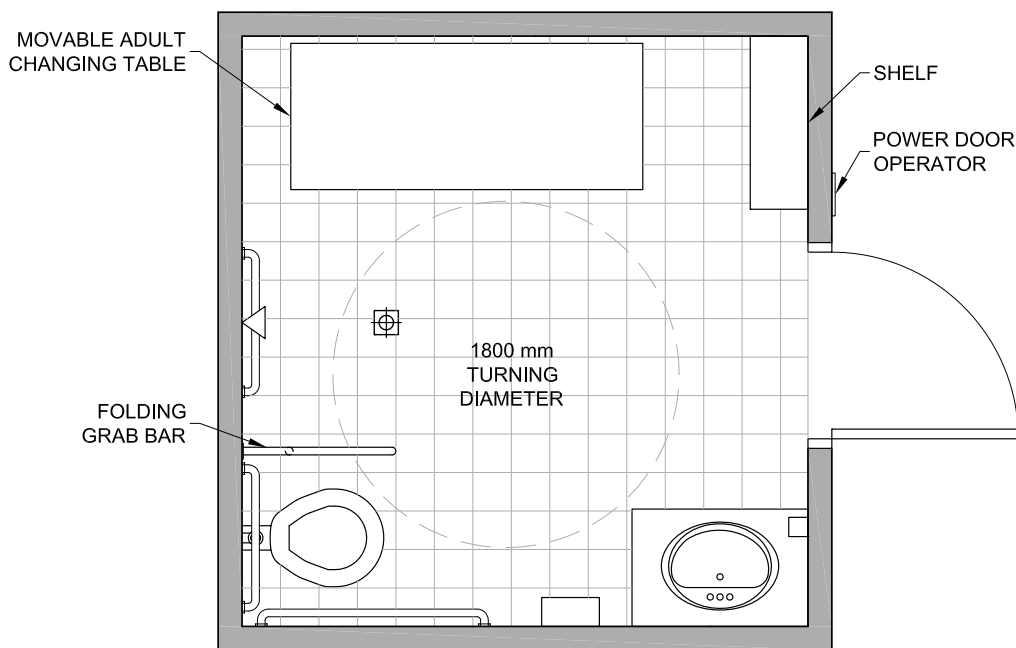
H.3.22 Where call buttons or pressable strips are installed, they shall be installed on the same wall below the side grab bar. They should be connected to an audible and visual alarm system.

H.4. UNIVERSAL SELF-CONTAINED CHANGEROOMS

Individual change and/or shower rooms for people of all ages, abilities and genders allow anyone including family members or caregivers of the opposite gender to provide assistance. These spaces may also be used by people who, for whatever reason, require additional privacy than what the gender specific changerooms provide. The universal self-contained changeroom shall be planned as an integral part of the changing area and located in proximity to the other changerooms.

H.4.1 At least one universal self-contained changeroom shall be provided in all public changerooms.

Explanation: Universal self-contained changerooms are required in all city facilities, not limited to, staff areas, gymnasias, arenas, indoor swimming pools and exercise/fitness centres.



* CEILING LIFT TO ACCESS TOILET, SHOWER AND TABLE.

H.4.2 Universal self-contained changerooms shall have a shower, toilet, lavatory and shower bench. Where required, based on use of the facility, a height adjustable and movable adult changing table shall be provided with access from both sides.

H.4.3 The shower seat shall be height adjustable and either freestanding or wall mounted.





- H.4.4 A commode and water/shower wheelchair shall be provided for use in the *barrier-free* shower / self-contained changeroom and be available to provide access from the changeroom shower area to the pool deck and ramp access into swimming pools, as needed. Storage space for these should be included in the design.
- H.4.5 A grab bar of diameter, clearance and minimum resistance to an applied force conforming to the current Alberta Building Code shall be installed to serve the elevated changing table. In addition, the grab bar shall be L-shaped with 760 mm long horizontal and vertical components mounted with the horizontal component 630–690 mm above the floor, and the vertical component 150 mm in front of the elevated adult changing table.
- H.4.6 The slope of the shower floor to drain shall be a maximum 1:20 (5%).
- H.4.7 Universal self-contained changerooms shall have a motorized ceiling mounted lift that accesses the elevated changing platform, shower, toilet and an open space not less than 2000 mm in diameter.
- H.4.8 Provide a wide tear-off paper roll to cover the change table or provide the options to sanitize the table.
- H.4.9 Provide suitable waste disposal and hand washing / drying facilities.

H.5. PUBLIC CHANGE AREAS

H.5.1 In addition to the Universal self-contained changeroom (section H.4), at least one private *barrier-free* change cubicle and shower shall be provided in each public change area for those desiring more privacy, with priority to individuals with *accessibility* requirements.

H.5.2 Benches shall be provided for resting. A section of minimum 1065 mm long, 450 – 500 mm high, and 510 – 610 mm deep shall be installed. This shall be located adjacent to *barrier-free* lower lockers mentioned below.

Explanation: Benches that are wide enough may assist people who use wheelchairs to transfer onto the bench and stay upright. Grab bars, may also be installed but should not interfere with transfer to the bench.

H.5.3 If lockers are provided, *barrier-free* lockers with raised numbering and good *colour contrast* shall also be provided and installed with latches that are easily operable with one hand and are within 400 – 1200 mm vertical reach of a wheelchair user. If the total number of lockers is 10 or more, a minimum of 10% *barrier-free* lockers shall be provided. If the total number of lockers is less than ten a minimum of one *barrier-free* locker shall be provided.

Explanation: Lockers should be available for wheelchair users and the lower height ensures access. Providing contrast between locker identification numbers and surface ensures people with low vision to locate the lockers. Latches that are easy to manipulate allows people with limited hand strength to use them.

H.5.4 A 1500 mm wide path shall be provided within each section of lockers and shall have a clear floor space of 1800 mm turning diameter directly in front of the *barrier-free* lockers in closed position.

Explanation: Benches in front of lockers block the access, so a clear space in front of the *barrier-free* lockers provides an area large enough for wheelchair maneuvering.

H.5.5 A minimum 1200 mm wide *barrier-free path of travel* shall be provided throughout the changeroom.

Explanation: Changerooms have different use areas (e.g. lockers, changing areas, washrooms, showers). This minimum 1200 mm wide path of travel ensures access to all areas and enables two people (one person using a *mobility aid* and one ambulatory person) to pass each other easily.

H.5.6 At least one pull down bench shall be provided in general shower area.



SPECIAL INTERIOR FEATURES

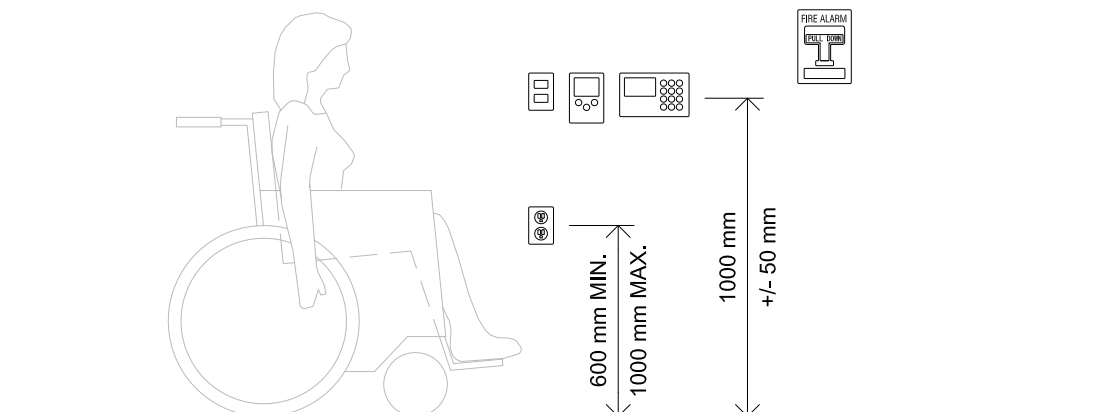
This section covers:

- I.1. Controls
- I.2. Faucets
- I.3. Counters
- I.4. Furniture
- I.5. Drinking fountains
- I.6. Public communications and Alarms
- I.7. Self-Service Machines
- I.8. Assistive listening devices
- I.9. Signage
 - Lettering and numbers for visual signs
 - Location of signs
- I.10. Pay telephones
- I.11. Exhibits / displays

I.1. CONTROLS

The design and location of controls is essential to accommodate people with limited mobility. Controls should be *accessible* to everyone that needs to use them. The controls referred to in this section include light switches, electrical outlets, thermostats, intercoms and fire alarms.

- I.1.1 Controls shall be installed 1000 +/- 50 mm above the floor, except fire alarm pull stations which are to be installed as per the most recent CSA standard.



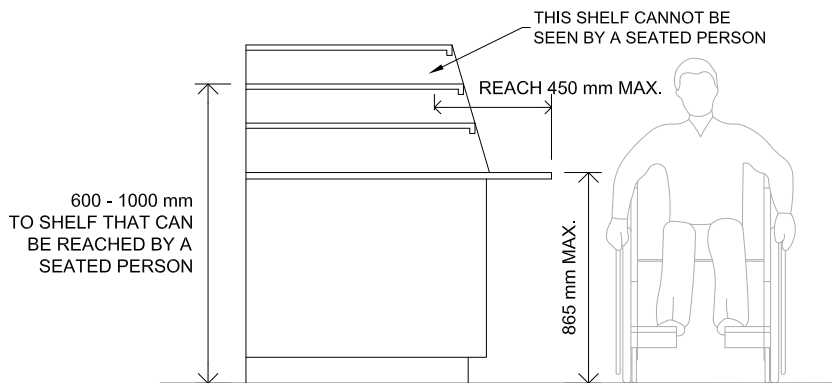
- I.1.2 Rocker-type light switches shall be used.
- I.1.3 Electrical outlets shall be mounted between 600 mm and 1000 mm above finished floor measured to the centre line of the outlet.

I.2. FAUCETS

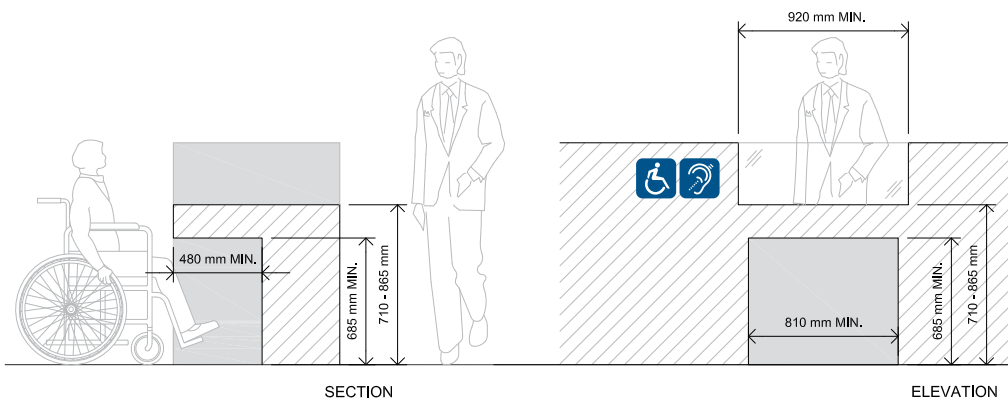
- I.2.1 Automatic (preferred) or lever-type faucets shall be used.

I.3. COUNTERS

- I.3.1 All products in a self-serve counter shall be within 450 mm from the edge of the counter and between 600mm and 1000 mm above the floor.



- I.3.2 Counters that serve the public shall contrast in colour /tone from their surroundings, and surfaces shall have a *non-glare finish*.
Explanation: *Colour contrast* and *non-glare finishes* can help people with vision loss to locate and use counters.



- I.3.3 Where a glass partition separates customers from the service personnel at a counter, a speaker system and an *assistive listening device* (e.g. an *induction loop system*, a *FM radio frequency system* or *infrared system*) shall be installed.
- I.3.4 Design consideration shall be made for having *barrier-free* sections for staff in all counters that serve public.
- I.3.5 Counters equipped with *induction loops* shall include the internationally recognized symbol.

I.4. FURNITURE

- I.4.1 Dining tables shall have a minimum clearance of 720 mm from finished floor to the underside of tabletop, with a clear minimum depth of 485 mm under the table.

Explanation: Dining tables with these dimensions provide adequate knee space for wheelchair users. A variety of dining table heights is encouraged that will allow some wheelchair users to use higher tables, as there are a variety of mobility devices available.

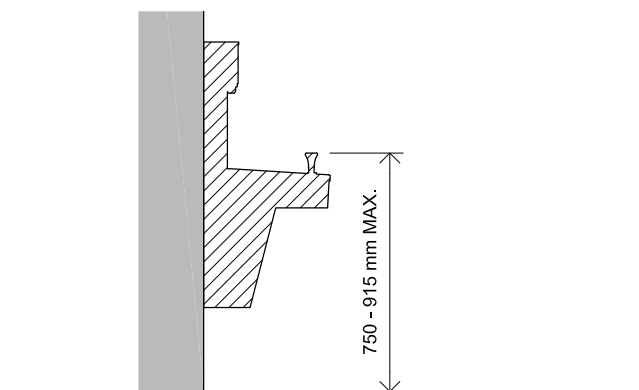
- I.4.2 Tables on raised platforms are not preferred, but if it is required then a minimum of 50% shall be *barrier-free accessible*.

Explanation: Tables on raised platform impede access for wheelchair users and people with other mobility issues.

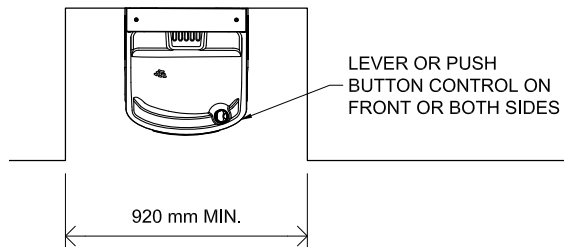
- I.4.3 Furniture design and placement in a room shall accommodate an 1800 mm clear turning diameter between the entrance and furniture when people are seated. A minimum clear space of 920 mm shall be provided behind occupied chairs at tables.

I.5. DRINKING FOUNTAINS

- I.5.1 In each water fountain location, a water bottle filling station or combination fixture shall be provided.



- I.5.2 In each location where a drinking fountain or fountains are installed, one fountain shall:
- have a spout opening between 750 mm and 915 mm above the finished floor, and
 - have lever or push controls located either on the front or on both sides.
- I.5.3 Where the drinking fountain is located in an alcove:
- the alcove shall be not less than 920 mm wide, and
 - the fountain shall be wall-mounted with clearance beneath the drinking fountain.
- I.5.4 Where a drinking fountain projects more than 100 mm into the *barrier-free path of travel*, this shall be designed to extend to within 200 mm from the floor for the entire length of the obstruction, in order to be *cane detectable*.



I.6. PUBLIC COMMUNICATIONS AND ALARMS

It is important that buildings are simple to navigate and encourage opportunities for people to connect and interact within them. This is especially true for people with *disabilities*.

- I.6.1 Whenever audible public communication is provided (e.g. narrated videos on screens or announcements on speakers), the same information should be provided visually by *closed captioning* or digital signage.
- I.6.2 Visual signal devices for fire alarm systems shall be installed so that the signal from at least one device is visible throughout all normally occupied floor areas (including washrooms).



I.7. SELF-SERVICE MACHINES

- I.7.1 When self-service machines are provided, at least 10% shall be *barrier-free*, with a minimum of one *barrier-free* self-service machine that complies with the following:
- The highest operable part of a self-service machine shall be 1000 +/- 50 mm above the finished floor.
 - The knee space below a self-service machine shall be no less than 700 mm high x 500 mm deep.
- I.7.2 Text and audio messages shall be installed in interactive transaction machines, such as point-of-sale machines.

I.8. ASSISTIVE LISTENING DEVICES

- I.8.1 An *assistive listening system*, preferably *induction loop system* shall be installed at all information and transaction counters.



Explanation: Many people who use hearing aids have difficulty functioning in noisy environments, especially when the speakers are at a distance. Many systems are available that can overcome the combined problems of distance and background noise. *FM radio frequency, infrared* and *induction loop systems* are examples of *assistive listening systems*. All three of these systems assist people who require aid in hearing, without disturbing the listening enjoyment of other people.

- I.8.2 Signage with the symbol for *assistive listening device* shall be provided. Reference to the T-switch shall also be made on the sign where *infrared* or *induction loop systems* are provided.

I.9. SIGNAGE

Signs and symbols are an essential consideration when designing spaces for people to navigate. Good signage provides people with cognitive and sensory challenges direction to a variety of services and spaces. Tactile maps and audio map systems are helpful for people with vision loss. Good locations for these include public parks, exterior *pathways*, sidewalks or in the lobbies of buildings. These maps enable users with vision loss to identify their location and to get an accurate sense of distance and direction. Tilted directional maps allow wheelchair users to read and use these easily. In addition to this Guide, it is recommended that Canadian National Institute for the Blind (cnib) standards for contrasts, colours, fonts and text sizes (mix of upper and lower case letters) as per the *cnib's Clear Print Guide* and the Canadian Standards Association (CSA) B651-12 be consulted for the design and placement of signage.

- I.9.1 The international symbols of access shall be used to identify all *barrier-free amenities* within a building.

Explanation: Use of the international symbols of access ensures signage can be understood by all.

[Refer to Appendix B for City of Edmonton symbols.](#)



- I.9.2 Various forms of communication shall be provided (e.g. visual cues, auditory cues, large print information sheets, ambassadors/guides etc.) or shall be available upon request.
- I.9.3 The level of illumination on signs shall be at least 200 lux.
- I.9.4 Provide clearly labeled signage for dedicated sharp disposal units that are available.
- I.9.5 Locker identification lettering shall be raised from the locker surface with *colour contrast*.

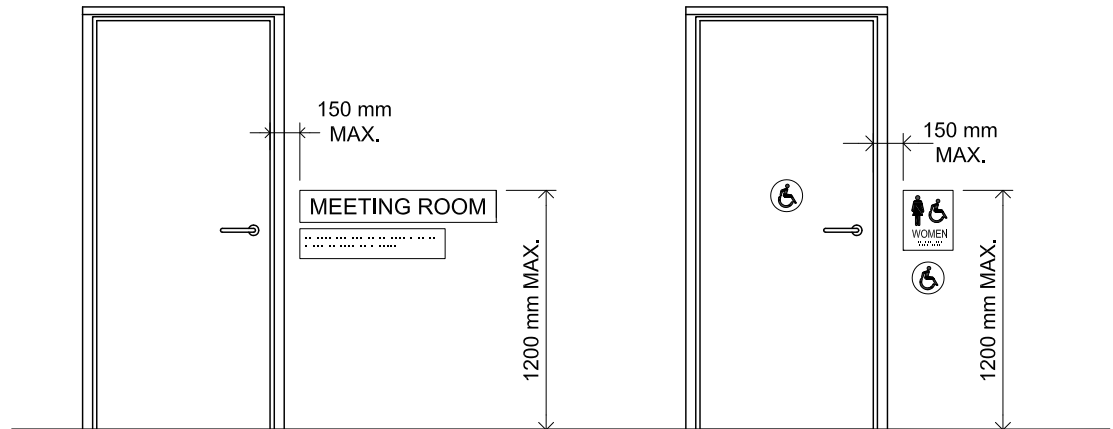
Lettering and numbers for visual signs

- I.9.6 Washrooms, kitchens, stairwells, print/copy rooms and bookable spaces that can be booked through The City of Edmonton shall provide tactile signage, including door room names and numbers conforming to *cnib's Clear Print Guide*.
- I.9.7 Lettering and numbers shall have a width-to-height ratio between 3:5 and 1:1, and a stroke-width-to-height ratio between 1:5 and 1:1.
- I.9.8 The character height of letters and numbers shall be relative to the intended viewing distance as per CAN/CSA B651-12.
- I.9.9 Ensure that safety is promoted by providing informative signage in multiple formats. (e.g. direction and safety information).

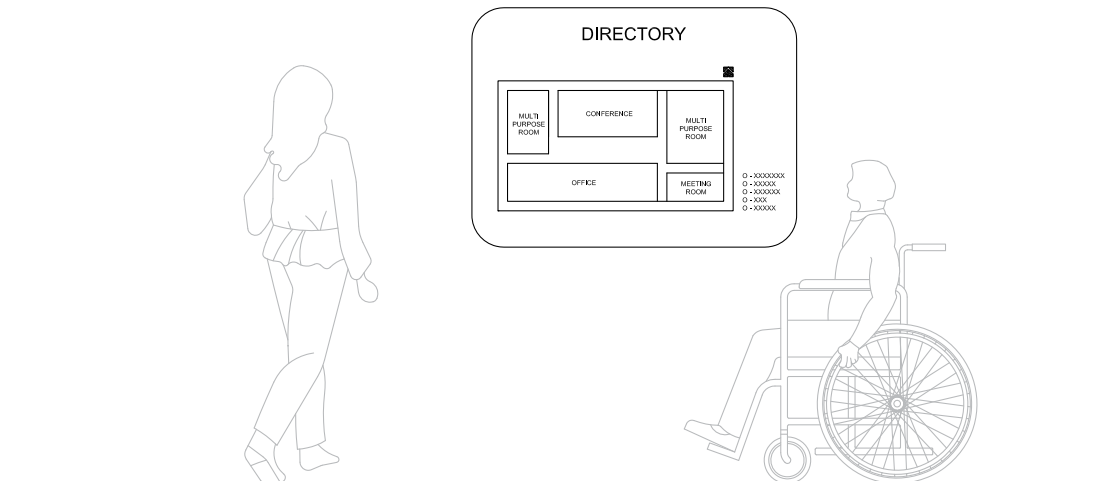


Location of signs

- I.9.10** Signage shall be located near the entrance of all buildings and along the route to direct people upon entering and navigating through the building. Include a tactile directory / map at all main entrances. Clear way finding shall be provided to the designated service area(s).



- I.9.11** Directional signs with the international symbols of access shall be used at focal points on main traffic routes.



I.10. PAY TELEPHONES

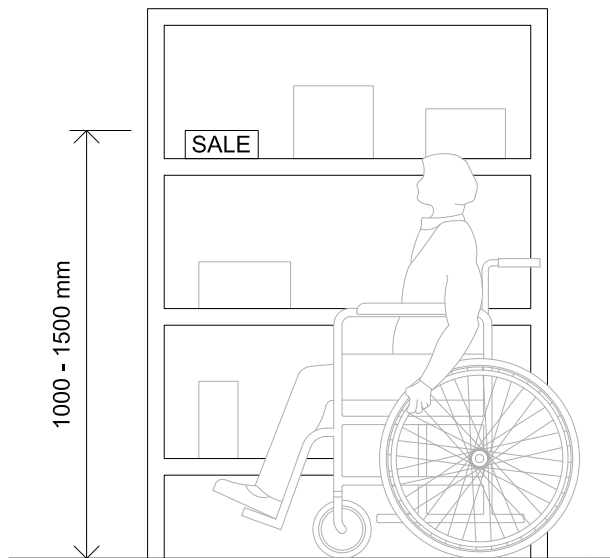
- I.10.1** Where pay telephones are installed, at least one shall be *accessible* to people in wheelchairs and have variable volume control and includes *TTY* (*teletypewriter*).
- I.10.2** *Barrier-free* pay telephones and *TTY* shall be identified with the associated international symbols.

- I.10.3 The length of the cord from the telephone to the handset shall be a minimum of 1000 mm.
- I.10.4 There shall be 800 mm clearance from the floor surface to the underside of any telephone enclosure or shelf with a minimum clear floor space of 800 mm in front of a telephone.

I.11. EXHIBITS / DISPLAYS

It is essential that exhibits, displays and their labels shall be placed at an elevation that makes viewing comfortable and possible for all visitors.

- I.11.1 Exhibit displays shall be supplemented with tactile signage conforming to *cnib's Clear Print Guide*.
Explanation: Exhibition areas should be *barrier-free*, or an alternative method of interpreting the message should be provided, such as audio-visual presentations, large print text and/or tactile signage.
- I.11.2 Displays and labels shall be located between 1000 mm and 1500 mm above the finished floor surface or ground level.



- I.11.3 Labels on horizontal surfaces higher than 1200 mm shall be tilted to allow for better viewing.
- I.11.4 Display lighting fixtures shall be designed and located to minimize glare and reflection.
- I.11.5 Table displays shall be located between 1100 mm and 1300 mm above the finished floor.
- I.11.6 Wall-mounted displays shall be located between 1200 mm and 1500 mm above the finished floor or ground level.



J INCLUSIVE DESIGN FOR DWELLING UNITS

It is essential that residential *suites*, including single and multifamily homes, are livable for all people, regardless of their mobility. A universal home allows people to move around and live without any restrictions within their space. A universal home should be flexible enough to accommodate people with all types of abilities, and provide a diverse comfort level for any of its occupants and visitors. STANDATA 06-BCI-010 defines 'adaptable' as a dwelling unit that "has been designed to allow it to be altered to make the unit consistent with the principles of *barrier-free design*".

In partnership with the City of Edmonton and Age-Friendly Edmonton, "*Home for Life*" has emerged as an initiative leading the way for life-long residential home design. Through advocacy, education, and technical leadership, *Home for Life* provides home-owners and builders with a framework for designing homes that are aesthetically pleasing and remain functional and *barrier-free* through all stages and ages, Edmonton's Zoning Bylaw also includes *Section 93: Inclusive Design*, which sets out regulations to achieve *accessible* design. These regulations mirror the requirements of the *Home for Life* initiative. Homes that meet these requirements can benefit from parking reductions.

[Refer to homeforlife.ca and Edmonton's Zoning Bylaw Section 93: Inclusive Design for more details.](#)

This section covers:

- J.1. General
- J.2. Entryways
- J.3. Bedrooms
- J.4. Kitchens
- J.5. Bathrooms
- J.6. Common and in-*suite* laundry rooms
- J.7. Alarms

J.1. GENERAL

- J.1.1 Automatic or lever faucets shall be used in all *barrier-free* dwelling units.
- J.1.2 Audio wall thermostats shall be installed in designated units for people with vision loss.
- J.1.3 Window operator hardware shall be installed within 450 mm forward reach of a wheelchair user.

J.2. ENTRYWAYS

- J.2.1 *Accessible* closet spaces for outerwear and shoes shall be provided.
- J.2.2 Closets shall have doors with D-shaped handles.

J.2.3 Closet rods shall be 1000 +/- 50 mm above the finished floor.

J.2.4 Closet shelves shall be 1200 mm above the finished floor.

J.3. BEDROOMS

J.3.1 If shelves are provided inside the bedroom closet, they shall be provided and mounted between 400 mm and 1200 mm above the finished floor.

J.3.2 Telephone jacks shall be installed between 450 mm and 1200 mm above the finished floor.

J.3.3 Closets shall have a clear opening of minimum 850 mm, with a 1500 mm turning diameter in front.

J.3.4 If using a sliding closet door, D-shaped handles are required.

J.3.5 Closet rods to hang clothing shall be provided at 1200 mm high.

J.3.6 A minimum 920 mm clearance on both sides and at the foot of the bed shall be provided.

Explanation: 920 mm wide clearance ensures a *barrier-free* path of travel.

J.4. KITCHENS

J.4.1 A *barrier-free* oven with a door that opens toward the side, where the bottom of the door is mounted between 400 mm and 860 mm above the finished floor shall be installed.

J.4.2 The refrigerator door shall swing 180 degrees.

J.4.3 Side-by-side fridges or bottom mount freezers shall be provided.

J.4.4 Space for a microwave shall be provided at counter height with knee space below, or in a shelf located so that the microwave door will be between 400 mm and 860 mm above the finished floor.

J.4.5 Electrical outlets and light switches shall be located at the front of counters. This ensures that important controls will be at an appropriate height for wheelchair users.

J.4.6 A work surface on at least one side of the cooktop, sink, dishwasher and oven shall be provided.

J.4.7 Cabinet and drawer pulls shall be provided with D-shaped handles and shall be of a contrasting colour to the cabinet surface.

J.4.8 Drawers with full extension slides shall be installed.

J.4.9 Lighting shall be installed under upper cabinets to reduce shadows and glare. This lighting shall be on a separate switch from the general lighting in the kitchen.



- J.4.10 A heat resistant shelf shall be installed under the oven. The shelf shall be the same width as the oven and pull out at least 250 mm.
- J.4.11 A heat resistant shelf shall be installed under the microwave. The shelf shall be the same width as the microwave and pull out at least 250 mm. Additional counter or shelf space must be provided to allow food items to be removed from the microwave safely.

J.5. BATHROOMS

- J.5.1 An adjustable mirror that is not less than 610 mm wide shall be provided.
- J.5.2 If provided, curbless roll-in showers shall be 1220 mm deep.
- J.5.3 The counter shall *colour contrast* with the wall background.
- J.5.4 The lavatory counter shall be a minimum of 915 mm wide and a maximum of 610 mm deep.
- J.5.5 Toilet flush handles shall be installed on the mount/ dismount side of the toilet.
- J.5.6 Toilet paper dispenser, towel bar and light switches shall *colour contrast* with the background finish and be installed in accordance with this guide.
- J.5.7 Towel bars shall be installed not more than 1100 mm above the finished floor and must be within a clear reach of 450 mm from where a wheelchair can be positioned.
- J.5.8 Before installing a bathtub, a floor drain for a curbless shower shall be installed underneath. The installation of a floor drain allows for a curbless shower to be installed later, if desired.

J.6. COMMON AND IN-SUITE LAUNDRY ROOMS

- J.6.1 Washer and dryer must have front-mounted controls, with side-hinged doors and door swings of 180 degrees.
- J.6.2 The interior of the dryer shall be illuminated.
- J.6.3 Working spaces shall be 600 mm deep x 765 – 850 mm high, with knee space below to allow wheelchair users the ability to conveniently fold laundry shall be provided in common laundry rooms.
- J.6.4 At least one dryer shall be installed at floor level in common laundry rooms.
- J.6.5 Space shall be provided to store laundry supplies at no more than 1200 mm above the finished floor.

J.7. ALARMS

- J.7.1 Visual and audible signal devices shall be installed for fire alarm systems (when provided), security gate indicators (when provided) and doorbells.



MAINTENANCE GUIDE

SECTIONS K-L

K EXTERIOR MAINTENANCE

[For additional information refer to City of Edmonton's 'Winter Design Guidelines'.](#)

This section covers:

- K.1. General site and park maintenance
 - Grass areas and walkways
 - Outdoor furnishing
 - Park Amenities
 - Playground and park equipment
 - Lighting and electrical fixtures
- K.2. Parking and facilities
 - Parking lots and access
 - Passenger loading zones
 - Exterior waiting and seating areas

K.1. GENERAL SITE AND PARK MAINTENANCE

- K.1.1 Adhere to ISO 14001 certified environmental management system for environmental management system for neighborhoods, parks and community recreation branches including agreement with environmental regulations.
- K.1.2 Maintain the following programs / initiatives:
 - Partners in parks
 - Parks & river valley conservation
 - Turf Maintenance
 - Integrated pest management policy
 - Trees & Urban Forestry Management plan
 - Litter Management
 - Graffiti Management
 - Snow removal Maintenance Priority Plan: Snow removal priority shall be given to outdoor parks and buildings frequently used by *seniors*.
 - Primary Sites: High pedestrian traffic areas, major facilities such as arenas, pools, libraries and *senior centres*.
 - River Valley parks and paved *trails*
 - Walkways and connector routes in residential areas

There shall be a snow removal plan to ensure pedestrian routes are *accessible* during winter months. Best practice states that snow removal will occur within 24 hours of snowfall, where possible.

Grass areas and walkways

- K.1.3 Grass areas shall be mowed, trimmed and shall be maintained free of litter, debris and trip hazards.
- K.1.4 Walkways shall have unobstructed *accessibility* and be maintained to have a uniform level surface free of litter, debris and trip hazards.
- K.1.5 Walkways shall be neatly edged; shall be clear of weeds and grass growth in cracks and expansion joints.
- K.1.6 *Pathways* shall not be obstructed by overgrown plants.

Outdoor furnishing

- K.1.7 Ensure hardware and bracing of all benches and tables are intact and remains properly installed / connected. Ensure Nails, bolts and screws are flush with the surface.
- K.1.8 All seating surfaces shall be clean, smooth, and free of protrusions or pointed corners. Ensure armrests are stable and seating surfaces remain undamaged.
- K.1.9 Trash receptacles shall be provided in seating areas to prevent littering and trip hazards. Area around trash receptacles shall be maintained clean and free of trash and debris. Regular pickups shall be arranged to ensure that odor and debris is managed to make it pleasant for park users.
- K.1.10 Seating including raised planting box seating shall not be obstructed by overgrown plants.

Park amenities

- K.1.11 Entryways to all *amenities* shall be free of debris. Ensure a *barrier-free* approach to shelters and picnic areas.
- K.1.12 Support natural features utilized as awnings for outdoor shelters by properly pruning them so they do not overgrow and become potential hazards.
- K.1.13 Regularly make sure all changerooms, public toilets, lavatories and stall hardware are functional and sanitary. Cleaning products should be non-toxic and slip resistant to ensure they are not hazardous to those with *mobility aids* or chemical sensitivities.
- K.1.14 Sharps disposal units shall be emptied regularly and appropriately.
- K.1.15 Uphold the quality of outdoor splash park decks and water play areas. Play surfaces and the surrounding area shall remain solid, slip-resistant and free of any potential trip hazards.



Playground and park equipment

- K.1.16 Keep park and playground equipment (e.g. outdoor fitness) and elements (e.g. chess tables) free of obstructions and potential trip hazards.
- K.1.17 Conduct regular safety checks to make sure park and playground equipment remains structurally sound and safe for all users.

Lighting and Electrical fixtures

- K.1.18 Ensure electrical systems and components are operational and timers are properly set to ensure safety. A minimum of 90% of lamps must be operational.
- K.1.19 Fixtures shall be adjusted to eliminate dark or blind spots.
- K.1.20 All signage shall be clearly visible and maintained.
- K.1.21 Verify all emergency lighting is functional and properly responds in emergency situations.
- K.1.22 Ensure regular inspections are conducted to ensure security amenities used in outdoor spaces including security cameras, bike lockers / racks and day lockers are functional.
- K.1.23 Recharging stations for *mobility aids* in outdoor shelters shall be functional.



K.2. PARKING AND SUPPORT FACILITIES

Parking lots and access

- K.2.1 Building Operator should complete frequent assessments, report any hazards (e.g. pot holes) and maintain area in and around parking lots to ensure they are free of obstructions.
- K.2.2 Support the ease of access to and from well-maintained parking lots year-round, including removal of debris, snow and other potential trip hazards preventing safe travel in and out of parking lots.
- K.2.3 *Pathways* between parking lots and EPark machines shall be maintained free of trip hazards and obstructions.
- K.2.4 Maintain surfacing to properly drain after rainfall or melted snow to prevent flooding.
- K.2.5 Ensure signs, areas around signs and parking lot markings are visible, clear of debris and well lit at all times.
- K.2.6 Verify all lighting is functional and distributing light effectively.
- K.2.7 Repair emergency phones at park nodes in the River Valley and ensure emergency contact information is clearly visible and legible.

Passenger loading zones

- K.2.8 Repair *curb ramps* when required and ensure tactile warning surface remains intact.
- K.2.9 Pedestrian crosswalk markings and signs shall be maintained to be visible and clear.

Exterior waiting and seating areas

Refer to 'Outdoor furnishing' in section K.1



L INTERIOR MAINTENANCE

This section covers:

- L.1. Public facilities
- L.2. Washrooms
- L.3. Furniture
 - Seating
 - Tables
 - Garbage Receptacles
- L.4. Lighting

L.1. PUBLIC FACILITIES

- L.1.1 Ensure doorways, corridors, floor surfaces and passages are clear and free of debris, obstructions or potential trip hazards.
- L.1.2 Ensure signs leading to *barrier-free* entryways are visible and clear.
- L.1.3 Regular inspections shall be conducted to ensure security *amenities* provided to store *mobility aids* are functional.
- L.1.4 In assembly buildings, ensure seating is clear and free of debris and a clear path of travel is maintained to access the seating area. Ensure seat handles are stable and anti-slip surfaces remain undamaged.
- L.1.5 Signs leading to priority seating areas shall be maintained visible and clear.
- L.1.6 Flexible furniture in activity rooms shall be kept clean and functional.
- L.1.7 Ensure warm pools are properly functioning including maintaining the appropriate temperature and chemical levels.
- L.1.8 Use chemicals for cleaning that are non-toxic and gentle on the skin for those with sensitivities.
- L.1.9 Ensure lane markings on walking/running tracks are clear and visible.
- L.1.10 Support the use of *age-friendly* fitness equipment (active and passive) by ensuring equipment is in good working condition and properly cleaned with non-toxic cleaning agents for users with skin sensitivities.

L.2. WASHROOMS

- L.2.1 Washrooms shall be kept clean and sanitary. Use cleaning products which are non-toxic and slip resistant to ensure they are not hazardous to those with *mobility aids* or chemical sensitivities.
- L.2.2 Washrooms shall have clean trash receptacles and properly stocked with paper products.

- L.2.3 Ensure lighting and ventilation systems are operational. Toilet, water faucets, stall / washroom door locks, and hand dryers shall be operational.
- L.2.4 Washroom doors have clear signage and maintained free of graffiti.

L.3. FURNITURE

Seating

- L.3.1 Ensure hardware is intact, remains properly installed and bracing is tightly connected. Nails, bolts and screws shall be flush with the surface and slats shall be smooth and structurally sound. Ensure armrests are stable.
- L.3.2 Seating surface and backing shall be kept clean, smooth, free of protrusions and shall not have any sharp or pointed corners.
- L.3.3 Clean trash receptacles in good condition shall be present in seating areas.

Tables

- L.3.4 Tables shall be kept clean and smooth without protrusions, exposed sharp edges or pointed corners.
- L.3.5 Ensure table frame and hardware are intact and slats properly secured.

Garbage receptacles

- L.3.6 Receptacles shall be cleared out regularly to avoid overflowing of garbage.
- L.3.7 Area around receptacles shall be maintained free of garbage and debris.

L.4. LIGHTING

- L.4.1 Electrical systems and components shall be operational. Ensure lighting fixtures are functional and cleaned on a regular basis.
- L.4.2 No electrical conducting wires shall be exposed.
- L.4.3 Ballast boxes and components shall be properly installed and secured.
- L.4.4 Timers shall be properly set for specific hours of operation to ensure safety and to indicate when occupancy should occur.



APPENDIX A – REFERENCE DOCUMENTS

Accessible Design for the Built Environment published by The Canadian Standards Association B651-12 (R2017). To purchase the document use the link:

https://store.csagroup.org/ccrz__ProductDetails?viewState=DetailView&cartID=&sku=2702123

Accessible Temporary Events, A Planning Guide by NC State University The Center for Universal Design

https://coloradosprings.gov/sites/default/files/ada_planning_guide.pdf

Alberta Building Code by National Research Council Canada latest edition. To purchase the document use the link:

www.nrc-cnrc.gc.ca/eng/publications/codes_centre/2014_alberta_building_code.html

Barrier-Free Design Guide latest edition, an Alberta Government publication by Safety Codes Council. For purchase of the Guide, visit

www.safetycodes.ab.ca/Public/Pages/Publications.aspx

Breathe: Edmonton's Green Network Strategy by City of Edmonton

www.edmonton.ca/city_government/initiatives_innovation/breathe.aspx

City Design and Construction Standards by City of Edmonton

www.edmonton.ca/city_government/urban_planning_and_design/city-design-construction-standards.aspx

City of Edmonton Playground Equipment Standard

https://www.edmonton.ca/city_government/documents/The_City_of_Edmonton_Playground_Equipment_Standard_2016.pdf

City Policy C463: Accessibility to City of Edmonton Owned and Occupied Buildings

www.edmonton.ca/city_government/documents/PoliciesDirectives/C463.pdf

City Policy C466: Integration of Persons with Disabilities

www.edmonton.ca/city_government/documents/PoliciesDirectives/C466.pdf

City Policy C573A: Complete Streets

www.edmonton.ca/city_government/documents/PoliciesDirectives/C573A.pdf

City Policy C576: Light Efficient Community Policy
www.edmonton.ca/transportation/PoliciesDirectives/C576.pdf

Clear Print Accessibility Guide by cnib
<https://cnib.ca/sites/default/files/2018-07/CNIB%20Clear%20Print%20Guide.pdf>

Clearing Our Path: Creating Accessible Environments for People with Vision loss by cnib
www.clearingourpath.ca/8.0.0-design-needs_e.php

Complete Streets Design and Construction Standards
https://www.edmonton.ca/city_government/documents/PDF/CompleteStreets_DesignStandards_Sept2018.pdf

Designing New Neighbourhoods Guidelines for Edmonton's Future Residential Communities
www.edmonton.ca/city_government/documents/PDF/Designing_New_Neighbourhoods_Final.pdf

Downtown & The Quarters Downtown Streetscape Design Manual

Edmonton Main Streets Guidelines by City of Edmonton
www.edmonton.ca/city_government/documents/RoadsTraffic/MainStreet_Guidelines_Feb2016.pdf

Edmonton's Transit Strategy
https://www.edmonton.ca/documents/RoadsTraffic/Transit_Strategy_June-29-2017.pdf

Geometric Design Guide for Canadian Roads by Transportation Association of Canada
www.tac-atc.ca/en/publications-and-resources/geometric-design-guide-canadian-roads

Home for life
www.homeforlife.ca

Inclusive Design: Edmonton Zoning Bylaw 12800 Section 93 bylaws 15998 and 18171

http://webdocs.edmonton.ca/InfraPlan/zoningbylaw/ZoningBylaw/Part1/Special_Land/93._Inclusive_Design.htm

LRT Design Guidelines – City of Edmonton

www.edmonton.ca/documents/RoadsTraffic/2017LRTDesignGuidelines.pdf

Procedures for On-Street Construction Safety by City of Edmonton

www.edmonton.ca/documents/ConstructionSafety.pdf

Sledge Hockey Accessibility: Design Guidelines for Arenas as recognized by Hockey Canada published by Canadian Recreation Facilities Council.

https://cdn.hockeycanada.ca/hockey-canada/Hockey-Programs/Sledge/Downloads/sledge_arena_guidelines_e.pdf

Transit Design Guidelines

(Can be obtained from City of Edmonton Project Manager)

Transit Oriented Development Guidelines by City of Edmonton

www.edmonton.ca/city_government/documents/PDF/C565_TOD_Guidelines.pdf

Vision for an Age-Friendly Edmonton Action Plan facilitated by Edmonton Seniors Coordinating Council and published by City of Edmonton

www.edmonton.ca/city_government/documents/PDF/Final-Final_Seniors_council_plan_May26.pdf

Winter Design Guidelines: Transforming Edmonton into a Great Winter City by City of Edmonton

www.edmonton.ca/city_government/documents/PDF/WinterCityDesignGuidelines_draft.pdf

APPENDIX B – CITY OF EDMONTON SYMBOLS



Women Men Unisex Accessible Women Accessible Men Accessible Unisex Accessible Family



Dogs On-Leash Dogs Off-Leash Boat Launch Ramp Hand Launch Kayaking Canoeing Tour Boat Fishing Area



Sportsfield Golf Playground Viewing Area Hiking Trail Bicycle Trail Skateboarding In-Line Skating



Horse Trail Stable Open Fire Permitted Stairs Winter Recreation Area Snowshoeing C.C. Ski Trail Ice Skating



Snack Bar Restaurant Drinking Fountain Parking Bus Light Rail Point of Interest Ahead on Trail



Park Pavilion* Picnic Site Covered Picnic Site Sledding Downhill Skiing Information



Fishing Pier Wading Swimming Slope Indication* Emergency Phone* Defibrillator



Exercise Fitness Area Tennis Baseball



Numbers

GLOSSARY

TERM	DEFINITION
Accessibility	A concept integral to human rights that refers to the absence of barriers that prevent individuals and/or groups from fully participating in all social, economic, cultural, spiritual and political aspects of society. The term is often linked to people with disabilities and their rights to access, and also refers to universal design characteristics of products, devices, information, programs, services, infrastructure that enable independent use, or support when required, and access by people with a variety of disabilities.
ADA	The Americans with Disabilities Act of 1990 prohibits discrimination and ensures equal opportunity for persons with disabilities in employment, state and local government services, public accommodations, commercial facilities, and transportation. www.ada.gov provides information and technical assistance on the ADA, including the 2010 ADA Standards for <i>Accessible Design</i> .
Age-friendly	In an age-friendly community, policies, services and structures related to the physical and social environment are designed to support and enable older people to “age actively”.
Amenities	Washrooms, rooms for public use, bus stops, play grounds, picnic areas, day lockers, bike lockers and / or racks, etc.
Assistive listening devices	Devices that may amplify sound and transmit audio information. The overall goal is to improve the sound to noise ratio and assist a deaf or hard of hearing person in receiving audio content. Assistive listening devices may include FM systems, infrared systems, and induction loop systems. Each system has its own strengths and best-case scenarios for application.
Barrier-free	Absence of obstacles, allowing persons with physical, cognitive or sensory impairments safer or easier access to <i>pathways</i> , open spaces, amenities, facilities, services or activities.
Barrier-free path of travel	A path of travel is an interior or exterior path a person might reasonably be expected to move through to get from one point to another. A <i>barrier-free path of travel</i> is one that is designed to accommodate all users.

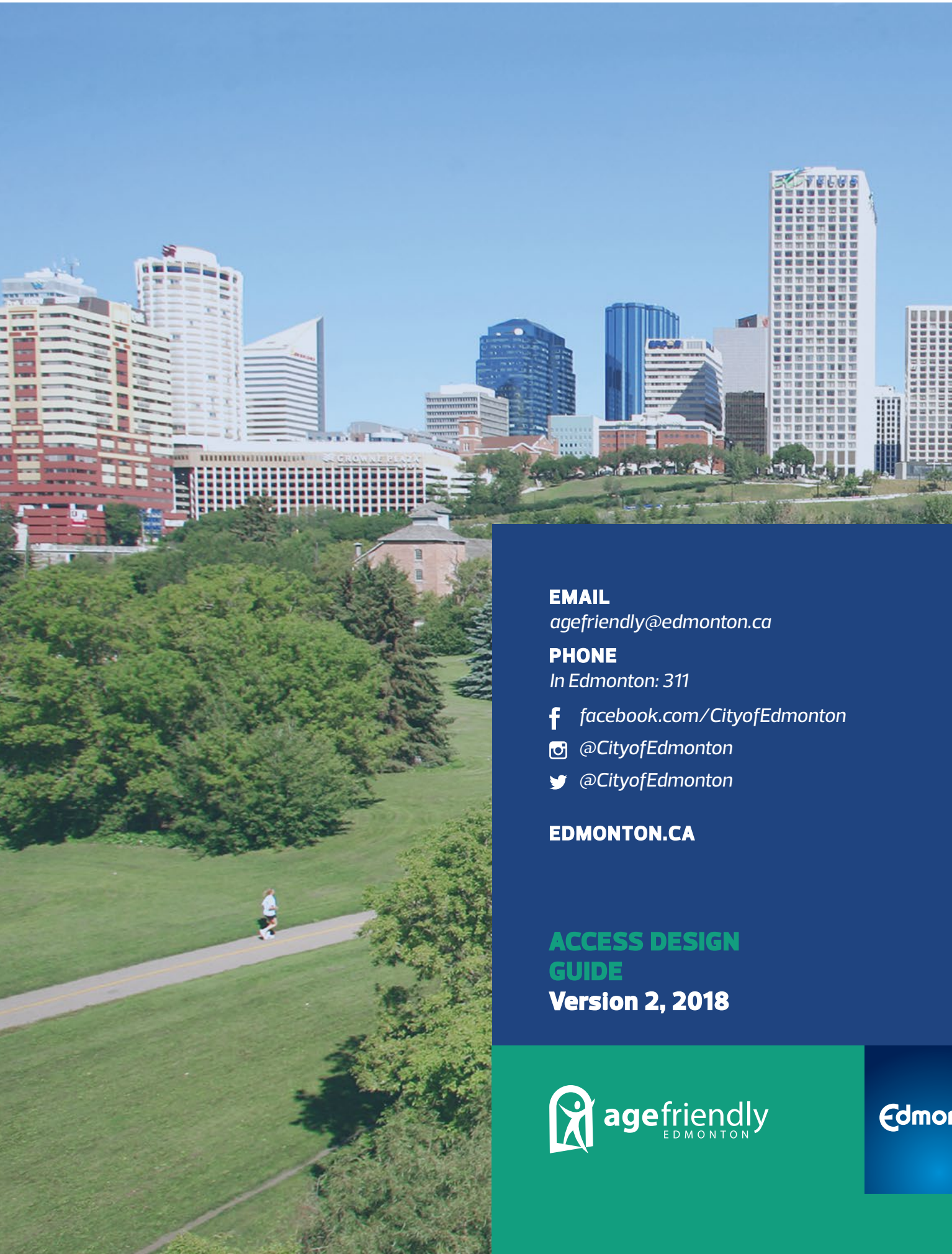
TERM	DEFINITION
Cane detectable	An object that protrudes from walls or freestanding supports by more than 100 mm can be said to be cane detectable when it is located 680 mm above the walking surface, or below this level. If an object protrudes at a level higher than 680 mm and below 2030 mm, it can be made cane detectable if there is a railing, planter, or other cane detectable barrier placed at or below 680 mm from the walking surface.
Clearing our Path	The CNIB online document “Clearing Our Path” provides information on creating <i>accessible</i> environments for people with vision loss. This second edition of “ <i>Clearing Our Path</i> ” is enhanced with new research, new international standards and new technology advancements. See Appendix for a link to the document.
Closed captioning	A process of displaying text on a screen or visual display to provide someone who is Deaf or hard of hearing with audio content that they would otherwise be unable to access. Closed captioning may also include descriptions of non-speech elements.
Colour contrast	The degree of difference between one colour and another on the colour wheel. The more visually different the colours, the greater the contrast.
Community park	Community parks are the basic units of the park system. They are intended to be frequent in the landscape, and flexible enough in programming to meet the social and recreational needs of most people in their catchment area. Some community parks are co-located with Community leagues or schools (usually elementary schools) and may be managed under a joint-use agreement or occupancy license.
Curb ramp	A solid (usually concrete) ramp graded down from the top surface of a sidewalk to the surface of an adjoining street.
Disability	An umbrella term covering impairments, activity limitations, and participation restrictions which can also be due to age. Thus disability is a complex phenomenon, reflecting an interaction between features of a person's body and features of the society in which he or she lives.

TERM	DEFINITION
District park	District parks are designed to meet the needs of multiple communities, such as a City quadrant or collection of neighborhoods under an Area Structure Plan. They may be more specialized than community parks, but may also provide multifunctional amenities. Some district parks contain unique attractions (e.g. Argyll Park Velodrome, Muttart Conservatory). The size and programming depends on the community where they are located, and the provision of amenities in the larger community.
FM radio frequency system	Frequency Modulation (FM) systems transmit sound on a specific frequency. The transmission is received by a small device that can be connected directly to a person's hearing aid via a Direct Audio Input. FM systems are generally used for large public facilities, such as airports and other transport terminals. When clearly marked, the FM broadcast area provides the traveler with an easily located listening zone so all information, especially important announcements, is readily available.
Guy-wire	A tensioned cable designed to add stability to a freestanding structure.
Inclusive fitness equipment	Equipment that enables people with various ability, including seniors, to benefit from a full body, cardiovascular and resistance based workout.
Induction loop system	Induction loop systems work with hearing aids. An induction loop wire is permanently installed, (typically under flooring or in the ceiling), and connects to a microphone used by a speaker. The person talking into the microphone generates a current in the wire which creates an electromagnetic field in the room. The hearing aid telecoil picks up the electromagnetic signal when the T-switch is turned on. The volume of the signal is managed through the hearing aid volume control setting. Hearing loops provide the benefit of individual not requiring to request or wear any additional equipment.

TERM	DEFINITION
Infrared system	<p>Instead of using sound frequencies, infrared technology uses infrared radiation to deliver sound from a transmitter to the hard of hearing or deaf person. The hard of hearing person wears a receiver or headset which works in conjunction with a loop or a T-switch in his/her hearing aid. The infrared signal will not transmit to the listener through walls or when the signal is interrupted by a moving object or person. Infrared systems are suitable for listening in both large and small groups while watching TV, listening to the radio, in meetings or other public venues. Both FM and infrared systems are available as personal listening devices, or may be provided in public venues such as meeting rooms, lecture halls, places of worship and theatres. The infrared rays are contained within an enclosed space in which they are being used for transmission. Infrared systems should be shielded from the sun to avoid a decrease in transmission strength.</p>
Metropolitan park	<p>Metropolitan parks are large feature parks intended to provide value to residents and visitors throughout Edmonton and the greater metro region. Metropolitan parks have a variety of functions and uses, but usually contain features and amenities that are not available elsewhere in the City.</p>
Open space	<p>An area of outdoor land (hard or soft surface) or water that is publicly owned or publicly <i>accessible</i>, including municipal parks, civic spaces, provincial or federal parkland, institutional campuses, and other public spaces.</p>
Pathway	<p>A path which follows routes independent of motor vehicle roadways, sidewalks and bike lanes, intended for use by pedestrians and other non-motorized modes of travel.</p>
Pocket park	<p>Pocket parks are small open spaces meant to serve the nearby neighbourhood and may contain only one <i>amenity</i> or serve one of the functions of open space (e.g. a playground, adult fitness, or seating area).</p>

TERM	DEFINITION
Principles of universal design	<p>The concept of universal design was developed by Ronald Mace, the founder and former program director of The Center for Universal Design at North Carolina State University. Universal design can be thought of as a living, evolving approach to design that considers the varied abilities of users. A working group comprised of architects, product designers, engineers and environmental designers defined seven principles of universal design in 1997. The seven principles are:</p> <ol style="list-style-type: none"> 1. Equitable Use: The design is useful and marketable to people with diverse abilities. 2. Flexibility in Use: The design accommodates a wide range of individual preferences and abilities. 3. Simple and Intuitive Use: Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level. 4. Perceptible Information: The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities. 5. Tolerance for Error: The design minimizes hazards and the adverse consequences of accidental or unintended actions. 6. Low Physical Effort: The design can be used efficiently and comfortably with minimum fatigue. 7. Size and Space for Approach and Use: Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.
Seating node	A <i>seating node</i> is a minimum of two benches or equivalent to provide a variety of seating options to accommodate various ability. The options include combination of armrests / armless and backrests / backless.
Senior	Refers to people generally ages 55 years and older.
Senior centre	A type of community centre where older adults can congregate to fulfill many of their social, physical, emotional and intellectual needs.
Suite	A room or series of rooms of similar use, under a single tenancy, and includes residential dwelling units (houses), motel/hotel rooms, stores, offices, etc.

TERM	DEFINITION
<p>Tactile Walking Surface Indicator</p>	<p>Typically a pattern of truncated domes or raised bars on a <i>colour contrasting</i> pane/tile incorporated on walking surfaces to alert people with visual impairment that they are approaching a hazard like change in elevation, end of pavement or beginning of the street. They can be indoors or outdoors and can also be used to provide wayfinding information to the visually impaired.</p>
<p>TTY (teletypewriter)</p>	<p>A device that allows a user to communicate over a phone line by typing a message. This device was formerly known as a TDD, a Telecommunications Device for the Deaf and hard of hearing. The acronym TTY can also refer to a Text Telephone. A TTY is required at both ends of a conversation. If a TTY is unavailable on the receiving end, Telecommunication Relay Services are also available from telephone service providers. A deaf or hard of hearing person, or person with a speech impediment may use a TTY to type their conversation to a relay agent who then reads the typed conversation to the other party. The relay agent then types the other party's spoken words back to the TTY user.</p>
<p>Trail</p>	<p>Granular (rock, shale or gravel) surface designated for pedestrians and/or cyclists.</p>
<p>Wayfinding</p>	<p>Signage, cartographic materials and design techniques that provide information about location, orientation and surroundings in order to support navigation.</p>



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**ACCESS DESIGN
GUIDE**

Version 2, 2018

