



**PUBLIC AGENDA
SASKATOON ACCESSIBILITY
ADVISORY COMMITTEE**

Friday, May 12, 2017, 12:00 p.m.

Committee Room E, Ground Floor, City Hall

Committee Members:

Mr. J.D. McNabb, Chair

Ms. J. Dawson, Vice Chair

Councillor H. Gough

Councillor Z. Jeffries

Ms. M. Baxter

Ms. G. Kozlow

Director of Community Development L. Lacroix

Director of Facilities & Fleet Management T. LaFreniere

Ms. O. Nicholson

Ms. C. Warlow

Pages

1. CALL TO ORDER

2. CONFIRMATION OF AGENDA

Recommendation

That the agenda be confirmed as presented.

3. ADOPTION OF MINUTES

Recommendation

That the minutes of the Regular Meeting of the Saskatoon Accessibility Advisory Committee held on April 21, 2017, be adopted.

4. UNFINISHED BUSINESS

4.1 Request for Funding - Visual Impairment Activity [File No. CK. 1704-5]

At the April 21, 2017 meeting of the Saskatoon Accessibility Advisory Committee, the Committee deferred decision on this matter.

The request for funding from Collette Warlow will be provided at the meeting for review.

Recommendation

That the Committee provide direction.

5. COMMUNICATIONS

6. REPORT OF THE CHAIR

7. REPORTS FROM ADMINISTRATION

7.1 Report of the Access Transit Manager [File No. CK. 225-70]

8. REPORT - Implementation of Accessibility Action Plan (2008) [File No. CK. 225-70] 3 - 75

A copy of the report is provided for the Committee's information.

Recommendation

That the information is received.

9. DOCUMENT - Facility Accessible Design Standards Draft (2012) [File No. CK. 600-7] 76 - 186

A copy of the document is provided for the Committee's information.

Recommendation

That the information be received.

10. MATTERS FOR FOLLOW UP [File No. CK. 225-70] 187 - 194

Recommendation

That the information be received.

11. STATEMENT OF EXPENDITURES [File No. CK. 1704-5] 195 - 195

Recommendation

That the information be received.

12. ADJOURNMENT

2008



Implementation of Accessibility Action Plan

Insightrix Research Inc.
FINAL REPORT
October 2008

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1 Background

The City of Saskatoon has been addressing access issues for persons in need of accessibility services on an on-going basis. Numerous initiatives have been undertaken involving City of Saskatoon civic departments and include the input of persons with disabilities and community advocate groups for the purpose of improving access for persons with disabilities with regards to infrastructure and City owned facilities.

During a City Council meeting held July 16, 2007, the Terms of Reference and the establishment of a Saskatoon Accessibility Advisory Committee were approved.

With City Council's approval to move forward with the development of an action plan, the Accessibility Advisory Committee hired Insightrix Research, Inc., to research and review the current situation within the city and develop a focused and prioritized framework for action.

In December of 2007 two documents developed by Insightrix were produced and presented to the Accessibility Advisory Committee: *"Checklist for Accessibility Planning"* and *"Accessibility Planning – Strategy Document"*.

As a result of recommendation #6 of the *"Accessibility Planning – Strategy Document"* – "before the Committee even starts to provide recommendations, especially regarding buildings and structures, barriers need to be defined and guidelines by which they are to be identified need to be set out" - this project is intended to carry out the two tasks.

2 Methodology

2.1 Development of Service Level Guidelines

Using the Checklist for Accessibility Planning document as the basis for the work and format for reporting outcomes, the City of Saskatoon Service Level Guidelines were developed and formalized for each target area of the six programs identified in the document, including items pertaining to:

- Built Environment
- Transportation
- Infrastructure
- Customer Service
- Information and Communications, and
- Employment

To confirm the Service Level Guidelines as being relevant and of greatest benefit for persons in need of accessibility services, Insightrix conducted consultations in the form of Focus Groups with seniors and persons with disabilities. Four focus groups were held between May 27th and 29th with a total of 33 participants attending. Two focus groups were held with senior residents of Saskatoon at the Saskatoon Community Service Village and the Franklin Senior Residence. Two additional groups were held at the Cosmo Civic Centre and the Saskatoon Field House and included people with various disabilities. In order to help with the recruiting process, various agencies and organizations were contacted, including:

- Saskatoon Council on Aging (SCOA)
- Franklin Retirement Community



- Saskatchewan Abilities Council
- Saskatchewan Association of Rehabilitation Centres
- Canadian National Institute for the Blind (CNIB)
- DAWning Saskatoon
- Multiple Sclerosis Society – Saskatoon Chapter
- Saskatchewan Brain Injury Association
- Visually Impaired Persons' Action Council (VIPAC)

Additional findings from the focus groups were incorporated into the Service Level Guidelines document and proposed revisions were brought forth to the Accessibility Advisory Committee for consideration.

Upon completion of the benchmark Service Level Guideline document, meetings were also held with the civic departments to review the guidelines against current and proposed civic programs and services for persons with disabilities. Civic departments that were contacted include:

- Transit
- Public Works
- Municipal Engineering
- Urban Design
- Human Resources
- Corporate Communications
- City Clerks
- Leisure Services
- Community Development
- Facilities Branch
- Planning Branch
- Development Standards
- Building Standards
- Parks Branch

Further, each department representative was provided with a copy of the document containing the Service Level Guidelines and were asked to comment on the validity, relevance and any discrepancies they felt were present in the section of the guidelines pertaining to their respective department. Costs and timelines associated with the implementation of the Service Level Guidelines were stressed during the consultations.

2.2 “Zone” Development

As a result of the consultations with the City departments, Inshtrix set out to determine the distribution of people with disabilities and seniors throughout Saskatoon. By understanding where the neighbourhoods with the highest proportions of persons with disabilities and seniors were, a series of “priority zones” were established to help prioritize the implementation of the items from the Service Level Guidelines.

To determine the location of **persons with disabilities**, several organizations that work with persons with disabilities were contacted. The Saskatchewan Abilities Council (SAC) provided a list of postal codes for participants of their Saskatoon Training program, Partners In Employment (PIE) program, and Disability Parking Permit program. The PIE program provides employment services for individuals with work-related barriers to find, secure and maintain long term employment. The Parking Permit program is administered by SAC on behalf of SGI. Access Transit also provided a list of postal codes for their users'



pick up points for the first quarter of 2008. These postal codes do not necessarily represent where users live, but rather where the service is being used.

With the help of the City Planning Branch, these postal codes were grouped by city neighbourhoods and sorted from highest to lowest according to the number of postal codes that fell within each neighbourhood boundary for each set of postal codes.

In addition, a list of all the assisted living residences and senior homes in Saskatoon were researched. This information was gathered from the Saskatoon Library Database of Senior Residences. This information detailed locations by neighborhood and compared to the other data sources.

To further supplement the creation of the zones, the Neighbourhood Profiles on the City of Saskatoon Website was used to calculate the percentage of **seniors** that lived in each neighbourhood relative to the total population of each neighbourhood. This was calculated by dividing the population of seniors that live in each neighbourhood by the total population within that neighbourhood. The neighbourhoods were then sorted from highest to lowest based on their percentage of seniors.

Based on the proportion of times a particular neighborhood was at the top of the list regardless of the data source (e.g. PIE program, Disability Parking, Census information, etc), priority zones were then determined.

2.3 Additional Consultations with Civic Departments

Due to the fact that some civic department representatives were unable to provide a significant amount of cost information during the first round of consultations, upon establishing the “priority zones”, additional consultations were held with those department representatives to obtain information regarding costs of implementing the Service Level Guidelines based on the zones. This simplified approach resulted in the ability to obtain additional cost estimates in a more focused fashion.

2.4 Secondary Research and Literature Review

In conjunction with conducting additional interviews and developing the “priority zones” within the city and consulting City staff on the costs of implementing the guidelines, secondary research was conducted to determine costs where gaps in information existed. This additional information examined the costs other municipalities spent on enhancing the accessibility of their cities. In addition to transit and infrastructure, a review of consultants in charge of sensitivity training and website accessibility audits was conducted as well.

3 Proposed Service Level Guidelines

At the start of the project, the Service Level Guidelines were established to provide guidance to the City of Saskatoon, when incorporating barrier-free accessibility to all civic facilities, services and infrastructure. These guidelines are not to act as a stand-alone document; they work in conjunction with the National Building Code as well as the Canadian Standards Association in regards to accessible design for the built environment.

Information contained in these Service Level Guidelines have been extrapolated from various sources including: the National Building Code (NBC), Canadian Standards Association (CSA), Facility Accessibility



Design Standards (FADS - developed by the City of London, ON.), various Accessibility Standards in accordance with the Accessibility for Ontarians with Disabilities Act (AODA) and various Accessibility Standards in accordance with the Americans with Disabilities Act (ADA).

Although these service level guidelines contain items that are technical in nature, when incorporating barrier-free accessibility to civic facilities and services, in addition to the Service Level Guidelines - the National Building Code, CSA Standard on accessible design for the built environment and the FADS document (which has been endorsed in Principle) should be adhered to and used during the implementation stage.

The Service Level Guidelines cover six target areas relevant to accessibility around the city of Saskatoon as well as access to facilities, information and services available to all residents of Saskatoon.

- a) Items in the **Built Environment** section include but are not limited to specifications regarding accessible parking areas, signage and entrances, as well as all interior building environments including; washrooms, elevators, handrails, lighting, stairs and ramps.
- b) Section on **Transportation** includes items pertaining to conventional as well as access transit buses, bus stops, driver training, signage and scheduling.
- c) Items mentioned in the section on **Infrastructure** are concerning sidewalks, crosswalks, audible pedestrian signals, curb cuts, snow removal, parks and playgrounds
- d) **Customer Service** Guidelines discuss items regarding staff training and providing people with disabilities with proper means to provide feedback to the City
- e) Guidelines regarding **information and communications** list the various means of distributing information to the residents of the city as well as items pertaining to the City website, Leisure Guide and general public education
- f) **Employment** Guidelines provide guidance to ensure existing staff are aware of issues and challenges faced by people with disabilities, to provide everyone with the same opportunities for employment as well as ensure that the workplace itself is accessible for an employee with a disability.

3.1 Background on Facility Accessibility Design Standards (FADS) – City of London

The Facility Accessibility Design Standards (FADS) is a technical design document used by the City of London staff to enhance accessibility beyond the minimal requirements of the Ontario Building Code. The FADS document is used when planning and designing municipal facilities as an aid to remove and prevent barriers for people with disabilities.

Originally introduced in 2001, the standards reflect extensive research on accessible, barrier-free environments that included consultations with organizations such as; Canadian Hearing Society, Canadian National Institute for the Blind, Community Living London, Learning Disabilities Association, Ontario March of Dimes and Thames Valley Children’s Centre. Going beyond existing accessibility regulations, standards and guidelines, FADS incorporates the principles of “universal design” that benefit people of all ages and abilities. This approach continues to earn the City of London praise as being on the leading edge in building an accessible community.



The City of London continues to encourage and support municipalities in their barrier-free endeavours. Permission to utilize and/or reproduce their standards can be obtained upon submission of a completed FADS Authorization Request Form. To date, more than 50 municipalities and organizations in Canada and the United States have adopted, or adapted the City of London's Facility Accessibility Standards for use in their community.

The Service Level Guidelines have been developed with the purpose to serve as the guiding benchmark document against which to direction action and monitor progress. Although some items in the Guidelines are quite detailed and include specific numbers be it regarding the slope of the ramp, the distance at which a handrail should be placed or the turning radius within an elevator, nevertheless they also contain information that does not restrict or prevent further improvements or amendments if needed. The Guidelines are not there to state what must be done, they in turn provide information on what should be done in order to ensure complete accessibility to all residents of Saskatoon.

3.2 Service Level Guidelines by Area

Below are the service level guidelines by area, which have been approved in principle by Council on September 2nd, 2008. As mentioned above, these guidelines provide guidance to the City of Saskatoon, when incorporating barrier-free accessibility to all civic facilities, services and infrastructure. These guidelines are not to act as a stand-alone document; they work in conjunction with the National Building Code as well as the Canadian Standards Association in regards to accessible design for the built environment.

3.2.1 Built Environment (All Civic Facilities)

- 1.1 **Parking areas** –availability and accessibility of parking areas at all civic facilities. Items covered should include:
 - 1.1.1 Designated accessible parking spaces located closest to accessible entrances
 - 1.1.2 Barrier-free path of travel from parking area to building entrance (clear of snow, garbage cans, sign posts and other obstacles; pathway well lit)
 - 1.1.3 A designated access aisle connecting the parking area to the entrance of the facility. This would also include the provision of a curb ramp between parking spaces in areas where a disabled parking spot is located adjacent to the curb and where the person with a disability may have to travel on the road to get onto the nearest curb ramp thus jeopardizing their safety.
 - 1.1.4 Accessible parking symbol painted on pavement of each parking stall, and proper signage posted and visible (after snow)
 - 1.1.5 Access aisle painted on pavement between parking spaces
 - 1.1.6 Number of designated accessible parking spaces ratio should be at least 3/100. At facilities where increased numbers of persons with disabilities may be expected, then a proportionately higher number of accessible parking spaces will be necessary.
 - 1.1.7 Accessible parking spaces width to be at least 2.7m



- 1.2 **Entrances** – All civic facilities have entrances accessible by people with various disabilities. Items to be examined when ensuring entrance accessibility should include:
- 1.2.1 Barrier-free path of travel to entrance, preferable on-grade access. If the main entrance has more than one doorway to get into the building, at least one door should be fully accessible.
 - 1.2.2 Entrances that are not accessible shall have directional signage marked with the International Symbol of Accessibility clearly indicating the location of accessible entrance
 - 1.2.3 Entrance doorway to be at least 95cm wide
 - 1.2.4 Entrance door is easy to open (automatic, sliding doors, power doors with large paddle/push plate)
 - 1.2.4.1 The maximum door opening force for pushing or pulling open a door shall be:
 - 38 N (8.5 lb) for exterior hinged doors
 - 22 N (4.6 lb) for interior hinged doors
 - 22 N (4.6 lb) for sliding or folding doors
 - 1.2.5 If entrance is through doors in a series, enough room should be left for a wheelchair to occupy the vestibule while opening the second door
 - 1.2.6 Automatic doors – the button/paddle should be large and well-marked and the door opens at a rate of approximately 15cm per second.
 - 1.2.7 Automatic doors – the button should be far enough from the door that the user is not struck by the opening door
- 1.3 **Signage** – Facilities and services for persons with disabilities are to be identified with appropriate signage and the signs used are to be consistent in design and are easily identifiable. Additional items pertaining to signage are as follows:
- 1.3.1 Signage should be available in graphic symbols for those with visual processing difficulties or who are unable to read
 - 1.3.2 Signage should include Braille as well as large print, high color contrast (white on blue background) and tactile lettering
 - 1.3.3 Signage should be installed a minimum of 1400 mm and a maximum of 1500 mm above the finished floor. The minimum level of illumination on signs shall be 200 lux (18.4 foot candles)
- 1.4 **Interior Building Environments**
- 1.4.1 **Washrooms** – there are to be washrooms available at all facilities that are accessible for people with disabilities, especially those in wheelchairs. Other items pertaining to accessible washrooms are:
 - 1.4.1.1 Single door entrance (not two doors in quick succession)



- 1.4.1.2 For washrooms without entrance doors, ensure there is only one turn with clear corner so persons with a visual impairment do not become disoriented
- 1.4.1.3 Barrier-free sink (that allows knee access for persons using wheelchairs) with soap and towel dispenser close to sink and at accessible height, include low mounted or tilt mirror, large lever handles or no-touch faucets.
- 1.4.1.4 BARRIER FREE CUBICLE:
- Minimum 1.5m x 1.5m
 - Door swings outward so the person in a wheelchair can close it independently
 - Equipped with door pull handle, coat hook, grab bars at appropriate height and placement
 - Can be locked from the inside with a large, sliding latch (not thumb-turning latch)
 - Toilet paper reachable without leaning too far off the toilet
 - Accessible toilet height of between 400mm to 460mm
 - If there are between 1 and 5 washroom cubicles in a facility, it should include one accessible cubicle. For facilities that have more than 5 cubicles, there should be 2 accessible stalls.
- 1.4.2 **Stairs** – all stair nosing should have tactile strips in contrasting colors. Slip-resistant, tactile finishes or strips contrasting in color and texture should be included on all landings. Stairs should be well lit.
- 1.4.3 **Elevators** – elevators are to be clearly identified at the main entrance, as well as the dimensions of the elevator should allow for a wheelchair or other assistive mobility devices. Elevator buttons and emergency controls should incorporate large print tactile numbers as well as Braille. Elevators should be operational at all times the facility is in use.
- 1.4.3.1 Dimension of the elevator car allows for a minimum turning radius of 1.5m x 1.5m with elevator door at least 950mm wide
- 1.4.3.2 The elevator door should remain fully open for a minimum of 8 seconds
- 1.4.3.3 In facilities with high public use, the distance between walls should be 2030mm x 1525mm
- 1.4.3.4 Elevator controls shall be readily accessible from a wheelchair upon entering the elevator with Braille labels on control buttons.
- 1.4.3.5 Elevators should have audible signals indicating floors, doors opening/closing.
- 1.4.3.6 Handrails should be provided on all non-access walls at a height of 800 to 920mm with a space of 40 to 45mm between the railing and the wall.



- 1.4.3.7 Floors of the elevator should have a firm and slip-resistant surface.
- 1.4.3.8 A two-way emergency call system or telephone should be available
- 1.4.4 **Ramps** – ramps should be able to accommodate 2 wheelchairs to pass, avoiding tight turns, and incorporating strong color contrast and tactile surfacing on all ramp landings.
- 1.4.4.1 Ramps should be used for any slope steeper than 1 in 20 in a path of travel
- 1.4.4.2 Ramp width should be minimum 1.5m to allow 2 wheelchairs to pass. Level landings/resting areas should be provided at 9m intervals along the ramp
- 1.4.5 **Handrails** – should be available on both sides of the stairwell/ramp and are continuously graspable, as well as extend horizontally beyond last stair and terminate to wall or ground
- 1.4.5.1 A ramp with a rise greater than 150mm shall have handrails which are:
- On both sides
 - Are continuous
 - Extend horizontally at least 300mm beyond the top and bottom of the ramp and return to the wall, floor or post
 - Measure between 865mm and 920mm from the ramp surface to the top of the handrail
- 1.4.6 **Interior Finishes**
- 1.4.6.1 Floor finishes are to be stable, firm, glare-free and have non-slip surfaces under wet and dry conditions
- 1.4.6.2 Routes of travel through a facility should address the full range of individuals that may use them. Minimum clear width 1100 mm (43 ¼ in.), will have a running slope of not steeper than 1:50 and minimum illumination level of 50 lux. Other considerations include accessible routes marked by bright colour or textural changes at floor level, to provide directional cues for people with vision disabilities
- 1.4.6.3 No protruding objects or tripping hazards are to be located in accessible routes, and if so, they should be clearly marked with a bright colour, a cane-detectable floor finish or a guard.
- 1.4.7 **Wall Finishes**
- 1.4.7.1 Walls in busy areas, corridors, ramps or staircases are finished in smooth, non-glossy, non-abrasive finishes
- 1.4.7.2 Colour of doors or door frames in hallways contrast with surrounding wall colours



1.4.7.3 Fire exit doors are consistently colored throughout the building, so that they are easily distinguishable from other doors

1.4.7.4 Mirrors and any separators made of glass are clearly marked for people with low vision

1.4.8 **Other**

1.4.8.1 At least one drinking fountain per floor should be available at accessible height with easily operated and accessible controls. Where more than one drinking fountain is provided on a floor level, at least 50% shall be accessible.

1.4.8.2 Reception or Service counters to provide a choice of counter heights to offer a range of options for a variety of persons. At least one barrier free section should be accessible for persons who use a wheelchair or scooter. Between 710 mm (28 in.) and 865 mm (34 in.) above the finished floor and has knee space below the counter surface.

1.4.8.3 Availability of space for persons using a wheelchair or scooter to sit/park in all public seating areas (without blocking walk-through areas)

1.4.8.4 Glass doors or partitions include a contrasting strip of color across at eye-level ensuring it is also visible to those using a wheelchair or other mobility assistive devices.

1.4.8.5 The width and clear path of travel to and from a doorway are adhered to not only in the entranceways but in addition in various offices, to accommodate people with various disabilities, especially those using a mobility assistive device.

1.4.8.6 Proper measures should be incorporated into the building emergency preparedness and evacuation system to assist people with various disabilities (incorporating visual signals together with the audible alarm systems, using appropriate emergency signage and ensuring it is clearly visible and displayed, in the event of fire when elevators cannot be used, areas of rescue assistance need to be designated)

1.4.8.7 Lighting is to be installed so that people with vision disabilities may clearly identify colours, patterns and signage. Specifically, lighting to minimize direct glare, to create an even distribution at floor level, not less than 200 lux (20 ft-candles)



3.2.2 Transportation

1.5 Access Transit Buses – items pertaining to accessible buses include:

1.5.1 Employees serving people with disabilities should be properly **trained** in:

- 1.5.1.1 Safe operation of accessibility equipment
- 1.5.1.2 Boarding and de-boarding assistance procedures
- 1.5.1.3 Handling and storage of transportable mobility aids and assistive devices
- 1.5.1.4 Understanding the function of personal care attendants, service animals and assistive devices and methods for interacting with customers who are accompanied by personal care attendants, service animals or use assistive devices
- 1.5.1.5 Emergency preparedness and response policy and procedures

1.5.2 The buses used for the transportation of persons with disabilities should display the **International Symbol of Access**

- 1.5.2.1 The international symbol of Access shall be displayed in a clearly visible position on the rear of the vehicle and on the front of the vehicle in a position other than the windshield
- 1.5.2.2 The international symbol of Access shall: a) be square or circle with a height and width of not less than 150 mm, and; b) consist of a symbol in white on a blue background.

1.6 Urban Transit – transit buses should all be low floor (kneeling) buses, and are properly labeled with the International Symbol for Access. Additional items pertaining to accessible **urban buses** include:

1.6.1 **Route or destination signage** - the route or direction or destination of the bus is to be legibly displayed, such that it is visible at the boarding point

- 1.6.1.1 Where route or destination signs are displayed, the buses should have signs that:
 - Are illuminated
 - Have non-glare surfaces
 - Are positioned to minimize glare, and
 - Use characters that provide high contrast with the background.

1.6.2 The route or direction or destination or next major stop of the bus should be **audibly announced** and visually presented through manual or electronic means



1.6.3 Steps on the Buses

- 1.6.3.1 Step surfaces are to be: a) firm and; b) slip resistant
- 1.6.3.2 Top outer edge of each step is to be marked by a colour strip in high contrast to its background that runs the full width of the leading edge of the step and is readily apparent from both directions of travel
- 1.6.3.3 All interior edges and raised floor areas should be marked by a colour strip in high contrast to its background
- 1.6.3.4 Step surfaces do not create glare.

1.6.4 Accessible **stop-request controls** are to be available throughout the bus, including within reach of allocated spaces and seated passengers.

1.6.5 Indicators within and on the Exterior of the Buses

- 1.6.5.1 A visual amber warning lamp indicator is to be mounted on the exterior, near the accessible entrance door(s)
- 1.6.5.2 Visual indicator should be coupled with an audible warning alarm. Both the visual indicator and audible warning alarm should function when the bus is kneeling, when the ramp is deployed or when the lift is in operation.
- 1.6.5.3 A visual and audible door opening and closing indicator system is to be available

1.6.6 **Bus Stops** – priority should be paid but not limited to installing bus shelters in areas that are highly concentrated by seniors and people with disabilities as well as based on utilization patterns. Paths are to be cleared to allow for easy access to the bus stop. Signage should be in clear print, the route numbers should be easy to see and identify.

- 1.6.6.1 Bus stops shall not be impeded by adjacent street furniture, such as waste boxes, planters, posts, signs, etc.

1.6.7 **Bus Shelters** - all glazed panels surrounding bus shelters shall incorporate decals of a highly contrasting color and a minimum of 2 in. wide

1.7 Access Transit

1.7.1 Provide an accessible means to make and accept reservations as well as obtain information. Some ways to achieve this are:

- Dedicated telephone line for making reservations, including an “Automated Touch Tone Service” to provide information on: scheduled pick-up and arrival times, ability to make trip cancellations, pre-booking, phone listings and hours of operation.
- Online access to the trip information details



3.2.3 Infrastructure

1.8 **Sidewalks** – in central business districts and downtown areas, sidewalks need to be designed to accommodate larger volumes of pedestrian traffic than in residential areas. Streetscapes in these areas often function for multiple purposes and generally consist of the following zones: the building frontage zone, the pedestrian travel zone, the planter/furniture zone, and the curb zone.

1.8.1 **Building frontage zone** – area between the building wall and pedestrian zone. At a minimum, pedestrians prefer to keep at least 0.6 m away from the building wall. The frontage zone should be increased and physically separated from the pedestrian zone (allow extra space for a door opening into the frontage area, sidewalk cafes, etc.) People with vision impairments often travel in the frontage zone and use the sound from the adjacent building for orientation. Some use the building edge as a guide for a cane, traveling between 0.3 m to 1.2 m from the building. The frontage zone should be free of obstacles and protruding objects. Level landings should be available at building entrances and around sidewalk furnishings such as drinking fountains, benches, etc.

1.8.2 **Pedestrian Travel Zone** – this is the area of sidewalk corridor that is specifically reserved for pedestrian travel. This area should be free of all obstacles, protruding objects, and any vertical obstructions hazardous to pedestrians, particularly for individuals with vision impairments

1.8.2.1 The pedestrian zone should be at least 1.8 m – 3.0 m wide or greater to meet the desired level of service in areas with higher pedestrian volumes.

1.8.2.2 The pedestrian zone should never be less than 1.2 m, which is the minimum width required for people using a guide dog, crutches and walkers. Wheelchair users need about 1.5 m to turn around and 1.8 m to pass other wheelchairs.

1.8.3 **Planter/Furniture Zone** – lies between the curb and the pedestrian travel zone. Provides a buffer from the street traffic and allows for the consolidation of elements like utilities (poles, hydrants, telephone kiosks, etc.) and street furniture (benches, signs, etc.). On local and collector streets 1.2 m is preferred and on arterial and major streets 1.8 m is preferred.

1.8.3.1 Additional space is required for bus stops and shelters which may include a boarding pad typically 1.5m x 2.4m.

1.8.3.2 For snow clearing purposes, wider planter/furniture zones are required, to allow for snow to be stored in the planter/furniture zone and keep the pedestrian zone obstacle free.

1.9 **Grades and Slopes**

1.9.1 The sidewalk grade ideally should not exceed 5 percent

1.9.2 Once a maximum grade of 8.3 percent for a distance of 9.0 m is achieved, a level landing must be installed



- 1.9.2.1 The slope of the level landing should not exceed 2 percent in any direction
- 1.9.2.2 The dimensions of the level landing should be at least 1.5m x 1.5m to allow wheelchair users to stop and rest without blocking the flow of pedestrians. This area can be greater with the inclusion of benches, hand rails and drinking fountains.
- 1.9.3 Maximum cross slope should not exceed 2 percent
- 1.9.4 Decorative surfaces such as paints and surface materials, polished stones or exposed aggregate rock are not slip resistant and should be avoided. Paint and thermoplastic materials commonly used to mark crosswalks are generally not as slip resistant when wet
 - 1.9.4.1 Brick and cobblestone increase the amount of work required by pedestrians with mobility impairments. Ensure tiles are spaced tightly together as they can create grooves that catch wheelchair casters.
 - 1.9.4.2 If the change in level/elevation of the sidewalk is between 6 mm and 13 mm – the surface needs to be beveled with a maximum grade of 50 percent. Once that change in elevation reaches over 13 mm, a ramp should be installed with a maximum grade of 8.3 percent.
 - 1.9.4.3 Gaps, grates and other openings occur at railroad tracks, drainage inlets, air vents, tree grates, etc. Grates should be placed within the planter/furniture zone away from the pedestrian travel area and also away from the bottom of crosswalks and curb ramps.
 - 1.9.4.4 Openings of gaps and grates should not allow the passage of a 13 mm sphere
 - 1.9.4.5 The long dimension of the opening should be perpendicular or diagonal to the dominant direction of travel.
 - 1.9.4.6 Tree branches should be maintained to hang no lower than 2.0 m as low hanging branches can be a safety hazard, especially for the pedestrians with vision impairments.
- 1.9.5 **Driveway crossings** – should be designed with the following guidance:
 - 1.9.5.1 Cross slope should be maximum 2.0 percent
 - 1.9.5.2 Changes in level should be flush (with a maximum change of 6.35 mm)
 - 1.9.5.3 The flare slope should be maximum 10 percent
- 1.9.6 **Ramps / Curb cuts**
 - 1.9.6.1 The ramp grade should not exceed a maximum slope of 8.3 percent



- 1.9.6.2 Cross slope on the ramp should not exceed 20 percent
 - 1.9.6.3 Minimum ramp width should be 1.2 m. In restricted spaces only, the minimum width should not be less than 915 mm
 - 1.9.6.4 Significant changes of grade as the pedestrians travel from the down slope of the ramp to the up slope of the gutter can cause wheelchair users to fall forward and should be 13 percent or less. Counter-slope should not exceed 5 percent
 - 1.9.6.5 Curb ramp length is determined by the vertical height of the curb between the roadway and the sidewalk. Assuming the cross slope of the corridor is constant at 2 percent, the formula for determining ramp length is: curb height / (ramp slope/percent – sidewalk corridor cross slope/percent)
 - 1.9.6.6 The curb ramp should be aligned with the marked crosswalk, so there is a straight path of travel to the curb ramp on the other side
 - 1.9.6.7 Adequate drainage should be provided to prevent the accumulation of water, snow/ice and debris on or at the bottom of the ramp
 - 1.9.6.8 Ramp lengths can be minimized by lowering the sidewalk to reduce the curb height. This would be applicable in areas with narrow sidewalks
- 1.9.7 **Snow Removal** – the sidewalks are to be cleared of snow and ice, in compliance with the snow clearing bylaw. It is of particular importance in areas and near facilities that are most commonly frequented by people with various disabilities as well as seniors.

1.10 Crosswalks

- 1.10.1 **Audible Traffic Signals** – Audible tones and speech messages can provide standard information about the status of the signal cycle (WALK, DON'T WALK). Information on the location, direction of travel and the name of the street to be crossed can also be included. In addition to providing information in multiple formats, the physical design, placement and location of the pedestrian signal device need to be accessible to pedestrians with vision and mobility impairments. Conduct an assessment of intersections throughout the city to review the following:
- 1.10.1.1 All “high-traffic” pedestrian intersections should have appropriate audible and visual traffic signals installed to accommodate those persons with various disabilities.
 - 1.10.1.2 The push button should be located as close as possible to the curb ramp without interfering with clear space
 - 1.10.1.3 The device should be mounted no higher than 1.0m above the sidewalk



- 1.10.1.4 The control face of the button shall be parallel to the direction of the marked crosswalk
- 1.10.1.5 The device should be placed no closer than 760 mm to the curb, and no more than 1.5m from the crosswalk
- 1.10.1.6 The button should be a minimum of 50 mm in diameter to be easily operated by pedestrians with limited hand function
- 1.10.1.7 The force to activate the button should require a minimum amount of force no greater than 15.5 N

1.10.2 **Flashing Pedestrian Crosswalks** – In areas that have higher than normal traffic of pedestrians and where currently no traffic signals are available (uncontrolled intersection), consider installing Flashing Pedestrian Crossings to ensure people are not waiting and can safely cross the streets.

1.11 Parks and fully accessible playgrounds

- 1.11.1 Sidewalks with the inclusion of curb cuts and proper surfacing should be available to make parks accessible for people with various disabilities.
- 1.11.2 Ensuring playgrounds have at least one accessible feature incorporated into the design, as well as introducing one fully accessible playground into all four quadrants of the city.
 - 1.11.2.1 Gates, pathways and walkways throughout the park shall be accessible to a person using a wheelchair, scooter or other mobility assisting device
 - 1.11.2.2 Provide accessible picnic tables, drinking fountains and accessible ground surfaces
 - 1.11.2.3 Provide benches adjacent to an accessible route, have arm and back rests, be of contrasting color to their background, have an adjacent level, firm ground surface at least 91cm x 137 cm for wheelchair, scooter or stroller parking

3.2.4 Customer Service

- 1.12 **Training of staff** – general staff training programs should include a component about how to provide goods and services to people with disabilities and their specific needs.
- 1.13 **Feedback process** – offer persons with disabilities with appropriate and effective means to provide their feedback be it: in person, by telephone, in writing, email or diskette – ensuring complaints and questions are handled appropriately and responded to using appropriate formats such as; email (using text documents rather than PDF, telephone or in writing.



3.2.5 Information and Communications

- 1.14 People with various disabilities should be provided with an effective means of obtaining information and providing their feedback to the City. Alternate formats of providing information and communication should be used such as;
 - 1.14.1 Large print – materials should be prepared with a font (print) size that is 16 to 20 points or larger
 - 1.14.2 Electronic text – ensure that formats of electronic text adhere to the screen reading software, as some items such as images and PDF's (Portable Document Format as supported by Adobe®) are not interpreted by screen reading software.
 - 1.14.3 Audio and/or video format
 - 1.14.4 Information distributed through various disability and senior organizations throughout the city or as bill inserts and/or pamphlets
- 1.15 Consider having the leisure guide available in alternate formats (other than print), or that people with disabilities have some alternative form of access to leisure information.
- 1.16 Review and re-design the website to conform to the W3C standards and applicable Web Content Accessibility Guidelines for website development.
- 1.17 Pursue means and ways to educate the general public on issues and needs of people with various disabilities, traffic laws, parking laws, usage of Audible Pedestrian Signals, etc.

3.2.6 Employment

- 1.18 **Training of existing staff** – build awareness among existing staff members on the needs and issues faced by people with various disabilities to ensure an equal and appropriate work environment is available for any staff with a disability. Provide training for supervisors and managers so they understand how to support employees with disabilities
- 1.19 **Recruitment and selection** – provide all applicants to City of Saskatoon job postings with an equal opportunity to obtain employment, by asking potential employees or applicants whether they have any needs or require any job-related support.
- 1.20 **Workplace accommodations** - people with disabilities are to be provided with a pleasant working environment, particularly: desk areas are appropriately positioned and provide ample room for a wheelchair; accessible washrooms are available, providing TTY telephone service and screen magnifiers, flexible scheduling and emergency preparedness. The section on the Built Environment (page 5 of this report) should be referred to as base level requirements for all buildings.

All of the information and discussions beyond this point are relative to the general public, civic department representatives and implications regarding the costs and timelines associated with putting these Service Level Guidelines into action.



4 Focus Group Findings and Results

To confirm the Service Level Guidelines as being relevant and of greatest benefit for persons in need of accessibility services, Insightrix conducted consultations in the form of Focus Groups with seniors and persons with disabilities. Four focus groups were held between May 27th and 29th with a total of 33 participants attending. Two focus groups were held with senior residents of Saskatoon at the Saskatoon Community Service Village and the Franklin Senior Residence. Two additional groups were held at the Cosmo Civic Centre and the Saskatoon Field House and included people with various disabilities. In order to help with the recruiting process, various agencies and organizations were contacted, including:

- Saskatoon Council on Aging (SCOA)
- Franklin Retirement Community
- Saskatchewan Abilities Council
- Saskatchewan Association of Rehabilitation Centres
- Canadian National Institute for the Blind (CNIB)
- DAWNING Saskatoon
- Multiple Sclerosis Society – Saskatoon Chapter
- Saskatchewan Brain Injury Association
- Visually Impaired Persons' Action Council (VIPAC)

4.1 Overall Results

Participants were asked to comment on general categories such as: Built Environment, Transit, Infrastructure, Leisure, Customer Service and areas which they felt were in need of most improvements.

Participants were asked to prioritize categories in order of importance, and Infrastructure was one of the top priorities (including – sidewalks and their condition, crosswalks and Audible Pedestrian Signals). Snow Removal was the next item of importance in all four groups. Another item at the top of the priority list was Transit both regular and Access, which was followed by items regarding Built Environment. Communication and information was seen to be connected with the above categories and was mentioned to be a priority in conjunction with Infrastructure, Snow Removal, Transit or Built Environment, specifically, the means by which people receive information and the perception on how much information they currently receive. Customer service was seen to be the least important item on the list with all of the focus group participants as they commented on it being good and adequate with very little complaints.

Safety of people was also mentioned throughout the discussions, in particular when crossing the roads, when walking on sidewalks in poor condition, usage of ramps within buildings and curb cuts on the sidewalks, lighting conditions as well as other interior components of the buildings such as color contrasts, heavy doors, etc.

There was a general consensus that there is a need for public awareness campaign on the items pertaining to disabilities, such as; the proper usage of Audible Traffic Signals, parking in spaces designated for people with disabilities, accommodating people using assistive mobility devices, and using conventional and access transit buses.

Praise was given to the city for having these focus groups as they are seen as opportunity for people to provide feedback and make their voices heard.



4.2 Detailed Focus Group Findings

Below are the details as they pertain to the focus groups. Participants were able to get very specific on areas/locations that require improvement.

4.2.1 Challenges people face in getting around the city

Sidewalks and Crosswalks

Quality of sidewalks – uneven, broken up, cracked. This presents a challenge as it is difficult to walk with a cane, drive over it with an assistive mobility device (scooter, wheelchair, walker). People with visual impairments have trouble seeing the cracks and bumps in the sidewalks.

The grooves on the road around Bessborough were commented as being difficult to maneuver about. People with sports wheelchairs get their wheels stuck in the grooves all the time.

Some individuals from the focus group with the seniors commented that they leave the city during the winter not only due to the cold weather, but because it becomes very immobile during wintertime.

Crosswalks in certain areas, particularly the timing of crosswalks, were commented to be a challenge for people. Participants from all four focus groups stated that at certain intersections the pedestrian light does not stay on long enough for them to be able to get to the other side of the street.

People on bikes, rollerblades, and skateboards - using sidewalks as their routes were commented to present a challenge in getting around the city. This was especially difficult for those who had hearing problems as they are unable to hear them approaching from behind.

Drainage systems at pedestrian crossings were commented to be full of water in the spring and snow/ice in the winter. Improper drainage creates water/ice obstacles for people to properly cross the streets.

People with visual impairments commented that there is a lack of well marked pedestrian crossings, in areas where there are no traffic signals. They stated that the information (location of crossing) needs to be available to them in order to feel safe to cross the street. This could be achieved by having clear and descriptive signage identifying the pedestrian crossing available.

Talking pedestrian signals (by City Hall) were commented to be very helpful to those who have visual impairments. Another great feature as commented by participants were those signals that announced the names of the streets at the intersection. Those signals with the “beeping” sounds don’t provide any directions and if you’re lost or unsure where you are the audible announcement of the street is very beneficial. Good traffic signals as stated by participants are located at Munroe and College Drive.

Transit

Access Transit – Calling 7 days in advance was seen as a tremendous challenge and commented to be unacceptable throughout all focus groups (seniors and those with various disabilities).

Some participants suggested that there should be a dedicated bus that takes people to doctor’s appointments or follows a set route on an hourly schedule, ensuring that everyone who needs to go somewhere has the means to get to their destination as well as get back to their residence. Some places



mentioned that could be included in the set route for the designated bus were: downtown, Field House, medical arts, midtown plaza, superstore, hospitals.

Participants from the Franklin senior residence commented that it's impossible to use access transit due to the scheduling times. They saw a great benefit in having a shuttle van that would take them to all of their appointments, shopping, theaters, etc. Franklin residence has one of these shuttles and participants provided only positive comments on the benefits of having one available.

Participants felt that there were not enough Access Transit buses in the city. Comments were made that people don't use it, because one can only get one-way trips and you are not guaranteed a ride back. People commented that calling to book access transit after 10:00 am would decrease their chance in getting on the bus.

A few participants stated that they spoke to City Transit asking the bus drivers to announce the names of the bus stops, or at least the major intersections; however they were not receptive of that idea. If the landmarks can't be seen, people become dependent on the bus driver to let them off, which at times they forget and let you off at the wrong stop. Toronto was mentioned as one of the cities where participants have visited and it is mandatory for the bus drivers to call out stops.

Snow removal

Build-up of snow and ice on sidewalks presents a challenge in moving about the city. This was mentioned to be an issue especially on bridges. It was commented that the city is doing a poor job with snow removal on major sidewalks and improvements have not been experienced with the introduction of the new Bylaw.

Communication

Seniors felt that it would be beneficial to hold a forum with city staff and the general public, where people would be able to raise issues and concerns, talk to the city staff directly as some of the participants felt that by calling they would get a run-around in trying to get a hold of a certain person. Media was seen as the channel through which the public could raise and voice their concerns.

With regards to the audible traffic signals, it was stated that a lot of people from the general public as well as those with disabilities are unaware of the proper usage and function of the signals. They are unaware that the noise/voice will not come on until you hold the push-button for longer than 3 seconds. Public needs to be educated as currently some residents are complaining that the signals are too noisy for them. It was also stated that the City at some point wanted the CNIB to inform their members where the signals were located, however many people with visual impairments living in Saskatoon are not affiliated with CNIB.

Facility Interior Features

Ramps

The ramp to get to the second floor at the Cosmo Civic Centre was commented to be very difficult to climb in a wheelchair. There are no rest areas on that ramp as it is a continual incline.

Washrooms

City facilities were commented to have good and accessible washrooms.



Stairs

Unmarked steps inside buildings create a walking hazard, especially single steps. Need to ensure they are properly marked (coloured)

North side by the Bessborough - the stairs are unmarked. City hall is dark in the foyer and is in need of more contrasting colors.

Parking

A program which some participants commented as being beneficial and useful was the ability for handicapped parking permit holders to park at the metered parking spots downtown, however it was stated that the program isn't highly publicized. This was supported by the fact that some participants were not aware of this program's existence.

Safety and Crime

Security and public safety (crime) has been raised as an issue/challenge that participants feel is a hindrance to getting around the city. The bus terminal downtown was commented to be one of the areas where people don't feel safe walking by.

Grocery Store in the downtown core

Those living in the downtown core all felt that a grocery store would be of great benefit, as currently people have to travel to other areas around the city to purchase their groceries.

4.2.2 Additional Comments

Other Comments on Built Environment

Signage is not very good – some areas are designated for bicycles (14th and Cumberland), however it becomes confusing as people think that it means they can go on the sidewalk

Availability of handicapped spots is not sufficient – Outside Mendel Gallery, they are hard to distinguish. Parking around TCU Place is very bad.

Not all street signs are in standard positions, making it difficult to figure out where to look for signage.

Credit Union Centre has no separate entrance for people in wheelchairs, and during concerts everyone uses the same door to get in and out of the building, trampling those in wheelchairs.

Harry Bailey has a ramp, but no railing to get into the pool. Have not gone swimming for that reason.

Sidewalk grates are too wide, canes get stuck in them quite often

Cosmo – poorly lit in the foyer and hallway – needs more contrast

All elevators should have Braille



Stairs – in need of contrasting strips to indicate where steps start and if there are any other steps following

Washrooms that don't have doors but instead are built with curved hallways are hard to maneuver; proper signage should be available, using symbols and Braille to point someone in the general direction of the washroom

Handrails in Field House and Cosmo – need to have them extend all the way to the bottom and a bit beyond the stairs, as at these places handrails start right at the edge of the ramp.

Other Comments on Access Transit

Participants felt it needs better time management or improved scheduling.

Access Transit is viewed as being very inefficient.

One idea is a zoning bus which could offer a circular route to offer transit service for several people who are going to a similar place.

Biggest complaint is to get access via telephone and trying to make a reservation. It can be very difficult to get through to make a reservation, or to know if the bus is on time or if it is delayed.

The participants would also like reduced fares for access transit.

More taxis are needed to complement Access Transit (i.e. The city could partner with taxi companies and offer reduced fares for those wishing to use the cab which in turn would off load some demand on Access Transit)

Only people with medical problem can use access transit yet many feel they could benefit from it (e.g. seniors with some mobility issues).

Short on drivers

7 days advance reservation is too long of a timeframe.

In need of more buses, demand is more than supply.

Other Comments on Infrastructure

Crosswalk lights are too short – timing needs to be extended to allow enough time to cross the street

Pedestrian crossings should have flashing light indicators

Audible traffic signals are generally seen as good. More of the ones that announce street names and intersections

Set priority for areas that are highly concentrated by seniors for sidewalk repairs and snow removal

Drainage in front of the ramp is not good, creating puddles during spring snow-melt

Audible traffic signals are only installed if they are requested by the general public.



Snow removal is poor

Downtown, one intersection has a curb cut on one side of the street, while the other side is missing one, there is no way to get onto the sidewalk

Bus stops need to be well marked, signage can be too high for people with a visual impairment.

4.2.3 Categories of most importance

The three most important categories to the participants from all four focus groups were areas regarding the infrastructure, Transit (Access in particular) and Snow clearing/removal. These were the three “hot” topics of discussion and comments were made that if changes and improvements were done to all three or one of them it would make the city more accessible and easier to get around. Customer service was seen as being really good in city facilities and the city overall.

Ranking	Area
1	Infrastructure
2	Transit (both urban and Access)
3	Snow clearing/removal
4	Built Environment
5	Communication with the City
6	Customer Service

4.3 List of Specific Locations around the City as mentioned by Focus Group Participants

4.3.1 Sidewalks and Crosswalks

4.3.1.1 Central Business District (Downtown Core) and City Park

- Sidewalks are in poor conditions around senior homes. Franklin was mentioned as one of the places where people have fallen numerous times due to the cracked, broken up and uneven sidewalk surface.
- The grooves on the road around Bessborough were commented as being difficult to maneuver about. People with sports wheelchairs get their wheels stuck in the grooves all the time.
- Presence of flower pots on sidewalks and street corners creates a hazard for people walking on the sidewalk. 4th avenue around 24th and 25th streets was commented to be one of the areas where this was an issue. 23rd and 3rd avenue was another area where flower pots were right at the end of the crosswalk
- Railroad tracks on Idylwyld difficult to get across
- 22nd, 20th and Idylwyld – ramp to get onto sidewalk is designed in a way that you need to get into the way of oncoming traffic to get on the sidewalk
- It is very difficult for visually impaired people to find curb cuts – there is no colour and no distinction. 20th and Idylwyld, 22nd and Idylwyld



- Queen Street before 4th and 3rd Avenue (North Side) - Sidewalks are uneven and people noted they have tripped and fallen there before

4.3.1.2 Nutana Suburban Centre

- Area by Walter Murray and Holy Cross schools were commented as another area where sidewalk was broken up and people called the City, however no action has been taken as of yet and the sidewalk is still in poor condition.
- West side of Market Mall – by senior residences – sidewalk all broken up
- Adelaide and Preston need ramps to get onto the sidewalk

4.3.1.3 Buena Vista and Haultain

- 26th street between 2nd and 3rd avenue was noted to be in need of sidewalk repairs.
- 8th street does not have sidewalks on the south side

4.3.2 Snow Removal

4.3.2.1 Central Business District (Downtown Core)

- Area between 24th street and bus mall (parking lot across from city hall) was commented to have water run off creating puddles in the spring and ice in the winter.
- Building on 25th street before Parktown was commented to never clean their sidewalks and remove snow in the winter.

4.3.2.2 Varsity View

- College and Munroe is really bad for snow clearing.

4.3.2.3 Lawson Heights Suburban Centre

- Primrose and Pinehouse as well as Primrose and Lenore are really bad for snow clearing

4.3.3 Audible Traffic Signals and Flashing Pedestrian Crossings

4.3.3.1 Central Business District (Downtown Core)

- 25th street should have audible traffic signals
- Idylwyld and 22nd in need of an Audible Traffic Signal



- Queen and 2nd Ave – in high need of an Audible Traffic Signal

4.3.3.2 Wildwood

- Acadia and Taylor – need an Audible Traffic Signal
- Kingsmere Blvd – becoming a very high traffic area, need traffic lights or flashing pedestrian crossing

4.3.3.3 Nutana Suburban Centre

- Adelaide Street (1 and a half blocks east of Market Mall) – high traffic – need flashing pedestrian crossings.

4.3.4 Length of Traffic Signals being too short

4.3.4.1 Central Business District (Downtown Core) and City Park

- Idylwyld and 22nd the lights to cross the street are too short
- 6th Ave and 25th Street – lights to cross the street stay on for too short.
- 24th and 5th the audible signal is the same in both directions
- 3rd and 23rd - too short
- 21st and 1st – very difficult to cross the street on the short signal.

4.3.4.2 Wildwood

- Acadia and Taylor – the lights to cross the street are too short going south

4.3.5 City Facilities

- The ramp to get to the second floor at the Cosmo Civic Centre was commented to very difficult to climb in a wheelchair. There are no rest areas on that ramp as it is a continual incline.
- City hall is dark in the foyer and is in need of more contrasting colors
- Handrails in Field House and Cosmo – need to have them extend all the way to the bottom and a bit beyond the stairs, as at these places handrails start right at the edge of the ramp.

4.3.6 Parks

4.3.6.1 Central Business District

North side by the Bessborough - the stairs are unmarked.



5 In-depth interviews with city departments

Upon completion of the benchmark Service Level Guideline document and the focus groups, meetings were held with the civic departments to review the guidelines against current and proposed civic programs and services for persons with disabilities. Civic Branches/Departments that were contacted include:

- Transit
- Public Works
- Municipal Engineering
- Urban Design
- Human Resources
- Corporate Communications
- City Clerks
- Leisure Services
- Community Development
- Facilities Branch
- Planning Branch
- Development Standards
- Building Standards
- Parks Branch

Most of the consultations occurred between June 9th and June 18th with additional follow-up interviews completed by August 28th.

Each department representative was provided with a copy of the document containing the Service Level Guidelines and were asked to comment on the validity, relevance and any discrepancies they felt were present in the section of the guidelines pertaining to their respective department. Costs and timelines associated with the implementation of the Service Level Guidelines were stressed during the consultations.

Below are the results from these discussions.

5.1 Public Works

- John Deere building itself is not accessible at all. It would be almost impossible to do any changes to it, to make the building accessible, due to it being a heritage site. Only solution would be to move to a different location.
- The repair and installation of sidewalk grades and slopes is all currently driven by complaints from the public. When a sidewalk is in a condition where it needs to be re-done and there are no curb cuts present they will be incorporated with the new sidewalk.
- Items such as cobblestone and interlocking blocks which are at times included in the sidewalk (River Landing) need to be thought out during the design and planning stages to ensure those areas can be accessed by wheelchair and other mobility assistive devices.
- Driveway crossings (installation and repair) are currently complaint driven
- Currently follow a standard design for ramps and curb cuts.



- Snow removal – the largest issue/factor this past year has been equipment breakdown. There have been too many mechanics lost and the machinery has been sitting in the shops without being fixed.
 - Currently writing a report to council regarding the planning and implementation of snow removal for 08/09 year.
 - Key areas will be identified.
- Business districts – this year will be ensuring that there is an inspection process for these key areas. There has not been a lot of monitoring on how the public adheres to the new Bylaw; however that issue will be targeted by introducing area inspections. Currently it has been complaint driven.
- The general public and staff need to be trained, there needs to be an understanding of the challenges involved with mobility issues around the town.
- Approximately 70% of the sidewalks around the city are in good condition.
 - It would be of benefit of having an assessment on areas that are highly concentrated by seniors and people with disabilities. Establishing “zones” around the city and then prioritizing and budgeting accordingly. It would be beneficial to have these “zones” as costs could then be estimated. It would take approximately a week to condition rate the sidewalks in a zone and then the scope of the repair work, the time it would take, and the costs could be estimated.
 - Snow removal could follow the same procedure. Currently the busy routes, downtown core, and business districts are cleared of snow first. The established “zones” could serve as the next steps in snow clearing.
 - Strategic Services provides public works with a list of approximately 30-50 sidewalk locations per year. If crews are replacing sidewalk at an intersection where ramps are not present they have been instructed to install ramps as part of the replacement.
- For snow removal the budget for the whole program is \$4.7 million dollars. The biggest challenge is on the equipment side of things, not enough mechanics to repair the machinery, as it sits in the shop waiting to be repaired.
 - There is a need for more snow removal equipment.
 - Currently examining enforcement in various areas around the city. There will be dedicated people who will become responsible for districts and will ensure that the snow removal Bylaw is abided to.

The following are estimated costs for sidewalk repairs:

- We have approximately 1,600 km of sidewalks and it is estimated that 30% of them have distresses that could be repaired.
 - \$22,000 to replace 100 meters of sidewalk
 - \$850-\$1500 to install a ramp

Therefore based on the calculations, approximately 480 km of sidewalk require some type of repair and it would cost \$13.6 million to complete all of the repairs (Using an estimate that 90% of these sidewalks or



432 km are in fair condition and would cost \$7.00 to repair 1 m of sidewalk and 10% or 48 km are in poor condition and would cost \$220.00 to replace 1 m of sidewalk – total to complete all repairs would be \$13,584,000).

5.2 Urban Design

- Urban Design is not directly responsible for bus shelters, although they are installed in our streetscapes. In the past when there have been bus shelters installed, the shelters have protruded into or have been installed within the Pedestrian Travel Zone.
- Currently do not keep all furniture outside of the bus stop zone, although consideration is given to what types of furniture is appropriate.
- Currently do not have a building frontage zone separated from the pedestrian zone.
- The minimum pedestrian zone we use is 1.5 metres width and has been as wide as 2.0 metres at a maximum.
- The minimum space for bus shelters and bus stops is not implemented. This requires a significant amount of space which is not always available.
- The tree grates and electrical vault grates used in our streetscapes use much larger openings than 13mm. The electrical vaults require a specific opening size for venting. The electrical vaults used have openings in the direction of travel. This is part of a structural requirement for the grate.

With regards to costs associated, most costs associated with Urban Design are actually incurred by either Infrastructure or Public Works departments.

5.3 City Clerks / Communications

- They will be looking to introduce files available to the public in formats other than PDF (i.e. Word and HTML).
- Council meetings will be available online through video-streamed files, so that the public can access meetings online on their own time
- Braille – not a widely used form of communication. There has not been a lot of interest or demand from the public for documents to be available in Braille. Public library has the “JAWS” screen reader program available. When something needs to be done in Braille, hire a person, train them and purchase the equipment.
- There is a general phone number for the city. That number is not as widely publicized. There is a section in the phone book that contains various contact numbers for city departments and issues the public might have. This information is hard to find and is not available in any other format.
- Currently the city prints a brochure called “Who’s Job is it?” This brochure is printed and updated every two years. It is available in PDF format in the “W” section of the website. Very difficult to find. The cost is approximately \$2,000-\$3,000 dollars to print the brochure. It is distributed by Local Area Planners throughout the city and is available at leisure facilities. This is a very useful brochure as it contains a great deal of contact information for various city departments. It is seen



as beneficial to work with major associations and organizations to distribute copies of this brochure to them so it can be passed on to the general public.

- When printed materials go out to the general public the design is based on the target audience the print is going out to. Colors and contrasts, font sizes and other accessible features are considered when material is distributed to seniors or people with disabilities, however it does not currently segregate or separate people by ability/disability status.
- In the process of developing a new portal (City Website) – it will have more online services available for residents of the city. They will look into whether the new portal will be compliant with the W3C Standards and whether there will be any accessibility feature incorporated into the website. To this point, the website does not have “font enlargement” capabilities.
- The City offers Sign Language courses for interested employees and those working with other employees who have a hearing impairment
- Communications Branch in its communications ensures that civic material is available to everyone — use a variety of media, depending on the campaign and budget, including radio, print, TV, direct mail, distribution points, and web site to communicate its message. When other civic branches are hosting open houses and we are assisting with communications, we ask them to make sure that the venues are wheelchair accessible (which they usually are).

Point Specific Comments from the Service Level Implementation Guideline document (*found on page 16 of this report*):

- 1.14.1 - probably not feasible for every brochure, but possible when some material is intended for a specific stakeholder group with a visual impairment. Currently, the City tries to ensure its brochures/materials are of a basic readable font size, effective layout, colour scheme, etc.
[costs depend on printing and layout specs]
- 1.14.4 - the Communications Branch is definitely able to distribute the brochure “Whose Job Is it?” to the larger organizations, such as CNIB and Council for Aging whose clients may find it helpful. Other materials will be distributed to those groups or other stakeholder groups, where applicable (such as when Saskatoon Transit changed its routes, an info session and materials were provided to those specific stakeholders)
[no extra costs; part of the regular distribution]
- 1.16 - the City is currently re-designing its website, and though it has not been confirmed by the technical people that it will be W3C compliant, there is some confirmation that the web pages will be expandable so easily read by those with vision impairments
[not sure about cost]
- 1.17 - the City already weaves into existing communications, messages about accessibility. For example: with the new sidewalk clearing bylaw, residents were encouraged to clear their sidewalks for safety and mobility reasons, and not just because it was the law; or when new audible pedestrian signals are installed, a public service announcement is issued, explaining why and how they work.
[no extra costs; part of the regular distribution]



5.4 Building Standards

- The items in the document that refer to buildings do not conflict with the requirements of the National Building Code of Canada (NBC)
- Other items such as buses, sidewalks, parking lots are not regulated by the NBC however these items (in the document) also do not contradict NBC requirements
- For new buildings or changes of major occupancy of existing buildings, the barrier free requirements of the NBC would be applied and they are much more extensive than the contents of the Proposed Service Level Guidelines.
- Over all, the approach seems to be a good one. I just would caution that there are already codes and standards in existence and so to avoid confusion maybe this document should reference those wherever possible instead of creating a new "code".

Ensuring that Building Code and Accessibility Standards are not omitted, need to incorporate a clause into the guidelines stating that the items in the guidelines work together with the building code. FADS would be a useful document to implement. Current accessibility standards document dates back to 1998 and is very similar to the FADS. It is part of the Accessibility Standards document of the building code.

5.5 Parks

- The new park signs should accommodate these service level standards, albeit the vertical height of the sign may pose a small problem, being installed adjacent to both the primary and secondary asphalt pathways. The fact that we are utilizing symbols should be a step in the right direction from our present (wooden horizontal) sign standards and location (in the turf areas).
- Repairs/Evenness - park pathway standard 2.4 metres wide. Paths are inspected on an annual basis and any issues that arise such as frost heaving, tree roots, cracks, etc. are dealt with through our asphalt repair budget.
- Snow Removal - The Parks Branch implemented a pathway snow removal program for the primary, lit, asphalt pathways in parks in conjunction with the corporate sidewalk snow removal bylaws. The Parks Branch will be implementing snow removal program in 2008/09 for all secondary asphalt pathways.
- Drainage - Park drainage issues, including those that affect pathways/access, will be dealt with through the new "drainage remediation" funding in our operating budget.
- Most, if not all primary entrances into parks are adjacent to sidewalk curb cuts to accommodate access. All other park pathways whether asphalt or aggregate, are built to match the grade of adjacent city (concrete) sidewalks. We also include, as part of a park upgrade, the curb cut "ramps" at the primary entrances, if it does not exist.
- The Parks Branch utilizes a wide variety of trees/shrub and perennial plant species for colour, fragrance and effect. We consciously make an effort to avoid planting seed/fruit producing trees/shrubs adjacent to pathways/sidewalks for the reasons as stated in this section. We maintain a clearance of 2.5 metres for obstructing branches, which exceeds the City of London standards, as outlined in this section. We have utilized raised planters, but with the costs of construction, they are limited in their usage.



5.6 Planning

Initiatives mentioned in the Planning area include:

- New areas and neighbourhoods include accessibility in the planning process, ensuring that there is easy access.
- The City incorporates crime prevention through environmental design (CPTED) principles, ensuring proper lighting; pathways are in well lit areas, accessible, etc.
- The City looks at the location of residences in proximity to public transit and transportation. This assists in ensuring adequate public transportation for the area.
- The City is offering supply of affordable housing units through the Affordable housing program
- The City takes into account all income levels when designing new neighborhoods, making affordability a consideration when designing an area or neighbourhood.
- The City is incorporating “Village Centres” in the new neighbourhoods which ensure accessibility to necessary services are available to the public.

5.7 Facilities Branch

As background, Access Experts were commissioned to provide the Facilities Branch with audits for approximately 50 civic structures with a report issued in 1998 (Access Report). The audit, incorporated requirements of the 1995 National Building Code, and included Occupancy Requirements, Parking, Exterior Paths of Travel, Signage, Major Entrance(s), Doors & Hardware, Interior Paths of Travel/Interior Ramps, Program Spaces, Drinking Fountains, Tactile Cues, and Warning Systems. For larger facilities, an added matrix of Priorities, Recommendation, and Estimated Costs was noted.

The findings of this report were incorporated into the Comprehensive Maintenance Program and has been steadily worked at since report date. It is estimated that approximately \$200,000 - \$300,000 has been spent. The source of funding has been the Capital and Civic Buildings Comprehensive Maintenance Reserve (CBCM) together with monies from Council.

The CBCM, which charges each operating department 1.2% of the new replacement value of capital infrastructure is used to do the planned maintenance of existing infrastructure. Exceptions arising from decisions on timing or application are noted below:

1. Many audited existing buildings did not have a “public” component, such as Fire Halls (other than the main hall #1) where wheel chair access or accommodated health access would never arise and as a result the decision was made to not spend in these areas.
2. Existing facilities with hardware, tactile cue, or handrail extension deficiencies were also not completed awaiting a larger renovation or expansion to accommodate the removal and replacement intents. An example of this would be the Mendel Art Gallery which will have these modifications done as part of the 2009/2010 Expansion/Renovation. Funds totaling \$125,000 have been allocated within the planned Mendel Art Gallery Capital Project.



The cost to complete the changes related to the report against the 1995 National Building Code standards is very close to complete once the Mendel is finished.

A dollar estimate was not available to bring the facilities up to the most recent National Building Code and that would require a full audit. However, the approach of using the CBCM reserve to fund planned infrastructure maintenance means that monies will be available in the future as required in the future to do this work. There is also in place a 5 Year Plan together with a tentative Ten Year Plan that will allow the incorporation of such changes.

5.8 Access Transit

The buses operate from 6 am in the morning to 11:30 pm at night, which is 18 hours a day/ 7 days a week/ 365 days a year. The operators work through all statutory holidays.

Customers can book 7 days in advance or same day pick up. Of all pick ups 50% are Subscriptions, or pre-booked for the same time(s) each day on an ongoing basis.

Bookings are done by email, phone or fax on an equal basis. Four clerks staff the booking and scheduling system, with average wait time of 20 minutes.

Currently the facility is maxed on space according to the Manager. The system is operated by one Manager and one Supervisor.

The service is from Accessible Door to Accessible Door. They will assist people but will not do transfers. A person requiring a transfer is expected to have an attendant.

The buses are fitted with GPS. Drivers wear uniforms. In terms of fares, structure is the same as the city buses.

In terms of training, each driver who is hired is provided with 5 to 6 days training before they are on the road by themselves.

Training consists of:

1. General Rules & Procedures including:
 - Pick up procedures
 - Operation of lift
 - Secure of client including operation of Q-Strait
 - Transport
 - Vehicle operation
 - De-acceleration
 - Videos
 - Defensive driving
2. SMART Driver Program
3. Learn the city including high density trip areas
4. Sensitivity training including an understanding of common disabilities
5. Operator Rules of Conduct
6. Radio training



Each driver must have a Class 4 License. 2A or 1A licenses are not required as the buses do not have air brakes.

Each operator spends 2 days with the Trainer, as well as One-on-One with 3 current drivers so they can observe and practice the techniques. Each of the current operators provides an evaluation of the trainee. The Trainer also conducts Site Visitations at 3 sites to interview the customer and to observe the driver in their use of equipment.

Major Constraints

Lack of Loading Zones for pick up and drop off are a major concern at key locations such as doctor's offices and the Galaxy Theatre. There are handicapped parking spaces but frequently the bus cannot access the spots.

A suggestion that is being made to the Accessibility Committee is for the Access Transit to use conventional bus stops where they are available.

Demand

A key part of the zoning study was the analysis conducted by the Acting Manager Access Transit, who identified the postal codes of their clients and the number of pickups done at those postal codes during a four month period from January 1, 2008 until April 30, 2008. This allowed the consultants to plot this data and with the assistance of the City of Saskatoon, Mapping Staff they created a density profile of the city.

The transit management also did the same exercise for drop-offs, but for purposes of time, the consultants used only the pick up points.

The time period of January to April is important to the reader. Usage of the system dramatically picks up with the first snow and extends through to spring snow melt. Thus the time period of January to April is also expected to be fairly representative of the fall period.

5.9 Development Standards

Development Services Branch, at City Hall, reviewed the guidelines and all seemed to be in order with no objections on any part of the guidelines from this department.

5.10 Leisure Services

Items pertaining to customer service training were seen as a very good component in the guidelines document. A lot of the training could happen on a weekly or monthly basis, where people would talk about any experiences they've had and how they dealt with resolving the situation. This would build on staff awareness regarding issues faced by seniors and people with disabilities and how they should be addressed.

There are currently no programs that target people with various disabilities. Leisure guide does not have any identification whether the programs are available to people with disabilities. The reasoning behind this was not to segregate the disabled into their own category, however after looking at other leisure guides throughout Canada and mentioning the fact that there are sections in the guide available on



“accessible programming” it was seen as beneficial to identify whether any program is available for people with disabilities.

5.11 Community Development

- When the playground replacement program was introduced it was estimated that an average cost of installing at least one accessible component at a playground would be approximately \$20,000.
 - Currently it costs \$40,000 dollars to add an accessible component to the already existing playground. For 2009 the total budgeted amount for accessible components is \$160,000 based on doing upgrades to 4 playgrounds.
- Upgrades are being done to approximately 4 playgrounds per year.
- When the initial inventory of playgrounds was done there were 109 playgrounds in the city. 40 of them were wooden and since this replacement program started have done 17 playgrounds to date.
- Everybody’s Playground in Erindale cost \$207,800 (in 2003) dollars, so in order to include one in each of the remaining three quadrants of the city, would need three more playgrounds and at least \$750,000 (in 2008 dollars).
 - Currently a fully accessible playground is being installed in Blairmore Suburban Centre – Morris T. Cherneskey Park - and will be completed by the end of the year.
 - 2009 – fully accessible playground is budgeted to be installed at the WW Ashley Park (Taylor Street)
 - 2010 – fully accessible playground will be installed in the Mayfair Neighbourhood – Ashworth Holmes Park.

5.12 Human Resources

- Did cross cultural training – cost was approximately \$7,500 to do this. Gathered staff and trained them on how to deal with people/employees from various cultures. This was complaint driven.
- Having customer service training incorporated would probably cost the same if not more. This can be included as a part of weekly or monthly meetings, where people get to share their experiences and how they dealt with issues and concerns.



6 Secondary Research and Literature Review

Two rounds of consultation occurred with many of the city staff. The first round occurred regarding the guidelines and obtaining their feedback. After the development of priority areas, consultation occurred again to gather information on costs.

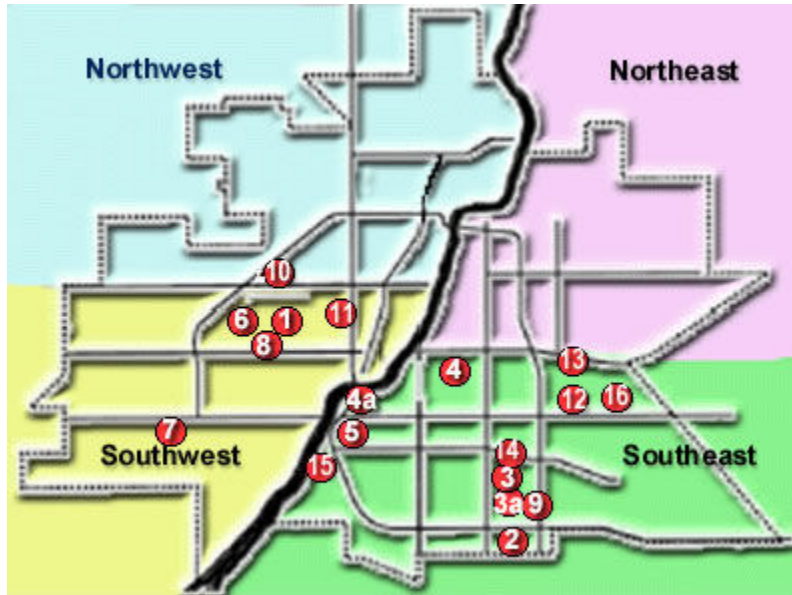
In addition to the gathering of demographic and residence information to create the zones, additional information was also consulted to determine what other cities were doing in terms of priority setting, training, communications, and transit.

Section 6.1 details the additional information used to create the zones. Section 6.2 identifies additional research conducted to determine the requirements, possible sources, and additional costs for other areas including training, communications, and transit.

6.1 Statistical Data

- a. Where do persons with disabilities and seniors live in Saskatoon?
 - In terms of people with disabilities, Statistics Canada can only tabulate the requested data at the provincial level. They can use the Census information (which asks if a person has activity limitations) to tabulate data at the city and town level. Costs start at \$1,115 and can take up to 9 weeks to obtain the tabulations.
 - Canadian Institute for Health Information did not have any of the required information.
 - Contacted Saskatoon Association for Community Living asking if they would be willing to provide postal codes or street names of their contacts with disabilities living in Saskatoon. However, they mostly work with intellectual disabilities, and so they recommended looking at the location of nursing homes, senior residences, etc.
 - Other organizations that work with persons with disabilities in Saskatoon and Saskatchewan that were contacted include: Saskatchewan Abilities Council, Learning Disabilities Association of Saskatchewan, Disability Income Support Coalition, Saskatchewan Voice of People with Disabilities, and the North Saskatchewan Independent Living Centre.

To assist in the process of determining where seniors and those with disabilities reside in Saskatoon, a list of all the assisted living residences and senior homes in Saskatoon were researched. This information was gathered from the Saskatoon Library Database of Senior Residences.



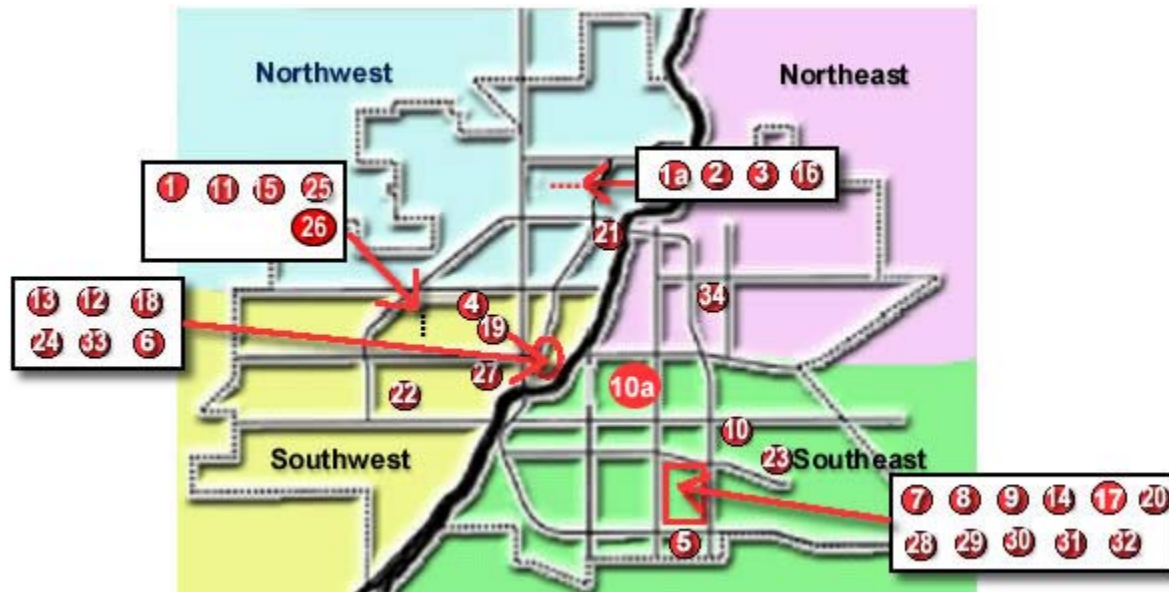
- Above is a distribution of Special Care Homes in Saskatoon. A special care home, or nursing home, is defined as a residence for individuals who require much assistance with all the activities of their daily living.



- Above is a distribution of Personal Care Homes in Saskatoon. A personal care home is "a private business that provides accommodation, meals and supervision or assistance with personal care to adults in a residential, family-like atmosphere.." (definition from *Personal Care Homes Directory*)



- Above is the distribution of Supported Independence Residents in Saskatoon. A supported independence residence is an apartment complex where residents have their own suite but may access services such as meals, housekeeping, and an emergency call service.



- Above is the distribution of Self-Contained Units in Saskatoon. Self-contained units are apartment complexes where residents are wholly responsible for their own meals, laundry, housekeeping, etc. Some self-contained units provide limited support services.

(Above info can be found at: <http://www.saskatoonlibrary.ca/housing/index.html>)

In addition, Census information was utilized to determine the proportions of seniors in each neighborhood. This appears in the following section: Development of Priority Zones.



6.2 Other Municipalities Initiatives

6.2.1 Training

To determine the need for and potential costs of training, Inshtrix reviewed other city practices. It was found that some other cities:

- Commented on the importance of sensitivity training with respect to persons with disabilities. An approach to have the City 'lead by example' was being commonly mentioned as well.
- Promoted hiring a Disability Resource Expert (staff, consultants, volunteers that have first hand advice and experience), to assist in the development and delivery of training, due to the complexity and diversity of disability issues.
- Integrate sensitivity training into new employee orientation process.

Some specific examples are as follows:

City of Mississauga

- The Human Resources department has been put in charge of developing training material for municipal employees to heighten sensitivity to customer needs (meeting all customer needs) and greater acceptance of disabled workers.
- They intend to hire Disability Resource Experts to develop the training materials.

City of Brampton

- Transit and Emergency Services includes sensitivity training as part of their new employee orientation process.

County of North Middlesex

- Plans to incorporate sensitivity training into current training programs.

City of Kingston

- Plans to incorporate sensitivity training into current training programs.

Ontario municipalities are welcoming this training in order to achieve the AODA's standards for Customer Service.

6.2.2 City Transit

To determine the need for and potential costs regarding transit, Inshtrix reviewed other city practices. It was found that some other cities:

- Have low floor accessible buses that are used in conjunction with conventional buses in the main transit system. Goal in place is to have all routes accessible within the next 5-10 years.
- Have a subsidized taxi program (Taxi Scrip) where people pay about ½ the regular price using coupons.
- Distribute "Hailing Kits" from the CNIB, for visually impaired passengers. The "Hailing Kit" is made up of plastic, three sleeved folder and a set of numbers that are in large print and also have the Braille numbers embedded on the cards. These night-reflective cards can be waved at an approaching bus to let the driver know which route the rider wants to board. It also includes a "reminder" card that can be given to the operator to ensure the rider is informed when his/her stop is approaching.
- All cities state in their rider policy that persons who wish to use the low floor buses must be able to enter and exit the bus independently. The bus driver is not responsible for assisting them, except for securing them in place.



Some specific examples are as follows:

City of Guelph

- Mobility Service provides service from accessible door to accessible door within city limits. At times, taxis will be used to meet demand.
- Currently have 14 fully accessible bus routes, with a goal of making all bus routes fully accessible.
- 35 of 55 conventional buses are low floor accessible.
- Bus drivers announce all stops
- Taxi Scrip Program - Persons using a wheelchair or scooter can book directly with Red Top Taxi. A \$40 coupon book may be purchased for \$20. The costs associated with the program are shared by transit and the taxi company.

Grand River Transit (Kitchener, Waterloo, Cambridge)

- MobilityPlus provides specialized transit services for persons with reduced mobility. Allows for temporary and seasonal use. Must book at least 2 days in advance.
- Use of low floor accessible buses running on many routes.
- MobilityPlus members can ride low floor accessible buses for free, provided they can safely board and exit the bus independently.
- If a person has trouble boarding a low floor bus without assistance, they may be required to attend a bus training session run by transit. These are held multiple times a year to meet demand.
- Taxi Scrip Program – similar to program in Guelph

City of London

- Use of low floor accessible buses on select routes
- Cherryhill Community Bus – specialized bus specifically designed for seniors and persons with mobility challenges. This bus goes to specified senior residences, medical facilities, and shopping centres.
- Specialized Transit – consists of a community bus service similar to above, shuttle service and paratransit services. Trip planning and Travel Training programs are in place to assist travelers that may require a higher level of support.

City of Kingston

- Distributed “Hailing Kits” for persons who are visually impaired. A “Hailing Kit” consists of a night reflective card that can be used to wave down a bus and a reminder card that can be given to a bus operator to ensure they notify the passenger of the desired stop.

Low Floor Accessibility

Many cities across the country have made a commitment to make their conventional transit systems fully accessible within the next 5 to 10 years. This means that the entire fleet of buses will have low-floor accessibility. Low-floor accessible buses have the ability to lower the front right corner of the bus to within 6-8 inches from the curb, eliminating the need to step up to enter the bus. The low-floor accessible buses also have a ramp that can be extended to the curb for persons in wheelchairs.

Low-floor accessible buses have clearly become a necessity for many cities across the country. Cities such as Kingston, London and Toronto, lead the country with respect to accessibility improvements. This can be attributed to the fact that Ontario has a Disability Act that requires municipalities to invest in accessibility planning.

Training

In 2002, City of London started to offer a training and familiarization program for the use of accessible conventional transit by eligible registrants of the specialized service (equivalent to Access Transit).



Further, the program provided training support for applicants deemed ineligible for the specialized service. The program is listed in the Accessibility Directorate's website as a best practice.

As an incentive, trips on the accessible conventional service were provided free for the target customers and one companion, during off-peak hours (9:00am – 2:00pm and 6:00pm – 12:00am) on weekdays, and all day on weekends and statutory holidays. At peak times on weekdays, the customer paid the prevailing fare.

The program had two principle objectives:

1. To support increased opportunity for travel and access to the community by designated individuals, addressing in part the latent demand for specialized transit services; and
2. To relieve pressure on the specialized transit service, freeing up resources to be used to support other forms of specialized transit services and/or meet increased demand for the service.

The program has been extremely successful, resulting in approximately 24,700 trips being taken on London's accessible conventional transit service by specialized transit service registrants. These trips may have otherwise been provided by or requested for the specialized transit service. The program has received a positive response from the community as indicated by the following:

- 55% of pass holders had never tried accessible conventional transit prior to having the pass
- 89% of customers that made use of the pass indicated their experience on the accessible conventional transit service was good to excellent
- 60% of the trips provided on the accessible conventional service were reported by customers as being trips in addition to those normally taken on the specialized service

In 2003, the City of London implemented a new operator training program for conventional transit operators. This was done to ensure that front line employees had the necessary knowledge to assist riders with disabilities to use accessible conventional transit. Accessibility awareness and sensitivity training was delivered to all employees and was included as part of training program for new employees.

In 2007, the City of London added to the operator training program by adding ongoing refresher training for existing employees. The City estimated that 65% of operators will have undergone the new training by the end of 2007.

Driver Responsibilities

The literature review looked at the policies of various cities across the country including, Calgary, Kingston, Guelph, London, Kitchener, and Waterloo. All cities clearly stated in their transit services policy that riders in wheelchairs or scooters using accessible low-floor buses are responsible for ensuring that they can enter the bus, position themselves in the designated area, and exit the bus in a safe and efficient manner. Failure to do so could result in the refusal of service. If assistance is required then riders are required to have an attendant who can help them enter and exit the bus. The main reason for this policy is a liability issue.



7 Development of “priority zones” and findings

7.1 Setting Priorities

There are various ways of setting priorities and implementing action plans. Research conducted on other municipalities and their processes for determining priorities focuses on:

- Retrofitting initiatives
- Usage of the facility/location/area
- Health and Safety Considerations
- Coordinating efforts with other planned upgrades

In most cases, not only priorities but timelines are also defined based on the priorities. Below is an example used at Brock University:

<p>Priority 1</p>	<p>Changes recommended are maintenance related and can be made within the confines of regularly scheduled operations. For example, installing new light bulbs when burned out to maintain appropriate lighting levels, lowering an existing sign or light switch to a more accessible level. No timeline is associated with this area.</p>
<p>Priority 2</p>	<p>Changes identified require immediate consideration and the development of timeline to address identified issues. A two-year time frame for completion of projects associated with these issues is recommended. Failure to address the identified issues may put the University at risk of non-compliance with government regulation or legislation.</p>
<p>Priority 3</p>	<p>Changes recommended are desirable to assist the University in more effectively meeting the access needs of people with disabilities. Therefore, action is recommended within 5 year time frame. Implementing the recommendations will result in lower incidents of possible complaints and increased service levels.</p>
<p>Priority 4</p>	<p>Changes recommended are suggestions for consideration in future planning and/or capital projects as resources become available. They may serve as ways to prevent barriers.</p>

Following a similar approach, priorities for the implementation of an Action Plan for Accessibility in Saskatoon are set determining the demographics, living residences of seniors and those with disabilities, as well as identified problem locations based on public consultation (ie. Focus groups). Costs have also been taken into account and calculated in the next section.



7.2 Determining Priority Neighbourhoods

In order to identify possible areas of the city for the Accessibility Advisory Committee to target for accessibility improvements, Inshtrix Research conducted extensive research regarding the demographic composition of the city by neighbourhood boundaries. The focus was on determining neighbourhoods that contained a high proportion of persons with disabilities, seniors, and senior or personal care residences.

7.3 Identifying Persons with Disabilities

To determine the location of persons with disabilities, several organizations that work with persons with disabilities were contacted. The Saskatchewan Abilities Council (SAC) provided a list of postal codes for participants of their Saskatoon Training program, Partners in Employment (PIE) program, and Disability Parking Permit program. The PIE program provides employment services for individuals with work-related barriers to find, secure and maintain long term employment. The Parking Permit program is administered by SAC on behalf of SGI. Access Transit also provided a list of postal codes for their users' pick up points for the first quarter of 2008. These postal codes do not necessarily represent where users live, but rather where the transit service is being used.

With the help of the City Planning Branch, these postal codes were grouped by city neighbourhoods and sorted from highest to lowest according to the number of postal codes that fell within each neighbourhood boundary for each set of postal codes. Based on the neighbourhood rankings within each set of postal codes, the neighbourhoods were further divided into five color groups. The five color groups were derived by taking the highest number of occurrences and dividing that number by five. The resulting value was used to determine range for each color.

Table 1 - Saskatchewan Abilities Council Trainees

SAC Training Program	
Neighborhood	Occurrences
Nutana Park	8
Parkridge	8
Eastview	7
Lakeview	7
Pleasant Hill	7
Westview	7
Meadowgreen	6
Wildwood	6
Avalon	5
Fairhaven	5
Haultain	5
College Park	4
Pacific Heights	4
Adelaide/Churchill	3
Brevoort Park	3
City Park	3
College Park East	3
Confederation Park	3
Exhibition	3
Massey Place	3
Mount Royal	3
Queen Elizabeth	3
Erindale	2
Forest Grove	2
Holiday Park	2
Holliston	2
Hudson Bay Park	2
Lawson Heights	2
Nutana Suburban Centre	2
River Heights	2
Silverwood Heights	2
Briarwood	1
Buena Vista	1
Caswell Hill	1
Confederation Suburban Centre	1
Dundonald	1
Grosvenor Park	1
Montgomery Place	1
North Industrial	1
North Park	1
Nutana	1
Riversdale	1
Sutherland	1



The neighbourhoods of Nutana Park, Parkridge, Eastview, Lakeview, Pleasant Hill and Westview had the highest number of occurrences. Based on the SAC data, these neighbourhoods were classified as having the highest priority.

Table 2 - Saskatchewan Abilities Council Partners in Employment (PIE) Program

SAC PIE Program

Neighborhood	Occurrences				
		Greystone Heights	8	Exhibition	3
Pleasant Hill	30	Westview	8	Holiday Park	3
		Dundonald	7	North Park	3
Riversdale	20	Mayfair	7	Silverspring	3
Meadowgreen	15	Buena Vista	6	Arbor Creek	2
City Park	13	Eastview	6	Lakeridge	2
Sutherland	13	Holliston	6	Lakewood	2
Confederation Park	12	Nutana Suburban Centre	6	Suburban Centre	2
Nutana	12			Montgomery Place	2
Central Business District	11	Wildwood	6	Nutana Park	2
Fairhaven	11	Hudson Bay Park	5	Queen Elizabeth	2
Parkridge	11			Richmond Heights	2
Silverwood Heights	11	Pacific Heights	5	Varsity View	2
College Park	10	River Heights	5	Airport Business Area	1
College Park East	10	Confederation	4	Grosvenor Park	1
Brevoort Park	9	Suburban Centre	4	Hudson Bay	1
Caswell Hill	9	Haultain	4	Industrial	1
Lakeview	9	Kelsey - Woodlawn	4	Lawson Heights	1
Massey Place	9	King George	4	U of S Lands	1
Mount Royal	9	Adelaide/Churchill	3	South MA	1
Westmount	9	Avalon	3	University Heights	1
Forest Grove	8	Briarwood	3	Suburban Centre	1

Based on the PIE data, the neighbourhoods of Pleasant Hill and Riversdale were classified as having the highest priority.



Table 3 - Saskatchewan Abilities Council (SGI) Parking Permits

SAC Parking Permits

Neighborhood	Occurrences		
Nutana Suburban Centre	444	Varsity View	80
Wildwood	367	Dundonald	79
Central Business District	207	Forest Grove	78
Lawson Heights Suburban Centre	206	Nutana Park	78
Mount Royal	199	Massey Place	76
Silverwood Heights	176	Exhibition	74
Nutana	141	Erindale	72
City Park	134	College Park East	70
Sutherland	127	Mayfair	67
Lakeview	124	Montgomery Place	66
Adelaide/Churchill	123	Pacific Heights	66
Confederation Park	123	Pleasant Hill	65
College Park	116	Haultain	62
Eastview	113	Parkridge	62
Fairhaven	110	Briarwood	61
University Heights Suburban Centre	108	Greystone Heights	61
Hudson Bay Park	106	Caswell Hill	60
Holliston	95	Richmond Heights	58
Brevoort Park	92	Holiday Park	55
Avalon	89	Silverspring	55
Buena Vista	86	Queen Elizabeth	54
River Heights	86	King George	48
Westview	86	North Park	47
Meadowgreen	85	Lakeridge	46
Lawson Heights	82	Westmount	41
		Arbor Creek	39
		Riversdale	35
		Grosvenor Park	34
		Stonebridge	30
		Kelsey - Woodlawn	18
		Confederation Suburban Centre	16
		Lakewood Suburban Centre	16
		Willowgrove	11
		Airport Business Area	5
		The Willows	5
		West Industrial	4
		Hudson Bay Industrial	3
		Central Industrial	1
		Hampton Village	1
		North Industrial	1
		South West Industrial	1
		U of S Lands South MA	1

Based on the Parking Permit data, the neighbourhoods of Nutana Suburban Centre and Wildwood were classified as having the highest priority.



Table 4 - Access Transit Pick-ups

Access Transit Users

Neighborhood	Occurrences
Nutana Suburban Centre	2808
Central Business District	2792
College Park	1222
Parkridge	1172
Wildwood	1172
City Park	1097
Confederation Park	825
Pleasant Hill	820
Mount Royal	749
U of S MA	662
Lawson Heights Suburban Centre	502
Meadowgreen	485
Nutana	473
Fairhaven	400
Caswell Hill	364
Hudson Bay Park	362
Silverwood Heights	358
Confederation Suburban Centre	333
Buena Vista	323
Eastview	312
Greystone Heights	306
Varsity View	298
Lawson Heights	287

Queen Elizabeth	284
Sutherland	283
Airport Business Area	277
Agriplace	256
Forest Grove	243
Haultain	202
Richmond Heights	199
Stonebridge	195
Mayfair	194
Holliston	188
Adelaide/Churchill	170
Kelsey - Woodlawn	166
Nutana Park	160
Pacific Heights	158
Exhibition	153
Dundonald	150
River Heights	148
Lakeview	140
Westview	120
Erindale	115
Holiday Park	113
Lakeridge	102
Riversdale	102
Grosvenor Park	95
Montgomery Place	92
Westmount	88
King George	84

North Industrial	78
Brevoort Park	74
Avalon	71
College Park East	66
University Heights Suburban Centre	63
Silverspring	56
Briarwood	43
Arbor Creek	39
Massey Place	36
North Park	30
Willowgrove	18
Lakewood Suburban Centre	13
Sutherland Industrial	8
Hudson Bay Industrial	4
Central Industrial	3
CN Industrial	3

Based on the Access Transit data, the neighbourhoods of Nutana Suburban Centre and Central Business District were classified as having the highest priority. This is an identical result to the SAC Parking Permit data above.



7.4 Identifying Senior Population

The Neighbourhood Profiles on the City of Saskatoon Website was used to calculate the percentage of seniors that lived in each neighbourhood relative to the total population of each neighbourhood. The neighbourhoods were sorted from highest to lowest based on their percentage of seniors and grouped by color. The range for each color had to be adjusted to account for the large number of values between 19% and 1%.

Table 5 - Senior Population

Senior Population

Neighborhood	Percentage of Seniors		
Nutana SC	69%	King George	10%
Lawson Heights SC	51%	Sutherland	10%
Central Business District	45%	Montgomery Place	10%
Richmond Heights	32%	Westmount	10%
Hudson Bay Park	28%	Mayfair	10%
Mount Royal	24%	River Heights	10%
City Park	19%	Fairhaven	9%
Avalon	19%	Caswell Hill	9%
Wildwood	18%	Meadowgreen	8%
Adelaide/Churchill	18%	Pleasant Hill	8%
Eastview	18%	Massey Place	8%
Varsity View	18%	Lawson Heights	7%
Holliston	17%	Lakewood SC	7%
University Heights SC	17%	Briarwood	7%
Greystone Heights	17%	Parkridge	6%
Queen Elizabeth	15%	Westview	5%
Nutana Park	15%	Lakeview	5%
Buena Vista	15%	Pacific Heights	4%
North Park	15%	Erindale	4%
Exhibition	14%	College Park East	4%
Stonebridge	14%	Airport Business Area	4%
Grosvenor Park	14%	Silverwood Heights	4%
Haultain	13%	Confederation Park	3%
Brevoort Park	13%	Dundonald	3%
Nutana	13%	Forest Grove	3%
Kelsey - Woodlawn	12%	Silverspring	3%
College Park	12%	Lakeridge	2%
Holiday Park	12%	Arbor Creek	2%
Riversdale	11%	Willowgrove	1%
Confederation SC	10%	U of S Lands South	1%
		MA	1%



Nutana Suburban Centre has the highest density of seniors, with 69% of the neighbourhood’s population being over the age of 65. Lawson Heights Suburban Centre comes is second with 51% of the population being Seniors.

Identifying Senior Residences

The Saskatoon Library Online Directory of Senior Housing was used to gather a list of postal codes for all types of senior residences in Saskatoon including Special Care Homes, Personal Care Homes, Supported Independence Residences, and Self Contained Units. Similar to Tables 1-3, the postal codes were grouped by City neighbourhood, ranked from highest to lowest, and grouped by color.

Table 6 - Senior Residences

Senior Residences

Neighborhood	Occurrences
Nutana Suburban Centre	18
Central Business District	7
Lawson Heights Suburban Centre	6
Wildwood	6
Hudson Bay Park	5
Mount Royal	5
Buena Vista	4
City Park	3
Haultain	3
Silverwood Heights	3
Stonebridge	3
Varsity View	3
College Park	2
Richmond Heights	2
Caswell Hill	1
Eastview	1
Erindale	1
Exhibition	1
Greystone Heights	1
Holiday Park	1
King George	1
Lawson Heights	1
Meadowgreen	1
Nutana	1
Parkridge	1
Riversdale	1
Silverspring	1
Sutherland	1

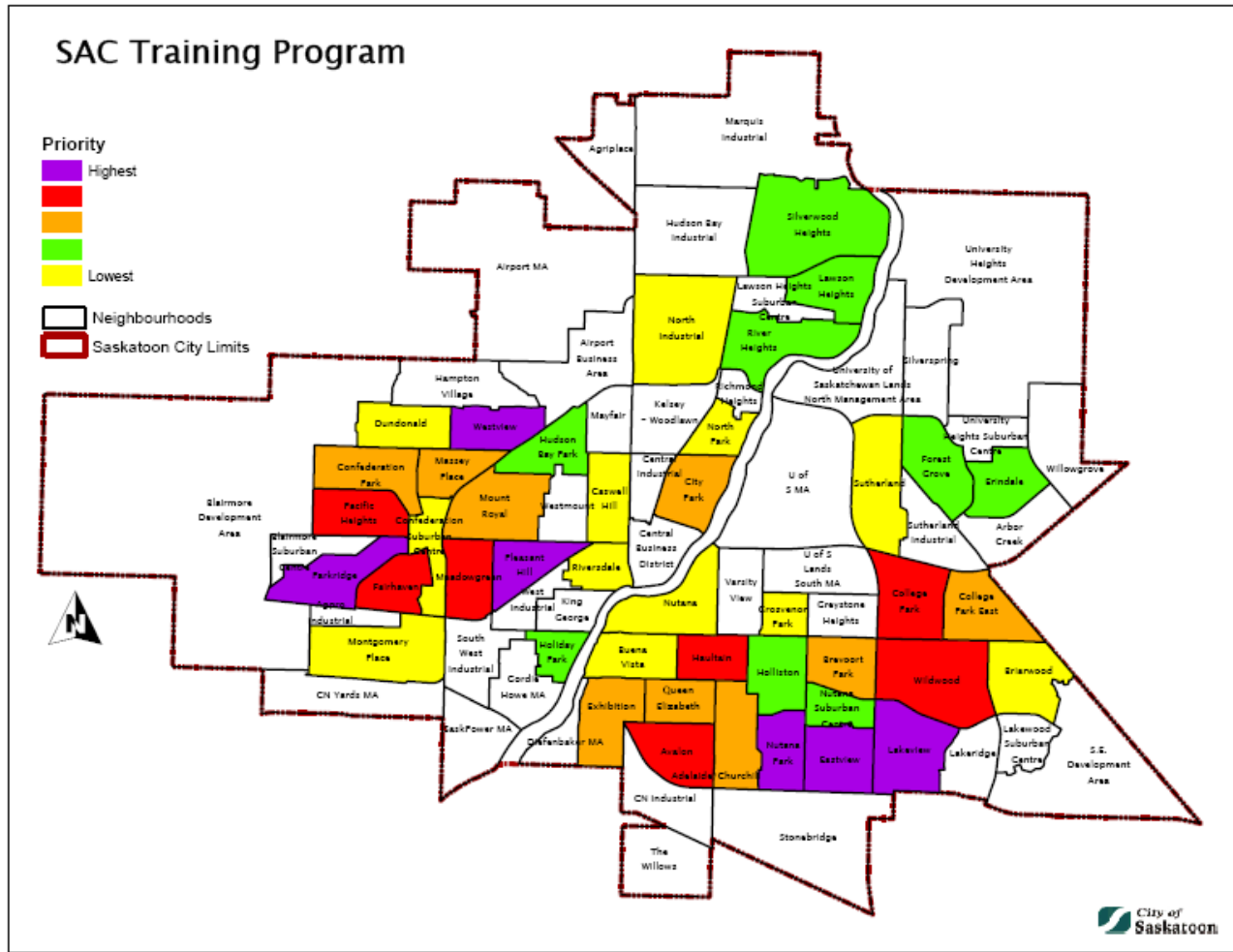
Nutana Suburban Centre has the greatest number of occurrences for senior residences.



7.5 Density Maps

For each Table (1-6), a density map was created to highlight the neighbourhoods in the City that were ranked the highest based on the data that was collected. The colors assigned to neighbourhoods in the preceding tables were used to highlight the priority level of each neighbourhood based on the respective data. The color purple signifies the greatest priority, followed by red, orange, green, and yellow. Neighbourhoods in white had no data fall within its boundaries.

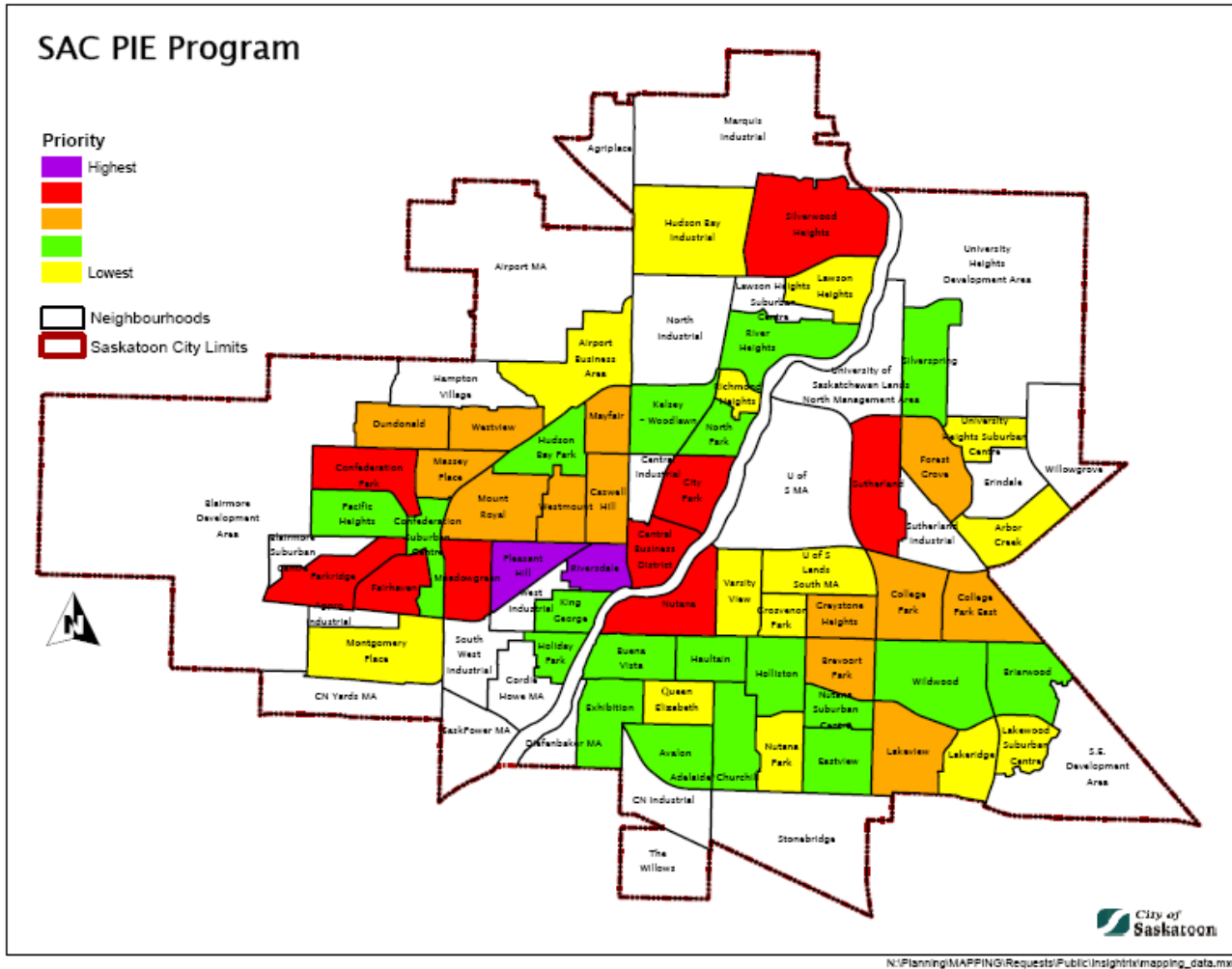
SAC Training Program



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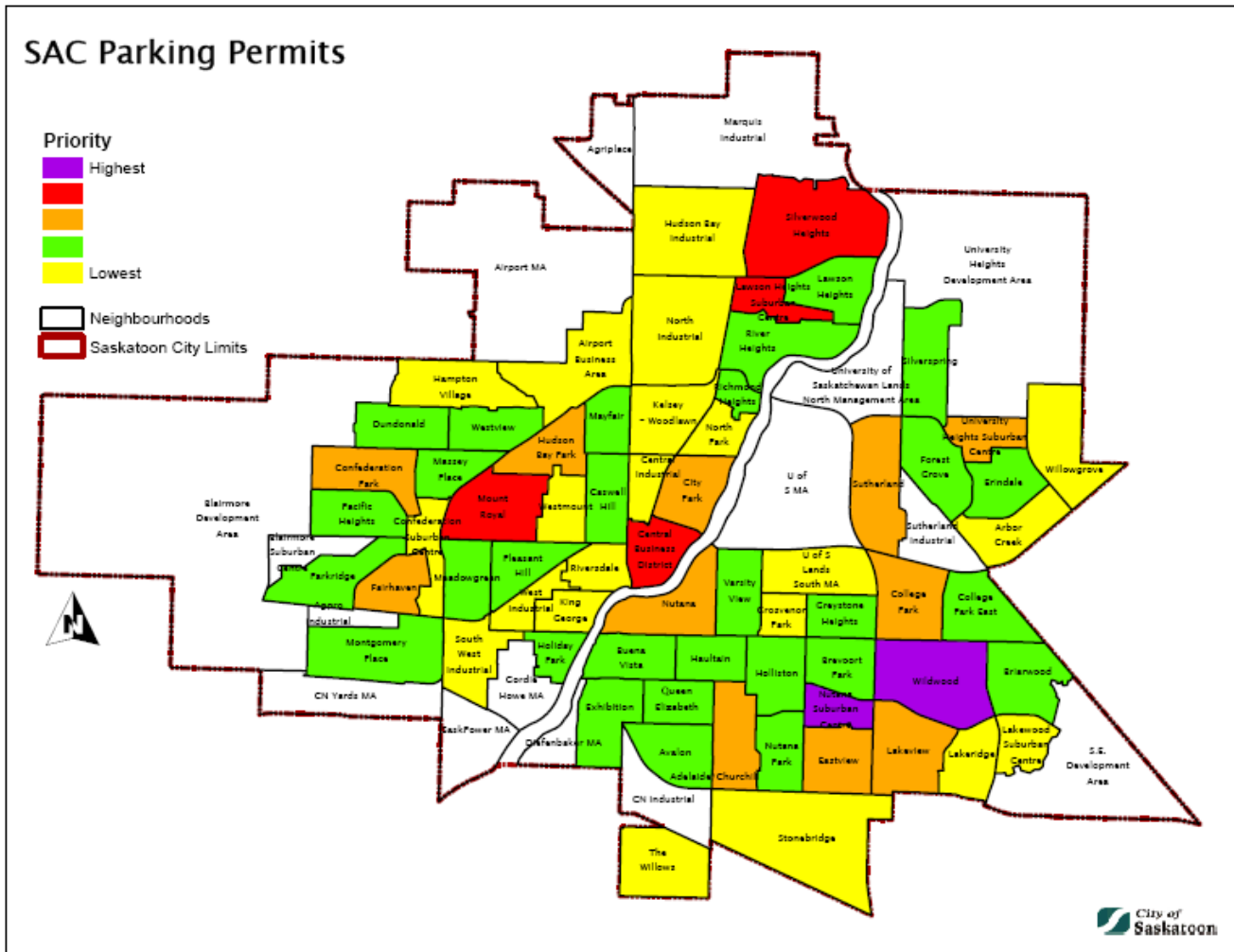


SAC PIE Program





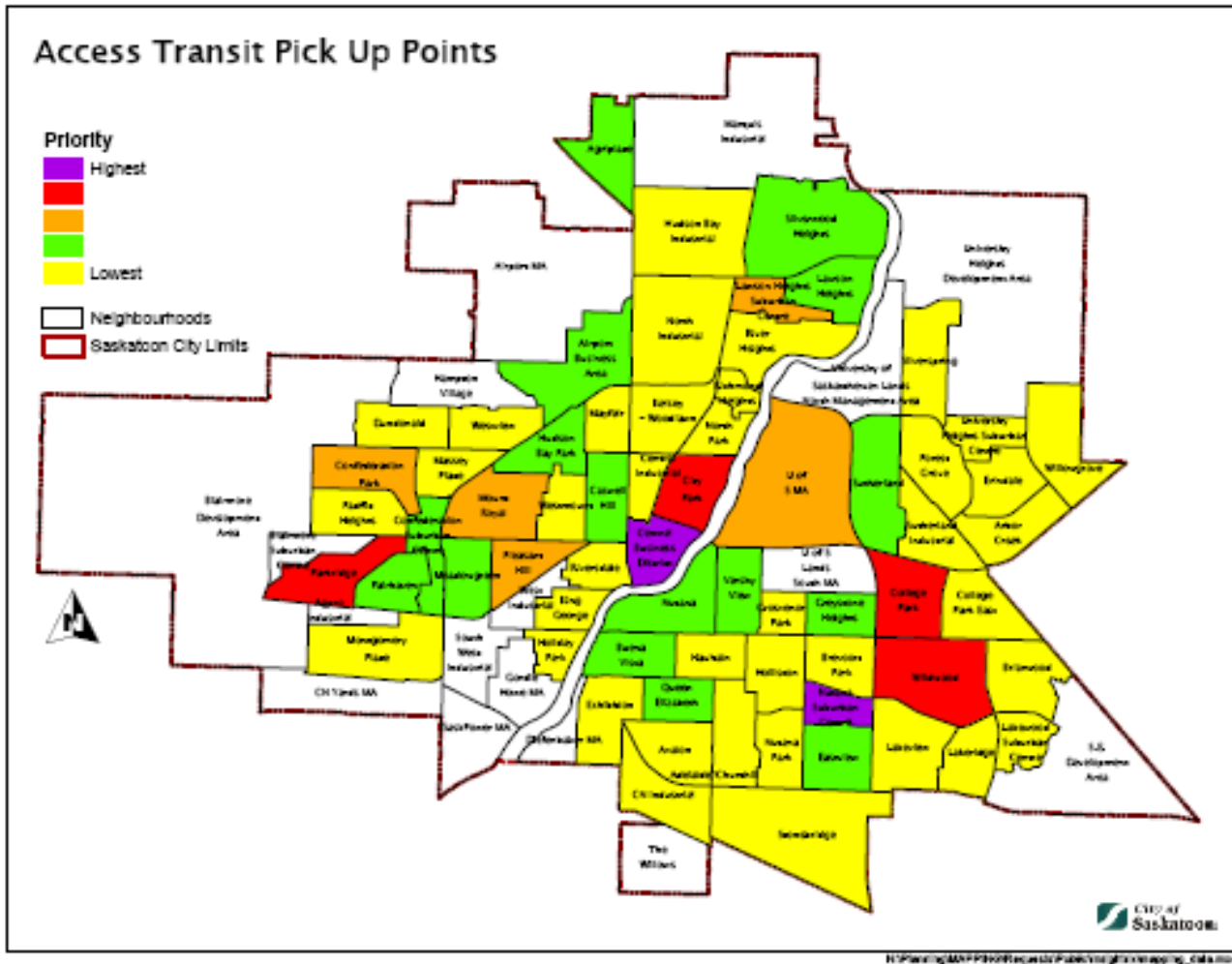
SAC Disability Parking Permits



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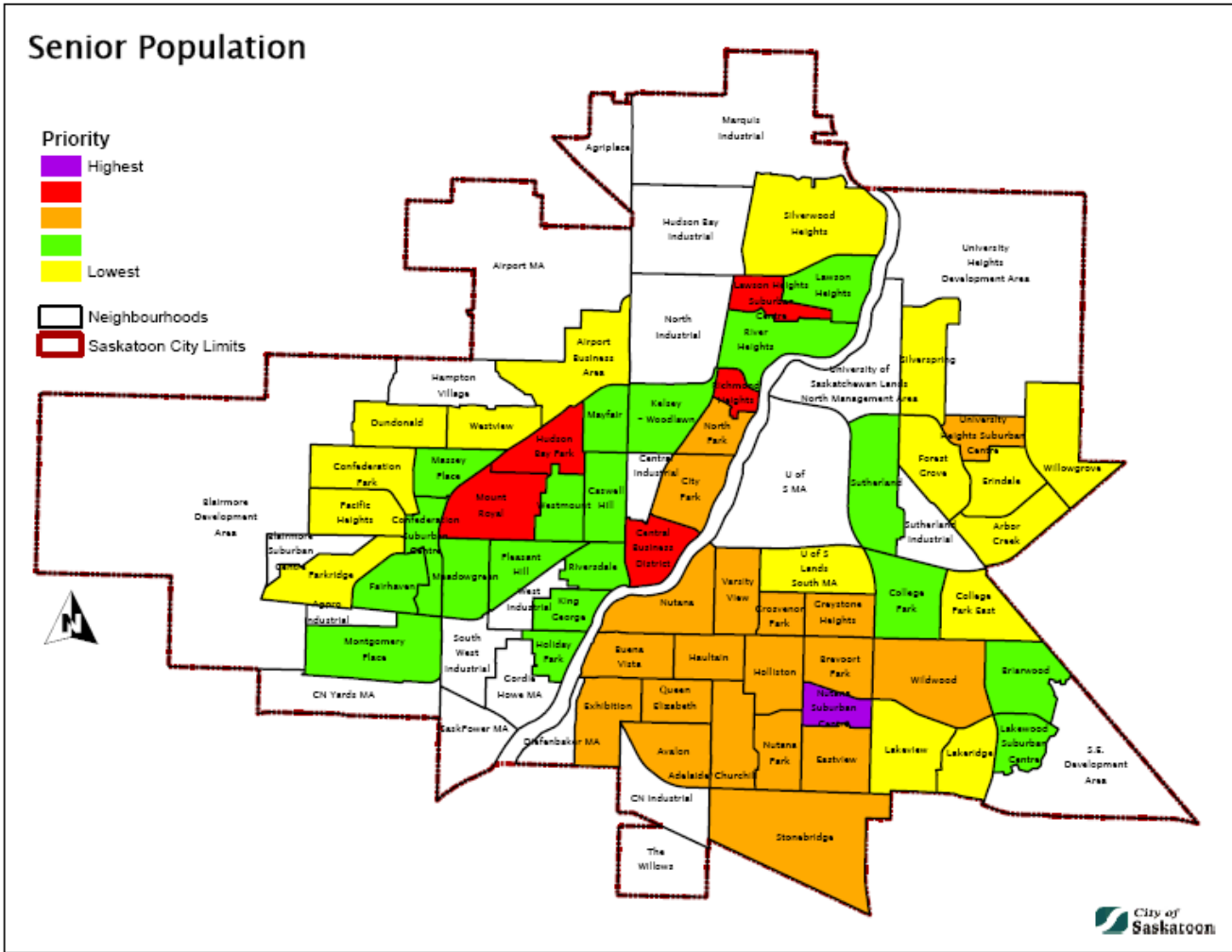


Access Transit Pick Up Points (January – March 2008)





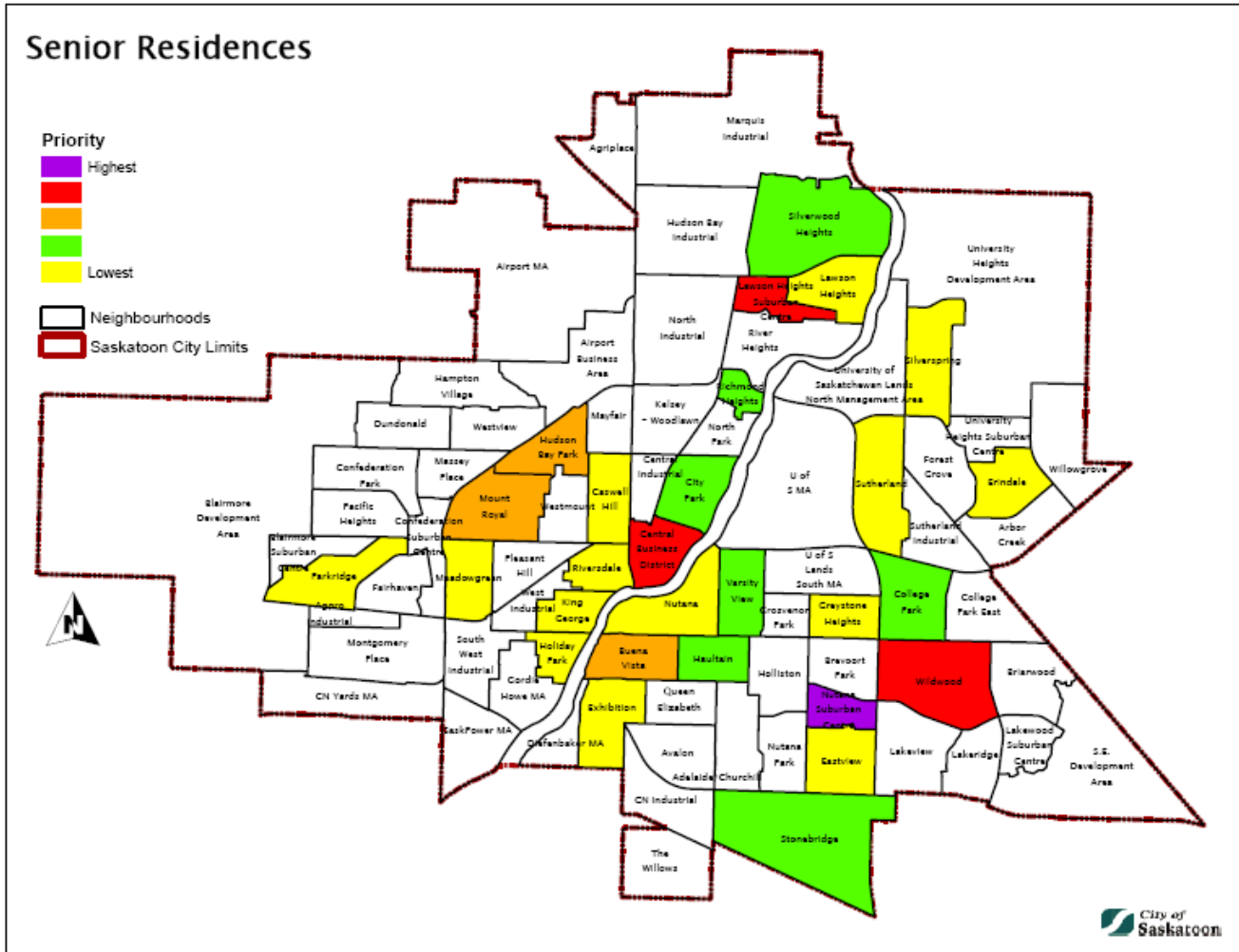
Senior Population



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Senior Residences



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7.6 Overall Representation

To obtain an overall representation of the data that was collected, each neighbourhood was assigned a value based on their color group with purple being the highest (value=5) and white being the lowest (value=0). For example, if a neighbourhood had the color purple, it would receive a value of 5 compared to a neighbourhood with the color yellow which would receive a value of 1 (Table 6). Each of these values was multiplied by a weighting that was given to each set of data, to ensure greater accuracy (Table 7). To avoid working with decimals each neighbourhood total was then multiplied by 100, resulting in a weighted total. Based on the weighted total, the neighbourhoods were grouped by color.

Table 7 - Overall Representation



City of Saskatoon – Implementation of Accessibility Action Plan

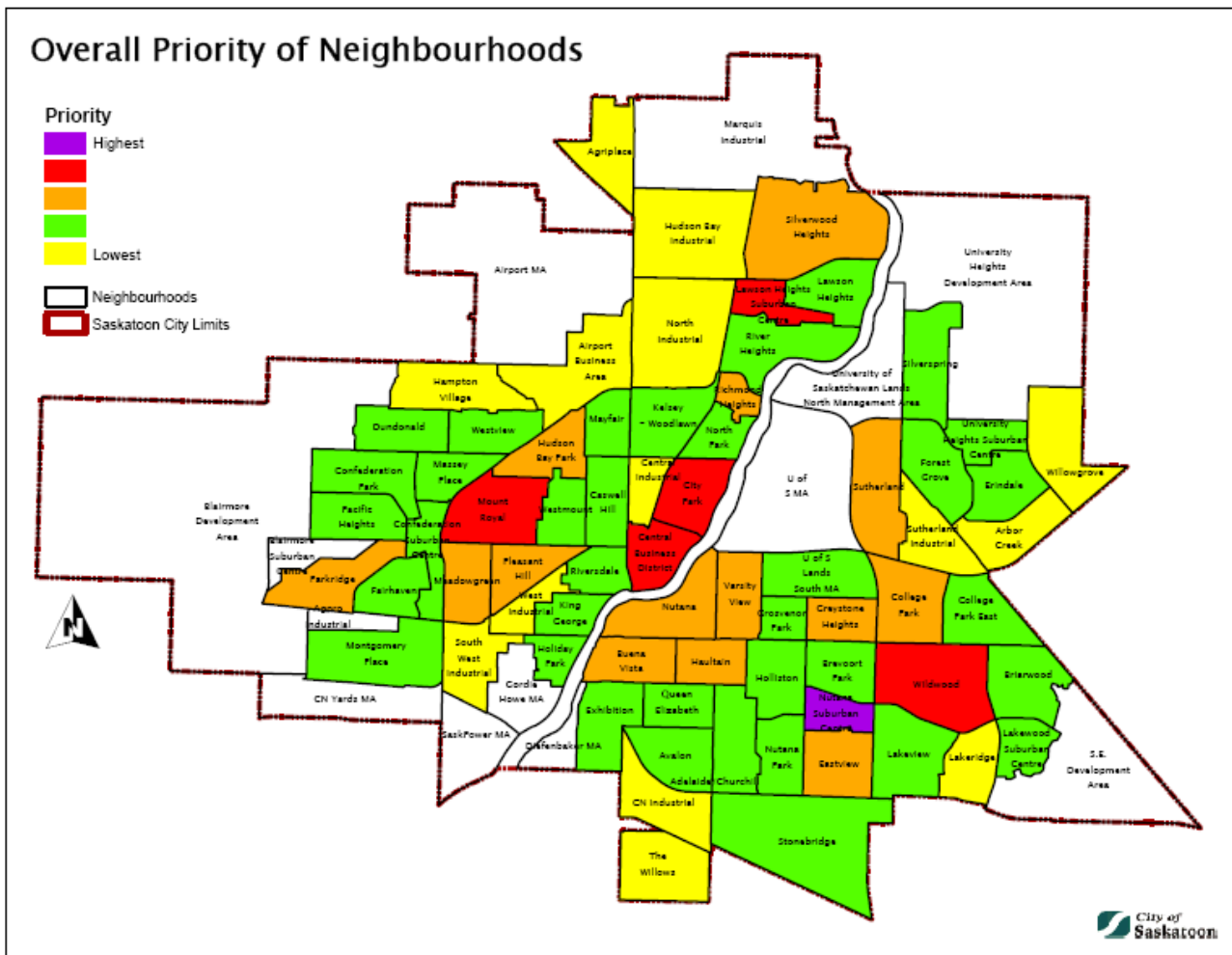
Neighborhood	SAC Training	SAC PIE	SAC Parking	Senior Residences	Senior Population %	Access Transit Pick Up Points	Weighted Total
Nutana Suburban Centre	2	2	5	5	5	5	470
Central Business District	0	4	4	4	4	5	400
Wildwood	4	2	5	4	3	4	380
Mount Royal	3	3	4	3	4	3	350
Lawson Heights Suburban Centre	0	0	4	4	4	3	340
City Park	3	4	3	2	3	4	305
Hudson Bay Park	2	2	3	3	4	2	300
College Park	4	3	3	2	2	4	275
Nutana	1	4	3	1	3	3	255
Buena Vista	1	2	2	3	3	2	245
Eastview	5	2	3	1	3	2	245
Haultain	4	2	2	2	3	2	240
Richmond Heights	0	1	2	2	4	1	225
Meadowgreen	4	4	2	1	2	3	220
Silverwood Heights	2	4	4	2	1	2	220
Parkridge	5	4	2	1	1	4	215
Varsity View	0	1	2	2	3	2	215
Pleasant Hill	5	5	2	0	2	3	210
Greystone Heights	0	3	2	1	3	2	205
Sutherland	1	4	3	1	2	2	205
Fairhaven	4	4	3	0	2	2	200
Adelaide/Churchill	3	2	3	0	3	1	195
Exhibition	3	2	2	1	3	1	195
Queen Elizabeth	3	1	2	0	3	2	190
Confederation Park	3	4	3	0	1	3	185
Avalon	4	2	2	0	3	1	180
Brevort Park	3	3	2	0	3	1	180
Caswell Hill	1	3	2	1	2	2	180
Nutana Park	5	1	2	0	3	1	180
Lawson Heights	2	1	2	1	2	2	175
University Heights Suburban Centre	0	1	3	0	3	1	175
Holliston	2	2	2	0	3	1	170
Stonebridge	0	0	1	2	3	1	170
Holiday Park	2	2	2	1	2	1	160
Lakeview	5	3	3	0	1	1	150
Massey Place	3	3	2	0	2	1	150
Riversdale	1	5	1	1	2	1	150
North Park	1	2	1	0	3	1	145
Grosvenor Park	1	1	1	0	3	1	140
River Heights	2	2	2	0	2	1	140
Briarwood	1	2	2	0	2	1	135
Confederation Suburban Centre	1	2	1	0	2	2	135
Forest Grove	2	3	2	0	1	2	135
Mayfair	0	3	2	0	2	1	135
King George	0	2	1	1	2	1	130
Montgomery Place	1	1	2	0	2	1	130
Westview	5	3	2	0	1	1	130
College Park East	3	3	2	0	1	1	120
Erindale	2	2	2	1	1	1	120
Pacific Heights	4	2	2	0	1	1	120
Silverspring	0	2	2	1	1	1	120
U of S Lands South MA	0	1	1	0	1	3	115
Westmount	0	3	1	0	2	1	115
Dundonald	1	3	2	0	1	1	110
Kelsey - Woodlawn	0	2	1	0	2	1	110
Lakewood Suburban Centre	0	1	1	0	2	1	105
Airport Business Area	0	1	1	0	1	2	95
Arbor Creek	0	1	1	0	1	1	75
Lakeridge	0	1	1	0	1	1	75
Willowgrove	0	0	1	0	1	1	70
Hudson Bay Industrial	0	1	1	0	0	1	45
North Industrial	1	0	1	0	0	1	45
Agriplace	0	0	0	0	0	2	40
Central Industrial	0	0	1	0	0	1	40
CN Industrial	0	0	0	0	0	1	20
Hampton Village	0	0	1	0	0	0	20
South West Industrial	0	0	1	0	0	0	20
Sutherland Industrial	0	0	0	0	0	1	20
The Willows	0	0	1	0	0	0	20
West Industrial	0	0	1	0	0	0	20



SAC Training	Weighting	SAC Training and SAC PIE were given the lowest weighting due to the small size of the sample. The Senior Population Percentage was given the highest weighting because of the known accuracy of the source, Statistics Canada.
SAC PIE	5%	
SAC Parking	20%	
Senior Residences	20%	
Access Transit	20%	
Senior Pop. %	30%	

7.7 Overall Density Map

The following map illustrates the overall level of priority for each neighbourhood by color. Similar to the previous density maps, neighbourhoods in purple have the highest priority followed by red, orange, green and yellow. Neighbourhoods in white had no data fall within its boundaries.





8 Priorities, Costs and Timelines of Completion

8.1 Cost Estimates

Using information from multiple sources including the City departments and secondary information from other municipalities, Insightrix Research obtained costing information. This costing information was applied to those areas determined to be priority as calculated in the previous section. Below are the cost estimates based for the different services/enhancements deemed to be a priority by those consulted during the focus groups (infrastructure, transit, and snow removal) as well as those that were a somewhat lower priority. Both are presented since those with a low priority, in many cases, have a small dollar amount attached to that service or enhancement.

8.2 Cost Estimates – High Importance Items

8.2.1 Disability Ramps

The number of disability ramps that have been constructed in each neighbourhood were tabulated by a representative from Municipal Engineering and provided an estimate of the number of disability ramps that are still required in each neighbourhood.

The table below (Table 8) shows the number of ramps required and the total cost by neighbourhood according to their priority ranking.

- A total of 4,090 ramps are currently required to have 100% of all sidewalks accessible.
- The cost per ramp is estimated at \$1,200 (in 2008 dollars).
- **The total cost to construct all the required ramps is \$4,908,000.**
- **Priority zones (purple, red, and orange) total cost: \$2,179,200 covering 44% of total curb ramps in the city that still need to be installed.**



Table 8 - Ramps by Neighborhood

Neighbourhood	Total	Existing	Required	Priority	Total Ramp Cost
Nutana S.C.	42	37	5	470	\$ 6,000
Central Business District	246	245	1	400	\$ 1,200
Wildwood	186	108	78	380	\$ 93,600
Mount Royal	225	53	172	350	\$ 206,400
Lawson Heights S.C.	41	40	1	340	\$ 1,200
City Park	219	143	76	305	\$ 91,200
Hudson Bay Park	95	23	72	300	\$ 86,400
College Park	148	77	71	275	\$ 85,200
Nutana	360	198	162	255	\$ 194,400
Buena Vista	203	84	119	245	\$ 142,800
Eastview	123	28	95	245	\$ 114,000
Haultain	227	71	156	240	\$ 187,200
Richmond Heights	38	17	21	225	\$ 25,200
Meadowgreen	121	12	109	220	\$ 130,800
Silverwood Heights	299	158	141	220	\$ 169,200
Parkridge	135	53	82	215	\$ 98,400
Varsity View	284	118	166	215	\$ 199,200
Pleasant Hill	155	33	122	210	\$ 146,400
Greystone Heights	94	39	55	205	\$ 66,000
Sutherland	214	102	112	205	\$ 134,400
Fairhaven	101	28	73	200	\$ 87,600
Adelaide/Churchill	202	93	109	195	\$ 130,800
Exhibition	162	81	81	195	\$ 97,200
Queen Elizabeth	205	44	161	190	\$ 193,200
Confederation Park	91	40	51	185	\$ 61,200
Avalon	189	71	118	180	\$ 141,600
Brevoort Park	143	60	83	180	\$ 99,600
Caswell Hill	288	139	149	180	\$ 178,800
Nutana Park	107	25	82	180	\$ 98,400
Lawson Heights	135	24	111	175	\$ 133,200
University Heights S.C.	92	91	1	175	\$ 1,200
Holliston	206	73	133	170	\$ 159,600
Holiday Park	73	13	60	160	\$ 72,000
Lakeview	180	64	116	150	\$ 139,200
Massey Place	27	21	6	150	\$ 7,200
Riversdale	176	86	90	150	\$ 108,000
North Park	137	82	55	145	\$ 66,000
Grosvenor Park	59	36	23	140	\$ 27,600
River Heights	169	48	121	140	\$ 145,200
Briarwood	182	182	0	135	\$ -
Confederation S.C.	67	67	0	135	\$ -
Forest Grove	221	174	47	135	\$ 56,400
Mayfair	182	32	150	135	\$ 180,000
King George	171	11	160	130	\$ 192,000
Montgomery Place	22	10	12	130	\$ 14,400
Westview	18	18	0	130	\$ -
College Park East	134	39	95	120	\$ 114,000
Erindale	161	160	1	120	\$ 1,200
Pacific Heights	20	9	11	120	\$ 13,200
Silverspring	179	179	0	120	\$ -
UofS Lands - South Management Area	24	23	1	115	\$ 1,200
Westmount	34	27	7	115	\$ 8,400
Dundonald	143	67	76	110	\$ 91,200
Kelsey-Woodlawn	86	6	80	110	\$ 96,000
Airport Business Area	1	1	0	95	\$ -
Arbor Creek	144	143	1	75	\$ 1,200
Lakeridge	163	161	2	75	\$ 2,400
Willowgrove	11	11	0	70	\$ -
North Industrial	2	2	0	45	\$ -
Central Industrial	11	11	0	40	\$ -
Hampton Village	5	5	0	20	\$ -
South West Industrial	5	5	0	20	\$ -
Sutherland Industrial	5	3	2	20	\$ 2,400
University of Saskatchewan Management Area	27	21	6	6	\$ 7,200
Totals	8,215	4,125	4,090		\$ 4,908,000



Table 9 - Cost by Priority Area

Priority	Total Cost	Percentage of Required Ramps
	\$ 6,000	0.12%
	\$ 393,600	8.02%
	\$ 1,779,600	36.26%
	\$ 2,715,600	55.33%
	\$ 6,000	0.27%
	\$ 7,200	0.15%

Table 9

This table shows the total cost for disability ramps and the percentage of required ramps for each priority color group. It appears that the city has done a good job of constructing ramps in the neighbourhoods that require them most. Less than 10% of the required ramps are for neighbourhoods in the top two priority groups.

8.3 Infrastructure (sidewalks, walkways, crosswalks, signals)

Four years ago Municipal Engineering conducted a 100% audit of all crosswalks and walkways in the city. This very extensive database has been updated on a continual basis so that a very detailed record exists of every crosswalk in the city, the type of crosswalk and in a similar manner, every walkway.

The focus of this audit was existing neighbourhoods. The database is also updated for installations that occur in new neighbourhoods. The database breaks the city into four quadrants with street addresses and plan numbers for every entry.

The current annual budget for existing neighbourhoods, (not new), is \$400,000 for walkways, and \$250,000 for crosswalks. Costs of pedestrian signals are \$20,000 to \$30,000. New signs are \$1,000 per sign. Painting of signs is \$250 per sign. The City condition rates its sidewalks and work is scheduled based on severity of distress, funding and location. For 2008, priority was given to sidewalks that contained parking meters or had parking restrictions plus sidewalks near hospitals and school.

In terms of additional needs, based on our focus groups 2 flashing pedestrian crosswalks were identified as required: estimated cost of \$50,000 each for a total of \$100,000.

Focus groups also identified a need for the audible traffic signals at 4 locations. **Estimated cost is \$15,000 each for total of \$60,000.**

Based on information received from City representatives, out of a total of 1,600 km of sidewalk in Saskatoon, approximately 70% of sidewalks are in good condition (i.e. 30% have distresses that could be repaired). To replace the sidewalk, cost is estimated to be \$220 per linear meter. To repair sidewalks costs are \$7 per linear meter. **Assuming 10% are replaced and 90% of the sidewalks can be repaired, total cost in the priority zones is \$4.85 million.** (For a complete breakdown of costs please refer to the table on page 62 of this report)

8.4 Access Transit

At the present time the City of Saskatoon has 16 routes serviced by 23 buses operated by 33 operators. These 23 buses are each worth \$110,000 with a useful life of 3 to 5 years. The current fleet has been in operation for 4 years. If access transit were to grow at a rate of two buses per year, they would require an additional 2 operators per bus. At a staff cost of \$60,000 per operator, this would result to a total staffing cost of \$240,000.



The yearly cost of adding two new access transit buses and four operators per year, would amount to a total of \$460,000.

Future Requirements

As we heard from the focus groups there is a great deal of complaints about the Access Transit booking system. With the current demand for the access transit buses; there is a definite need to expand the fleet and the corresponding staff to drive the new buses. The actual number of additional buses needed to address the current demand will require additional studies and exploration of other measures that could mitigate the demand load. (i.e. like the training and familiarization program in the City of London mentioned on page 38 & 39 of this report). There is also a need to continue to budget for replacement of the existing fleet of 23 buses, which are nearing the useful life expectancy.

The purchase cost of 23 new access transit buses would be an additional \$2,530,000 less salvage value.

8.4.1 Playgrounds

Currently it costs \$40,000 dollars to add an accessible component to the already existing playground. For 2009 the total budgeted amount is \$160,000 based on doing upgrades to 4 playgrounds. Upgrades are being done to approximately 4 playgrounds per year.

When the initial inventory of playgrounds was done there were 109 playgrounds in the city. 40 of them were wooden and since this replacement program started have replaced 17 playgrounds to date.

Everybody's Playground in Erindale (a fully accessible destination playground) cost \$207,800 (in 2003 dollars), so in order to include one in the remaining three quadrants of the city would need at least \$750,000 (in 2008 dollars).

- Currently a fully accessible playground is being installed in Blairmore Suburban Centre – Morris T. Cherneskey Park - and will be completed by the end of the year (2008).
- 2009 – fully accessible playground is budgeted to be installed at the WW Ashley Park (Taylor Street)
- 2010 – fully accessible playground will be installed in the Mayfair Neighbourhood – Ashworth Holmes Park.

8.4.2 Sensitivity Training

Insightrix reviewed many of the local consultants' promotional material and determined there was no one actively promoting specialization in sensitivity training regarding persons with disabilities. Due to the current legislation requirements in Ontario, there are many consulting firms that are available for reference. One such firm is Designable Environments, an organization of consultants who assist their clients in the creation of accessible environments through the application of universal design principles. The firm has a number of services including architectural consultation, medical/legal consultation, future care planning, codes and standard development, education and training, and facility audit and accessibility planning.

In terms of the education and training, for the City of Saskatoon, they proposed the following methodology:



Phase 1: Needs Analysis
Phase 2: Training Development
Phase 3: Training Delivery

Phase 1: Needs Analysis

- One visit to City to meet with interested parties
- Conduct targeted interviews to assess needs and define target audience
- Review City's training facilities and resources
- Develop specific learning outcomes for the training
- Develop a training strategy

Budget Estimate: \$ 3600 plus disbursements

Phase 2: Training Development

- Develop detailed training curriculum
- Develop training tools and resources
- One visit to the City to review progress and gather feedback
- One visit to the City for pilot testing of the training, tools and resources
- One visit to the City to conduct a 'train-the-trainers' workshop

Budget Estimate: \$ 7200 plus disbursements

Phase 3: Training Delivery

- Provide ongoing support for the trainers

Budget Estimate: \$ 1200 plus disbursements

Total initial hard costs (assuming the train the trainer approach): \$12,000 plus disbursements (total estimated to be \$25,000 including disbursements)

Should the needs analysis suggest that a 'train-the-trainer' approach is not appropriate, the consultant would undertake the training at an additional cost of \$1200 per diem per trainer (plus disbursements). One day of training would likely incorporate presenting the same ½ day session twice, to groups of about 50 participants.

8.4.3 Communication

Insightrix reviewed many of the local consultants' promotional material and determined there was no one actively promoting specialization in accessibility audits in regards to communication. Due the current legislation requirements in Ontario, there are many consulting firms that are available for reference. One of the main areas of interest in regards to communication however is the accessibility of the City's website.

The Website

The Web is an increasingly important resource in many aspects of life: education, employment, government, commerce, health care, recreation, and more. It is essential that the Web be accessible in order to provide equal access and equal opportunity for people with disabilities. An accessible Web can also help people with disabilities participate more actively in society.

The City of Saskatoon website offers the possibility for unprecedented access to information and interaction for many people with disabilities. That is, the accessibility barriers to print, audio, and visual media can be easily overcome through Web technologies.



The power of the web is in its universality. Access by everyone regardless of disability is an essential aspect.

- **Tim Berners-Lee,**

Inventor of the World Wide Web.

One such company that conducts audits and designs accessibility websites is Yellow Pencil in Edmonton and Vancouver. Their process includes the following:

- **Accessibility Audit** - illustrates how the City's website performs for users with disabilities. They provide a report that gives an overview, context on the issues of accessibility, and concrete tasks for the City's developers to improve access to the site. Specifically:
 1. The City tells them (or they help the City determine) what level of accessibility compliance they need. This can range from a general improvement to a specific target with the Web Accessibility Initiative (WAI) of the World Wide Web Consortium (W3C) - (priority A or priority AAA).
 2. Their experts run technical and heuristic tests on the City's site to determine how easy or difficult it is to navigate the website in regards to accessibility.
 3. They will provide a full report of the findings including:
 - o An overview to introduce the concepts and issues behind accessibility information regarding your legal responsibilities to provide an accessible website
 - o Specific instructions for developers on how to solve any problems and learning resources on how create and maintain accessible content.
 - o Personas of users and how people with disabilities interact with information online.

Depending on the complexity of the website (number of templates used or media types employed throughout the site), the City of Saskatoon may be able to perform their own accessibility audit through free software such that is provided on the website "www.w3.org". The free heuristic test available allows the user to run their url address through the software to see if it passes for accessibility. Error messages will inform the webmaster of areas of weakness and any barriers a person with a disability may encounter. The second option entails employing a third party auditor such as yellowpencil.com to perform an audit.

An accessibility auditor such as yellowpencil.com randomly selects between 20 and 50 of the website pages (depending on the size of the site) and scores them for accessibility. **This process is far more involved and will cost between \$5,000 and \$10,000 dollars.** After the audit, full-service companies like yellowpencil can either coach the City of Saskatoon's webmaster to make the changes (at an hourly rate) or complete the changes (for an additional cost dependent on the number and complexity of the changes required).

Contact Dave Bellous at Yellowpencil for more information 780-423-5917 ext 221



8.5 Summary by Neighborhood: Costs associated with Purple, Red and Orange Priority Zones.

Neighbourhoods / Suburban Centres	Ramps Required	Priority	Total Ramp Cost	Sidewalks Replacement (\$220.00 per linear meter)	Sidewalk Repair (\$7.00 per linear meter)	Crosswalks	Audible Traffic Signals	Total Costs
Nutana S.C.	5	Purple	\$ 6,000	\$51,514.95	\$14,752.01	\$ 50,000.00		\$ 122,267
Central Business District	1	Red	\$ 1,200	\$166,724.65	\$47,743.88		\$ 30,000.00	\$ 245,669
Wildwood	78	Red	\$ 93,600	\$217,983.82	\$62,422.64	\$ 50,000.00	\$ 15,000.00	\$ 439,006
Mount Royal	172	Red	\$ 206,400	\$271,798.17	\$77,833.11			\$ 556,031
Lawson Heights S.C.	1	Red	\$ 1,200	\$43,642.64	\$12,497.66			\$ 57,340
City Park	76	Red	\$ 91,200	\$196,944.38	\$56,397.71		\$ 15,000.00	\$ 359,542
Hudson Bay Park	72	Orange	\$ 86,400	\$142,207.14	\$40,722.95			\$ 269,330
College Park	71	Orange	\$ 85,200	\$213,187.32	\$61,049.10			\$ 359,436
Nutana	162	Orange	\$ 194,400	\$270,539.54	\$77,472.69			\$ 542,412
Buena Vista	119	Orange	\$ 142,800	\$189,252.05	\$54,194.91			\$ 386,247
Eastview	95	Orange	\$ 114,000	\$178,027.40	\$50,980.57			\$ 343,008
Haultain	156	Orange	\$ 187,200	\$185,446.39	\$53,105.10			\$ 425,751
Richmond Heights	21	Orange	\$ 25,200	\$51,561.14	\$14,765.24			\$ 91,526
Meadowgreen	109	Orange	\$ 130,800	\$166,045.48	\$47,549.39			\$ 344,395
Silverwood Heights	141	Orange	\$ 169,200	\$476,283.48	\$136,390.27			\$ 781,874
Parkridge	82	Orange	\$ 98,400	\$192,652.93	\$55,168.79			\$ 346,222
Varsity View	166	Orange	\$ 199,200	\$222,706.09	\$63,774.93			\$ 485,681
Pleasant Hill	122	Orange	\$ 146,400	\$178,452.34	\$51,102.26			\$ 375,955
Greystone Heights	55	Orange	\$ 66,000	\$135,543.76	\$38,814.81			\$ 240,359
Sutherland	112	Orange	\$ 134,400	\$219,156.72	\$62,758.52			\$ 416,315
Totals	1,816		\$ 2,179,200	\$ 3,769,670	\$ 1,079,497	\$ 100,000	\$ 60,000	\$ 7,188,367
Average Cost / Neighbourhood								\$ 399,418

- Priority zones (purple, red, orange) total cost: \$2,179,200 covering 44% of total curb ramps in the city that still need to be installed.
- In terms of additional needs, based on our focus groups 2 flashing pedestrian crosswalks was identified as required: estimated cost \$50,000 each for total of \$100,000.
- Focus groups also identified a need for the audible traffic signals at 4 locations. Estimated cost is \$15,000 each for total of \$60,000.
- Based on information received from city representatives, out of a total of 1,600 km of sidewalk in Saskatoon, approximately 70% of sidewalks are in good condition (i.e. 30% are in poor condition and in need of improvement). To replace the sidewalk, cost is estimated to be \$220 per linear meter. Total repair sidewalks costs \$7 per linear meter. Assuming 10% are replaced and 90% of the sidewalks in poor condition are repaired, total cost in the priority zones are \$4.85 million.

Highlighted are those areas with above average (basis the 20 neighborhoods) total costs.



9 Conclusions and Recommendations

Based on research conducted including; focus groups, internal interviews with City of Saskatoon department representatives, interviews with other municipalities, as well as literature review, the following conclusions and recommendations are provided.

9.1 Recommendation #1: Facility Accessibility Design Standards (FADS)





With strong support from the City of Saskatoon civic department representatives, it is highly recommended that the City adopt the Facility Accessibility Design Standards (FADS) document developed by the City of London. The FADS document is available to use and implement upon submitting an application form to the City of London (free of charge). The FADS are used by over 50 cities, communities and organizations throughout Canada and the United States. The FADS document outlines all necessary standards needed to make facilities as well as the infrastructure (sidewalks, ramps, curb cuts) fully accessible to people with disabilities. Instead of using a number of various documents (National Building Code, Canadian Standards Association Standard on accessible design for the built environment and the FADS) to implement standards on accessibility, the FADS document can be used as the one standard setting document for the City. In the case that the FADS document is not adopted by the City of Saskatoon, the City should look to combine all essential documentation from the above mentioned sources and produce a single standard setting document to address facility and infrastructure accessibility.

9.2 Recommendation #2: Service Level Guidelines

The Service Level Guidelines have been established to provide guidance to the City of Saskatoon, when incorporating barrier-free accessibility to all civic facilities, services and infrastructure. It is recommended that the City of Saskatoon implement the Service Level Guidelines as the benchmark guiding document to direct action and track progress. If implemented, it should be noted that these guidelines do not act as a stand-alone document and work in conjunction with the National Building Code, the Canadian Standards Association Standard on accessible design for the built environment, as well as the FADS document (if selected as a standard setting document for Facility Accessibility Design).

9.3 Recommendation #3: “Priority Zone” implementation

Through extensive research regarding the demographic composition of the city by neighbourhood boundaries, the “priority zone” development focused on determining neighbourhoods that contained a high proportion of persons with disabilities, seniors and senior or personal care residences. The zones identify and provide possible areas of the city, which can be targeted for prioritizing accessibility improvements contained in the Service Level Guidelines. All the zones have been coded by colour which distinguishes priority levels from highest to lowest. Neighbourhoods that have been coded with the purple colour are considered to be the highest priority neighbourhoods, followed by red, orange, green and yellow (lowest priority neighbourhoods). It is recommended that the zones be used by order of priority when implementing items from the Service Level Guidelines. The table below provides suggested timelines of how long it should take to make improvements within certain zones, as will have an impact on accessibility within those neighbourhoods.

Zone Colors	Implementation Timeline
 Purple	1 to 2 years
 Red	2 to 3 years
 Orange	3 to 5 years
 Green	5 to 7 years
 Yellow	7 to 10 years



9.4 Recommendation #4: Areas of Importance (Infrastructure, Snow Removal and Transit)

Through the focus groups conducted with seniors and people with various disabilities a list of exact locations (contained in the body of this report) provides a directory of specific items which people feel are in need of improvements. The items and locations from this list should be considered to be of high priority and targeted directly. Furthermore - Infrastructure, Snow Removal and Transit were the three priority areas from the Service Level Guidelines that were ranked to be of high importance by participants in all focus groups. Based on the high priority neighbourhoods as well as the top three areas of importance as determined by focus group participants it is recommended that an inventory of additional improvements be conducted to ensure that the main concerns of the residents in those neighbourhoods are addressed. Due to the fact that a limited number of people participated in the focus groups and the specific locations are based on their comments only, it is seen as beneficial to set-up a one-call number where any individual could call and report other locations of concern.

9.4.1 Recommendation #4a: Stage Priority Improvements based on Focus Group Results

As shown in Appendix A and Appendix B, begin development on improvement to infrastructure including sidewalks, crosswalks, walkways, and signals in those priority areas identified in the focus groups which also correspond to those areas of high priority. **The focus group results validated the need to examine these priority areas or zones as 95% of the suggestions from focus groups in terms of problem locations were in those priority areas identified based on demographics and residences.**

The City can stage the improvements of the high cost items and those that are low priority but low and/or no significant cost should also be implemented.

9.5 Recommendation #5: Sensitivity Training

As a result of findings from the focus groups as well as consultations with various civic department representatives it became apparent that some employees within the City need to become more knowledgeable and understanding regarding the issues pertaining to accessibility for people with various disabilities. Through secondary research and consultations with other cities, it was noted that some communities choose to hire consultants who provide sensitivity training to existing and new staff on topics pertaining to accessibility awareness and dealing with various issues faced by people with disabilities. The City should consider providing sensitivity training for its existing and new employees.

Insightrix reviewed many of the local consultants' promotional material and determined there was no one actively promoting specialization in sensitivity training regarding persons with disabilities. Due the current legislation requirements in Ontario, there are many consulting firms that are available for reference. One such firm is Designable Environments, an organization of consultants who assist their clients in the creation of accessible environments through the application of universal design principles. The firm has a number of services including architectural consultation, medical/legal consultation, future care planning, codes and standard development, education and training, and facility audit and accessibility planning.

9.6 Recommendation #6: City Website Audit

The Web is an increasingly important resource in many aspects of life: education, employment, government, commerce, health care, recreation, and more. It is essential that the website be accessible in



order to provide equal access and equal opportunity for people with disabilities. An accessible Web can also help people with disabilities participate more actively in society.

The City of Saskatoon website offers the possibility for unprecedented access to information and interaction for many people with disabilities. That is, the accessibility barriers to print, audio, and visual media can be easily overcome through Web technologies. The lack of accessibility features available on the City Website has been mentioned on numerous occasions during focus group discussions and consultations with City representatives. In developing a standard for website accessibility, one of the many standards from the W3C is the Web Content Accessibility Guidelines 2.0 system (WCAG 2.0), which covers a wide range of recommendations for making Web content more accessible. Following these guidelines will make Web content accessible to a wider range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech difficulties, photosensitivity and combination of these.

It is recommended that the City assess the current accessibility features of the City of Saskatoon website. Depending on the complexity of the website (number of templates used or media types employed throughout the site), the City of Saskatoon may be able to perform their own accessibility audit through free software such that is provided on the website “www.w3.org”. The second option entails employing a third party auditor such as yellowpencil.com to perform an audit.

9.7 Recommendation #7: Structured approach to sidewalk repairs, audible traffic signal installation and snow removal

The current state of sidewalk repairs, installation of audible traffic signals (ATS) and snow removal is complaint based. Through public consultations and interviews with City department representatives it was noted that at the present time all of the above mentioned items, especially sidewalk repairs and ATS installations are complaint based. The City does have some locations which they select for improvements, however if a broken-up sidewalk has not been reported it is unlikely it will be fixed. The City should consider transitioning to a more structured approach in addressing these issues be it by way of conducting an inventory of sidewalks and areas of high traffic for ATS installations or by assessing the above items based on the high priority neighbourhoods, or actively promoting a 1call number to report deficiencies – “Neighbourhood Watch”.

9.8 Recommendation #8: Distribution of “Whose Job Is It?” Brochure

As mentioned in the focus groups, people feel there is a need for a better communication network with the City of Saskatoon. On many occasions it was mentioned that people don’t know who to contact, get the run-around when they do get a hold of someone, or feel they are not being listened to. Through consultations with the Communications Branch and City Clerk’s Office it became apparent that there exists a brochure titled “Whose Job Is It?” which provides a full directory, listing important numbers and contact information for a specific area of concern. This brochure is updated and printed every two years and is distributed at various city facilities. Consideration should be paid to effectively pursue the distribution of “Whose Job Is It?” brochure with all important contact information available to the residents of Saskatoon. It is seen as beneficial to work with major associations and organizations to distribute copies of this brochure so it can be passed on to the general public.



10 Appendix A – High Cost and Low Cost Items by Section and Priority Level

High Cost Items - From Focus Group Findings		
Relevant section from the Service Level Guidelines	Description	Cost
Infrastructure*	Sidewalk repairs	\$7 per linear meter
	Sidewalk replacement	\$220 per linear meter
	Curb ramb installation	\$1,200 per ramp
	Crosswalks - patterned concrete	\$20,000 per leg of an intersection
	Crosswalks - general	\$10,000 to add pedestrian signals and crosswalks to all 4 legs of an intersection
	Flashing Pedestrian Crosswalk	\$40,000 - \$50,000
	Audible Traffic Signals	\$7,500 per device (need two devices per intersection)
Transit*	Access Transit buses	\$110,000 per bus, plus ongoing operating and maintenance costs
Parks	Playgrounds - Addition of one accessible component to an existing playground	\$40,000 to add one accessible component to a play structure
	Fully Accessible Playground	\$350,000
Built Environment	Handrail placement	unable to provide costs
	Leisure Facility and Pool accessibility	unable to provide costs

* These items are considered to be of **High Priority**, based on findings from the focus group discussions



Low Cost Items - From Focus Group Findings		
Relevant Section from the Service Level Guidelines	Description	Actions to be taken
Infrastructure	Traffic Signals*	Extending the timing of traffic signals to provide pedestrians with appropriate time to cross the road
	Sidewalks	Flower pots at various locations around the city have been mentioned to be located in the path of travel presenting obstacles and hazards to pedestrians, as well as their locations too close to street corners. Moving the flower pots would be of help to pedestrians.
Transit	Stop Announcements	Bus drivers to announce at minimum bus stops at major intersections
Built Environment	City Facilities	Ensuring there is proper lighting inside city facilities (hallways, entranceways and foyers). Cosmo Civic Centre, Saskatoon Fieldhouse and City Hall mentioned during focus groups
Communication	Brochure Distribution	Connecting with major disability agencies and organizations serving the City and distributing the "Whose Job Is It?" brochure containing directory of contact information for various city departments. There needs to be broader distribution of this brochure.

* These items are considered to be of **High Priority**, based on findings from the focus group discussions



11 Appendix B – Specific Location by Section

List of Specific Locations From Focus Group Findings			
Relevant section from the Service Level Guidelines	Description	Neighbourhood (Priority Zone)	Specific Location
Sidewalks and Crosswalks	Poor condition, broken up, uneven, in need of repairs or replacement	Nutana Suburban Centre	Area around Walter Murray and Holy Cross High Schools
			West side of Market Mall - by senior residences
		Central Business District and City Park	24th Street and 3rd Ave - Franklin Senior Residence
			Delta Bessborough Hotel
			Queen Street before 4th and 3rd Avenue (North Side)
			26th Street between 2nd and 3rd Avenue
	Railroad Tracks on Idylwyld Drive.		
	Obstacles (flower pots) on sidewalks and street corners	Central Business District and City Park	4th Avenue around 24th and 25th Streets
			3rd Avenue and 23rd Street
	Unmarked Curbs and Curb Cuts	Central Business District and City Park	20th Street and Idylwyld Drive
			22nd Street and Idylwyld Drive
	Difficult sidewalk ramps or lack of them	Central Business District and City Park	22nd, 20th Streets and Idylwyld Drive (difficult to get onto sidewalk on existing ramps)
		Nutana Suburban Centre	Adelaide and Preston (need ramps)
Buena Vista and Haultain		8th Street (South Side)	



List of Specific Locations From Focus Group Findings				
Relevant section from the Service Level Guidelines	Description	Neighbourhood (Priority Zone)	Specific Location	
Traffic Signals and Pedestrian Crossings	Flashing Pedestrian Crossing needed	Nutana Suburban Centre	Adelaide Street (one and a half blocks east of Market Mall)	
		Wildwood	Kingsmere Blvd - becoming a high traffic area	
	Audible Traffic Signal needed	Central Business District and City Park	25th Street	
			Idylwyld Drive and 22nd Avenue	
			Queen Street and 2nd Avenue	
	Length of Traffic Signals is too short	Central Business District and City Park	Wildwood	Acadia and Taylor
			Idylwyld and 22nd Avenue	
			6th Avenue and 25th Street	
			3rd Avenue and 23rd Street	
		Wildwood	1st Avenue and 21st Street	
Snow Removal	Sidewalks are rarely cleared of snow	Central Business District and City Park	Area between 24th Street and The Bus Mall	
			25th Street before Parktown	
		Lawson Heights Suburban Centre	Primrose and Pinehouse	
			Primrose and Lenore	
		Varsity View	College and Monroe	



12 Appendix C – Listing of Consultants for Website Accessibility Audits and Sensitivity Training

WebAIM (www.webaim.org)

- WebAIM is a non-profit organization within the Center for Persons with Disabilities - external link at Utah State University
- Services include: Accessible Design and Retrofitting, Accessibility Monitoring and Reporting, Consulting and Technical Assistance, Accessibility Training, and Accessible Site Certification.
- Brief Report on Accessibility of Website starting at \$350.

Web Content Accessibility Guidelines (www.w3.org)

- The World Wide Web Consortium (W3C) is an international consortium where Member organizations, a full-time staff, and the public work together to develop Web standards.
- Provides in-depth information on web accessibility design, management and evaluation.

Web Accessibility Technical Services (www.wats.com)

- Web Accessibility Consulting since 2001
- Services include: Accessible Design and Development, Consulting and Technical Services, Website Testing, Accessibility Training.
- Clients include: National Research Council, Canadian Space Agency, Parks Canada, Services Canada: People with Disabilities On-Line

Beyond Ability International (www.beyond-ability.com)

- Founded in 1986, Beyond Abilities provides technical, educational, and marketing services to make the world more accessible to persons with disabilities.
- Services include: Accessibility Training and Education, Accessibility Planning and Policy Development, and Operational Evaluations.
- Clients Include: City of Guelph, Region of Waterloo, Town of Oakville, Canada Post

Cantor Access (www.cantoraccess.com)

- Cantor Access Inc. is a Toronto-based consultancy that works with organizations worldwide to ensure that their products, services, spaces, and web sites, are accessible to and usable by people with disabilities; and that their employees with disabilities can perform their jobs efficiently and effectively.
- Services include: Accessibility Consulting, Accessibility Training, and Accessible Website Development.
- Clients Include: RBC, CIBC, American Express, BMO

Designable Environments (www.designable.net)

- Organization of consultants who assist our clients in the creation of accessible environments through the practical application of universal design principles
- Services include: Facility Auditing and Accessibility Planning, Education and Training, Codes and Standards Development, Future Care Planning.
- Clients include: City of Winnipeg, City of Guelph, City of Oshawa, City of Kitchener.

Effective Accessibility Consulting (www.effectiveaccessibility.ca)

- Providing education and training on issues relating to disability and accessibility.
- Services include: Needs Assessment, Accessibility Assessments, *Person-to-Person* Sensitivity Awareness/Customer Service Training Workshops
- Clients include: Town of Midland, Town of Penetanguishene, Ontario Public Service.



2012 Facility Accessibility Design Standards



DRAFT

ACKNOWLEDGEMENTS

June 2012

Re: City of Saskatoon, 2012 Facility Accessibility Design Standards

Dear reader/user of these standards,

On behalf of the City of Saskatoon we are pleased to be able to present to you our 2012 Facility Accessibility Design Standards. These standards are applied to all newly constructed and/or renovated City of Saskatoon owned, leased or operated facilities.

We would like to thank and recognize the City of London, Ontario for allowing us to heavily draw upon the information and excellent work they completed in the City of London's 2007 Facility Accessibility Designs Standards (FADS) document. We would also like to extend our thanks to the Saskatchewan Human Rights Commission for their reference material related to the accessibility rights of persons with disabilities.

In addition to the City of Saskatoon using this document for our own facilities, **we strongly encourage the use of these accessibility design standards throughout the community** and hope that you find them interesting and valuable for your facility construction and/or renovation projects.

ACCESSIBILITY RIGHTS OF PERSONS WITH DISABILITIES

GENERAL OVERVIEW

(The following information is an excerpt from an information guide produced by the Saskatchewan Human Rights Commission, the City gratefully acknowledges the Commission for this excerpt. For more information on Accessibility rights please visit their website at www.shrc.gov.sk.ca)

Accessibility for people with disabilities is a priority for the Saskatchewan Human Rights Commission and the City of Saskatoon. Accessibility rights include the right to accessible services, transportation and employment.

Disability covers a wide range of conditions and is an evolving concept. Some disabilities are visible while others are not. A disability may have been present since birth, developed over time, or caused by an accident. Disability is defined in section 2 of The Saskatchewan Human Rights Code (the Code). The definition includes, among other conditions: epilepsy, any degree of paralysis, amputation, lack of physical co-ordination, blindness or visual impairment, deafness or hearing impediment, muteness or speech impediment, or physical reliance on a service animal, wheelchair or other remedial device, physical, mental and learning disorders. Drug and alcohol dependencies and environmental sensitivities are also disabilities. According to the 2006 Census, the percentage of the adult (15 and older) population reporting any kind of **disability in Saskatchewan is 18.8 per cent**. This number is estimated to increase because Saskatchewan has an aging population.

Accessibility rights are **protected by a number of laws**. The objects of *The Saskatchewan Human Rights Code* (the Code) are:

- to promote recognition of the inherent dignity and the equal inalienable rights of all members of the human family; and
- to further public policy in Saskatchewan that every person is free and equal in dignity and rights and to discourage and eliminate discrimination.

The Canadian Charter of Rights and Freedoms (the Charter) guarantees equality of the law including equal benefit of the law without discrimination. The Supreme Court of Canada has noted the need to "fine tune" society so that its structures and assumptions do not exclude persons with disabilities from participation in Society.

ACKNOWLEDGEMENTS (Cont.)

Finally, Canada ratified The United Nations Convention on the Rights of Persons with Disabilities (the Convention) on March 11, 2010. The Convention recognizes that equality, dignity, autonomy, independence, accessibility and inclusion are essential for people with disabilities to fully realize equal citizenship in the world.

Parties to the Convention are required to promote, protect and ensure the full enjoyment of human rights by persons with disabilities, and to ensure that they enjoy full equality under the law. Given Canada's commitment to the Convention, existing laws, and the growing population of people with disabilities in Saskatchewan, it is the perfect point in history for Saskatchewan to renew its focus of an accessible society.

The United Nations (UN) recognizes resources to implement the Convention are limited, but also indicates that **resource limitations cannot be an excuse to delay implementation**. Accessibility must be advanced, though the UN recognizes it will be a slow, progressive process.

BUILDING STANDARDS

Addressing Barriers Persons with disabilities face barriers on a daily basis. The barriers can be physical, attitudinal or systemic. It is most effective to identify and remove barriers voluntarily and proactively rather than respond to individual accommodation requests or complaints. The Commission investigates complaints where barriers have not been identified and removed. Barriers to public services can result in discrimination against people with disabilities. It makes good business sense to identify and remove barriers. Barrier removal allows for fuller participation by all members of society.

Accessibility is not a one-way street. Businesses, public services, and society as a whole benefit from accessible transportation. A shift in perceptions and attitudes is required to realize this. Adopting the concepts of **accommodation** and **accessibility** through **universal access** and **barrier-free design** will benefit all members of the community. Addressing barriers is not only about the provision of barrier-free, equitable lifestyles for people currently living with disabilities. It is also about future planning. Saskatchewan has an aging population and due to medical advancements people are living longer. We need to proactively plan for the future.

Substantive equality not technical compliance - Accessibility should not just be a matter of whether or not it is possible for persons with disabilities to perform tasks, but also whether it is possible to perform tasks in a dignified and easy way. The Human Rights Commission and the City of Saskatoon endorse the concept of **substantive equality** which strives for equal rights and opportunities and the recognition of the dignity and worth of every person.

Legislation and the Law - People who obtain a building permit are often unaware of their additional legal obligations under the Code. This information section outlines considerations that pertain to **accessibility rights, building standards** and **human rights law** in Saskatchewan. In particular, the relationship between the Code and *The Uniform Building and Accessibility Standards Act (UBAS)* which adopts *The National Building Code (NBC)*, a model code for Canada. The table below introduces the main differences between the Code and NBC/UBAS. The remainder of this section explains some of these differences, the complementary nature of the two pieces of legislation, and changes the Commission endorses to promote substantive equality and accessibility rights of persons with disabilities.

ACKNOWLEDGEMENTS (Cont.)

The Human Rights Code	NBC/UBAS
Deals with human rights.	Deals with building standards.
Applies to old and new buildings if they house a public service.	Applies to 'new' (post 1988) public buildings, as well as to public buildings which have undergone major renovations and additions.
Requires efforts short of undue hardship, to accommodate people with disabilities.	Requires compliance with detailed accessibility requirements in the UBAS regulations.
Accommodation is determined on a case-by-case basis, depending on the circumstances of a service provider.	Uniform standards are strictly enforced.
There are no exceptions to the Code, but a service provider may argue undue hardship.	There are major exceptions within UBAS – i.e. exception for additions and renovations under 600 square metres in area.
Complaint-based – law is only enforced if a complaint is filed.	Proactive – legislation is enforced through building permit.
The Code has precedence over UBAS under section 44 of the Code. There may be a breach of the Code even where a building complies with narrower UBAS requirements.	Section 15 of UBAS states a permit issued in accordance with UBAS does not authorize the breach of any other law.

NBC and UBAS - The National Building Code (NBC) is a national model code published by the National Research Council of Canada. As a model code the NBC is unenforceable unless adopted through provincial legislation. In Saskatchewan UBAS became law in 1988. UBAS adopted the NBC as the basis for Saskatchewan's building and accessibility standards. The UBAS regulations contain some alterations to the NBC, but the majority of the NBC is adopted in UBAS.

The NBC and UBAS establish minimum standards to ensure that buildings in Saskatchewan are accessible. UBAS sets out detailed accessibility requirements for the construction of new commercial buildings and major renovations or additions. These requirements are enforced through the building permit and inspection processes. By "building in accessibility" when construction begins, UBAS makes many public buildings accessible in the most cost-efficient manner. However, UBAS has limited scope.

The accessibility requirements of UBAS do not apply to renovations or additions to existing buildings if they are less than 600 square metres in area. The Commission considers this to be a problem. Recent complaints lead the Commission to believe that some buildings or additions are deliberately kept just under the 600 square metre cut-off, in order to avoid the UBAS accessibility requirements. Given this "trend", the Commission believes it has an obligation to inform Saskatchewan residents about the Convention, Code requirements and the business case for accessibility.

The Saskatchewan Human Rights Code - The provisions of the *Code* take precedence over UBAS. Under the *Code* any building open to the public must be accessible. Where discrimination is on the basis of disability, the *Code* requires a service provider to take steps to **accommodate** the needs of people with disabilities unless those steps cause **undue hardship**. What constitutes undue hardship varies from case to case. Some factors the courts have considered to determine what constitutes undue hardship include:

- A threat to health or safety,
- Major economic impact,
- Past efforts to accommodate, and
- Facilities and size of organization or workplace

ACKNOWLEDGEMENTS (Cont.)

Universal design - The concept of universal design is larger than either of accessibility or barrier-free design. Universal design is the design of products and environments to be useable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

The intent of universal design is to simplify life for everyone by making products, communications, and the built environment more usable by as many people as possible at little or no extra cost. Universal design benefits people of all ages and abilities. Current building codes tend to focus on the needs of people with mobility impairments, i.e. wheelchair users. This has led to inadequate design requirements and has in some cases created problems for individuals with other types of disabilities. Some examples include:

- Curb ramps which have neither tactile nor visual cues making them dangerous for people with visual impairments,
- Water fountains at only one height making them difficult to use for tall people, people in wheelchairs, or people of small stature

The Commission and the City support the concept of universal design. Universal design encourages recognition of each person's uniqueness along with their interdependence on other members of society. On that basis, society needs to develop a concept of special needs which is not based on a piecemeal accommodation of the "norm" for the few, but on designing an adaptable world suitable for all.

CONCLUSION

Society has a moral and ethical responsibility along with a legal requirement to make Saskatchewan accessible. There is also a strong business case to do so. The Human Rights Code protects people with disabilities from discrimination in public services through a complaint-based system. UBAS sets minimum building standards through the proactive issuance of permits. While the Code and UBAS deal with different areas of the law, they do in fact complement one another. Finally, the Saskatchewan Human Rights Commission and City of Saskatoon promote the concept of universal design and encourage a societal shift in thinking when it comes to building or renovating new structures. The concept of universal design is the foundation for the development of this Facility Accessibility Designs Standards document.

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DRAFT

1.0 INTRODUCTION

This standard addresses accessibility requirements for the design and construction of new *facilities*, as well as the retrofit, *alteration* or *addition* to existing *facilities*, owned, leased or operated by the City of Saskatoon. This standard particularly addresses the needs of persons with *disabilities*, including, but not limited to, persons with a mobility impairment, hearing impairment, visual impairment, cognitive impairment, persons who are deaf-blind and persons with limited stamina and/or dexterity.

This standard is intended to encompass the intent of the Saskatchewan Human Rights Code, in terms of respecting the dignity of persons with *disabilities*. The phrase 'respects their dignity' means to act in a manner which recognizes the privacy, confidentiality, comfort, autonomy and self-esteem of persons with *disabilities*, which maximizes their integration and which promotes full participation in society.

This standard incorporates the belief in universal design that recognizes the broad diversity of people who use *facilities*. Universal design is defined as:

"The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design." The universal design philosophy is structured around the seven design principles listed below. (Refer to Appendix A for further information

on the universal design principles and their guidelines.)

This standard reflects minimum dimensional criteria required for adult persons. Prior to the design stage of a project, special consideration should be given to the function of the *facility* and the patrons who will use it. A review and upgrade of this standard may be required in some instances, particularly if a *facility* is designed primarily for the use of a particular type of user, such as children or older persons.

Where conflicts exist between scoping and/or dimensional requirements of this standard and legislation enacted by the federal or provincial governments', the most accommodating requirements shall apply (i.e. the requirement(s) that will result in the most accommodating environment but never less than the minimum requirements of the current National Building Code, the Uniform Building and Accessibility Standards Act, the Building Bylaw, the Swimming Pool Bylaw, and the Plumbing and Drainage Regulations).

The City of Saskatoon shall review and/or update this standard every 3-5 years, to reflect technological advancement and new construction practices, as well as changes to the barrier-free design requirements of various codes and standards such as the Uniform Building and Accessibility Standards Act, the

National Building Code, the CSA Standard B651 - Accessible Design for the Built Environment and the Plumbing and Drainage Regulations.

This standard recognizes the concept of equivalent facilitation as a means to encourage new and innovative design ideas and solutions. Departures from particular technical and scoping requirements of this standard by the use of other designs and technologies are encouraged when the alternatives will provide substantially equivalent or greater access to the usability of the *element* and/or *facility*. Design departures from information provided and referenced in this standard should be carefully assessed to determine the validity of the application and may require review by a committee appointed for this purpose by the Building Standards Branch of the City of Saskatoon.

Dimensions used in this standard are in metric units. Nearest imperial equivalent dimensions are in parentheses.

For the purposes of this standard, words and terms in *italics* have their meanings defined in Section 2.0.

The City of Saskatoon encourages all users of this standard to provide feedback, as well as to make proposals for changes, additions and/or deletions. A proposed Change Order Form is included in Appendix B of this standard.

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 a minimum of fatigue.

7. SIZE AND SPACE FOR APPROACH AND USE:

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

The Principles of UNIVERSAL DESIGN

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2.0 GLOSSARY AND DEFINITIONS

GRAPHIC CONVENTIONS

Dimensions that are not marked maximum or minimum are absolute, unless otherwise indicated.

GENERAL TERMINOLOGY

comply with Meet one or more specifications of this standard.

if ... then Denotes a specification that applies only when the conditions described are present.

may Denotes an option or alternative.

shall Denotes a mandatory specification or requirement.

should Denotes an advisory specification or recommendation.

DEFINITIONS

Access aisle: An accessible pedestrian space between elements, such as parking spaces, seating and desks, that provides clearances appropriate for the use of the elements.

Accessible: Describes a site, building, facility or portion thereof that complies with this standard.

Accessible element: An element specified by this standard (for example, telephone, controls etc.).

Accessible route: A continuous unobstructed path connecting accessible elements and spaces of a facility. Interior accessible routes may include corridors, floors, ramps, elevators, platform lifts and clear floor spaces at fixtures. Exterior accessible routes may include parking access aisles, curb ramps, crosswalks at vehicular ways, walks, ramps and platform lifts.

Accessible space: Space that complies with this standard.

Adaptable: The ability of a certain building space or element, such as kitchen counters, sinks, and

grab bars, to be added or altered so as to accommodate the needs of individuals with or without disabilities or to accommodate the needs of persons with different types or degrees of disabilities.

Addition: An expansion, extension, or increase in the gross floor area of a facility.

Alteration: A change to a facility that affects or could affect the usability of the facility or part thereof. Alterations include, but are not limited to, remodelling, renovation, retrofitting, rehabilitation, reconstruction, historic restoration, resurfacing of circulation paths or vehicular ways, changes or rearrangement of the structural parts or elements, and changes or rearrangement in the plan configuration of walls and full-height partitions. Normal maintenance, painting or wallpapering, or changes to mechanical or electrical systems are not alterations, unless they affect the usability of the building.

Area of rescue assistance: An area which has direct access to an exit, where people who are unable to use stairs may remain temporarily in safety to await further instructions or assistance during emergency evacuation.

Assembly area: A room or space accommodating a group of individuals for recreational, educational, political, social, civic or amusement purposes, or for the consumption of food and drink.

Attic or Roof space: The space between the roof and the ceiling of the top storey or between a dwarf wall and a sloping roof.

Automatic door: A door equipped with a power-operated mechanism and controls that open and close the door automatically upon receipt of a momentary actuating signal. The switch that begins the automatic cycle may be a photoelectric device, floor mat, or manual switch. (See Power-assisted door)

Board room or **Conference room** or **Meeting room:** A room used for meetings, which accommodates six or more people.

Building: A structure occupying an area greater than ten square metres, consisting of a wall, roof and floor or any of them, or a structural system serving the function thereof, including all plumbing, fixtures and service systems appurtenant thereto; or a structure occupying an area of ten square metres or less that contains plumbing, including the plumbing appurtenant thereto; or structures designated in the National Building Code.

Circulation path: An exterior or interior way of passage from one place to another for pedestrians, including, but not limited to, walks, hallways, courtyards, stairways, and stair landings.

Clear: Unobstructed.

Clear floor space: The minimum unobstructed floor or ground space required to accommodate a single, stationary wheelchair, scooter or other mobility device, including the user.

Closed-circuit telephone: A telephone with dedicated line(s), such as a house phone, courtesy phone or phone that must be used to gain entrance to a facility.

Common use: Refers to those interior and exterior rooms, spaces or elements that are made available for the use of a restricted group of people (for example, occupants of a homeless shelter, the occupants of an office building, or the guests of such occupants).

Cross slope: The slope that is perpendicular to the direction of travel. (See running slope)

Curb ramp: A short ramp cutting through a curb or built up to a curb.

2.0 GLOSSARY AND DEFINITIONS

Detectable warning surfaces: A standardized surface feature built into or applied to walking surfaces or other *elements* to warn persons with a visual *impairment* of hazards on a *circulation path*.

Disability: Any restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being.

Egress, Means of: A continuous and unobstructed way of exit travel from any point in a *facility* to a public way. A *means of egress* comprises vertical and horizontal travel and may include intervening room *spaces*, doorways, hallways, corridors, passageways, balconies, *ramps*, stairs, enclosures, lobbies, horizontal exits, courts and yards. An *accessible means of egress* is one that complies with this standard and does not include stairs, steps or escalators. Areas of rescue assistance, protected lobbies or protected elevators may be included as part of an *accessible means of egress*.

Element: An architectural or mechanical component of a *building, facility, space* or *site* (e.g., telephone, *curb ramp*, door, drinking fountain, seating or water closet).

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

Facility or Facilities: All or any portion of *buildings*, structures, *site improvements*, complexes, equipment, roads, *walks*, passageways, *parks*, parking lots or other real or personal property located on a *site*.

Ground floor: Any *occupiable* floor less than one *storey* above or below grade with direct access to grade. A *facility* always has at least one *ground floor* and may have more

than one *ground floor*, as where a split-level *entrance* has been provided or where a *facility* is built into a hillside.

Guard: A safety railing used as a barrier to prevent encroachment or accidental falling from heights.

Handrail: A component which is normally grasped by hand for support at stairways and other places where needed for the safety of pedestrians.

Heritage Facility: A *facility* or portions thereof designated under the Saskatchewan Heritage Property Act, or identified in the inventory of heritage resources for the City of Saskatoon. (See *Public Heritage Facility*)

Impairment: Any loss or abnormality of psychological, physiological or anatomical structure or function.

Mezzanine or Mezzanine floor: That portion of a *storey* which is an intermediate floor level, placed within the *storey* and having *occupiable space* above and below its floor.

Marked crossing: A crosswalk or other identified path intended for pedestrian use in crossing a *vehicular way*.

Occupiable: A room or enclosed *space* designed for human occupancy in which individuals congregate for amusement, educational or similar purposes, or in which occupants are engaged at labour, and which is equipped with *means of egress*, light and ventilation.

Open space: Large-scale tracts of land without visible evidence of residential, commercial or industrial development. These areas may be privately or publicly owned and are generally left in a natural state and not programmed for active recreation. The benefits of open lands typically extend beyond the immediate area and usually provide community-wide benefits.

Operable portion: A part of a piece of equipment or appliance used to insert or withdraw objects, or to activate, deactivate, or adjust the equipment or appliance (for example, coin slot, push button, handle).

Park: Land that is privately or publicly held that has been developed for multiple recreational and leisure-time uses. This land benefits the entire community and balances the demands of the public for outdoor recreational facilities and other amenities, such as pathways, picnic areas, playgrounds, water features, *spaces* for free play and leisure.

Power-assisted door: A door used for human passage that has a mechanism that helps to open the door or relieves the opening resistance of a door, upon the activation of a switch or a continued force applied to the door itself.

Private open space: Privately owned land areas within a subdivision, generally smaller in scale than *open space*, which have been left free from structures, parking lots and roads. These types of areas generally benefit only the residents or employees of the particular subdivision and usually remain in private ownership.

Public Heritage Facility: A *facility* or portions thereof designated under the Saskatchewan Heritage Property, or identified in the inventory of heritage resources for the City of London and that is open and accessible to the public. (See *Heritage Facility*)

Public use: Describes interior or exterior rooms or *spaces* that are made available to the general public. *Public use* may be provided at a *facility* that is privately or publicly owned.

Ramp: A walking surface which has a *running slope* greater than 1:25.

Retrofit: See *Alteration*.

Running slope: The slope that is parallel to the direction of travel. (See *Cross slope*)

2.0 GLOSSARY AND DEFINITIONS

Service entrance: An *entrance* intended primarily for delivery of goods or services and not intended for use by the public.

Service room: A room provided in a *building* to contain equipment associated with *building* services.

Service space: A space provided in a *facility* to facilitate or conceal the installation of *facility* service *facilities* such as chutes, ducts, pipes, shafts or wires.

Signage: Displayed verbal, symbolic, *tactile* and pictorial information.

Site: A parcel of land bound by a property line or a designated portion of a public right-of-way.

Site improvement: Landscaping, paving for pedestrian and *vehicular* ways, outdoor lighting, recreational *facilities* added to a *site*.

Sleeping accommodations: Rooms in which people sleep, for example, a dormitory.

Space: A definable area (e.g. room, toilet room, hall, *assembly area*, *entrance*, storage room, alcove, courtyard or lobby).

Storey: That portion of a *building* included between the upper surface of a floor and the upper surface of the floor next above. If such portion of a *building* does not include *occupiable space*, it is not considered a *storey* for the purposes of this standard. There may be more than one floor level within a *storey*, as in the case of a *mezzanine* or *mezzanines*.

Structural frame: The columns and the girders, beams, trusses and spandrels having direct connection to the columns and all other members which are essential to the stability of the *building* as a whole.

TDD (Telecommunication Device for the Deaf): See *Text telephone*.

TTY (Teletypewriter): See *Text telephone*.

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

Technically infeasible: Means, with respect to an *alteration* of a *building* or a *facility*, that it has little likelihood of being accomplished, because:

- existing structural conditions would require moving or altering a load-bearing member which is an essential part of the *structural frame*; or
- other existing physical or *site* constraints prohibit modification or addition of necessary *elements*, *spaces* or features which are in full and strict compliance with the minimum requirements for new construction.

Temporary structure: A *facility* that is not of permanent construction but that is extensively used, or is essential for *public use* for a period of time. Examples of temporary *facilities* covered by this standard include, but are not limited to, reviewing stands, bleacher areas, temporary kiosks, temporary health screening services or temporary safe pedestrian passageways around a construction *site*. Structures and equipment directly associated with the actual processes of construction, such as scaffolding, bridging, materials hoists, or construction trailers, are not included.

Text telephone (TTY): Machinery or equipment that employs interactive text-based communication through the transmission of coded signals across the standard telephone network. *Text telephones* can include, for example, devices known as *TDDs* (telecommunication display devices or telecommunication devices for deaf persons) or computers with special modems. *Text telephones* are also called *TTYs*, an abbreviation for teletypewriter.

Vehicular way: A route intended for vehicular traffic, such as a street, driveway or parking lot, within the boundary of the *site*.

Walk: An exterior pathway with a prepared surface intended for pedestrian use, including general pedestrian areas, such as plazas and courts, within the boundary of the *site*.

3.0 SCOPE, APPLICATION AND ENFORCEMENT

GENERAL

The requirements of this standard shall be

- mandatory for all newly constructed and retrofitted *facilities* owned, leased or operated by the City of Saskatoon; and
- encouraged for all other *facilities*, whether new or retrofitted.

Exceptions: This standard does not apply to

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

GENERAL APPLICATION

All areas of newly designed or newly constructed *facilities* and altered portions of existing *facilities* shall comply with Sections 4.1 to 4.4 of this standard, unless otherwise provided in this section or as modified in Section 4.5, Facility-Specific Requirements.

Exceptions: The requirements of Sections 4.1 to 4.4 do not apply to

- *service rooms*
- elevator machine rooms
- janitor rooms
- *service spaces*
- *crawl spaces*
- *attic or roof spaces*.

APPLICATION BASED ON FACILITY USE

The specific *facility* types listed in Section 4.5 shall, in addition to all of the provisions specified in Section 4.1 to 4.4, comply with the additional design requirements specified in Section 4.5.

Where a *facility* contains more than one use covered by a special application section, each portion shall comply with the requirements for that section in addition to all other general provisions.

WORK AREAS AND EMPLOYEE-DESIGNATED AREAS

All *facilities* shall be *accessible* for employees, as well as patrons/users. All areas intended for use by employees shall be designed and constructed to comply with this standard.

TEMPORARY FACILITIES

This standard applies to temporary *facilities*, as well as permanent *facilities*.

RETROFITTING, ALTERATIONS AND ADDITIONS

Each *addition* to an existing *facility* shall be regarded as an *alteration*.

Each *space* or *element* added to the existing *facility* shall comply with the applicable provision(s) of this standard.

Except where the provision of *accessible* features is *technically infeasible*, no *alteration* shall decrease or have the effect of decreasing accessibility or usability of an existing *facility* to below the requirements for new construction at the time of *alteration*.

If existing *elements*, *spaces* or common areas are altered, then each such altered *element/space/feature/area* shall comply with all applicable provisions. If the applicable provision for new construction requires that an *element/space/feature/area* be on an *accessible route* and the altered *element/space/feature/area* is not on an *accessible route*, this route shall be altered to become *accessible*.

If *alterations* of single *elements*, when considered together, amount to an *alteration* of a room or *space* in a *facility*, the entire *space* shall be made *accessible*.

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

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

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

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

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

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

3.0 SCOPE, APPLICATION AND ENFORCEMENT

HERITAGE FACILITIES

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

- *Facilities* and/or areas that are generally used independently by the public and have undergone extensive modernization should be permanently and fully *accessible*. This includes parking areas, reception areas, washrooms, food service areas and gift shops. It can also include *walkways* and garden areas. If accessibility is limited by non-heritage *elements*, those *elements* should be revised.
- *Facilities* and/or areas which are used only by guided tour groups, through which assistance could easily be provided to open doors or to place a temporary *ramp*, could remain as existing or with minor temporary modifications.

- It is desirable to provide a complete experience of a *Public Heritage Facility*. If an *accessible* area or areas can be provided to fully experience a given *site* or *facility* context, access to the entire *site* or *facility* is not necessary.
- Access to above-grade and below-grade areas is not necessary if the context of those areas can be adequately provided on the *accessible* floor level.

If retrofit for accessibility of a main public *entrance* in a *Heritage Facility* would substantially threaten or destroy the historic significance of the *facility*, access shall be provided at an alternative *entrance* with directional signs at the main public *entrance*. The *accessible entrance* should have a notification system (if not generally used by the public) and remote monitoring (if security is an issue).

Safe egress from a *Heritage Facility* is required.

EQUIVALENT FACILITATION

In a retrofit situation where the requirements of a section of this standard are *technically infeasible* to implement, equivalent facilitation may be proposed.

Equivalent facilitation proposals shall be referred to the the Facilities Branch Manager of the Infrastructure Services Department and/or the Building Standards Branch Manager of the Community Services Department for review and approval on an individual basis.

IMPLEMENTATION

City of Saskatoon, as well as contracted consulting firms shall be responsible for the application of the Facilities Accessibility Design Standards when designing and administering all construction and renovation projects associated with new *facilities*, as well as the retrofit, *alteration* or *addition* to existing *facilities*, owned, leased or operated by the City of Saskatoon.

Designing and constructing to this standard shall be included as a mandatory requirement in all City of Saskatoon Request for Proposals, Tender Documents and construction Contracts.

ENFORCEMENT

The Infrastructures Services Department, Facilities Branch the City of Saskatoon through the project management function, shall ensure compliance to this standard during the pre-planning, design, construction documents preparation and contracts administrative phase.

4.0 DESIGN STANDARDS

All areas of newly designed or newly constructed *facilities* and altered portions of existing *facilities* shall comply with this section, unless otherwise provided in Section 3.0.

Exceptions: This standard does not apply to

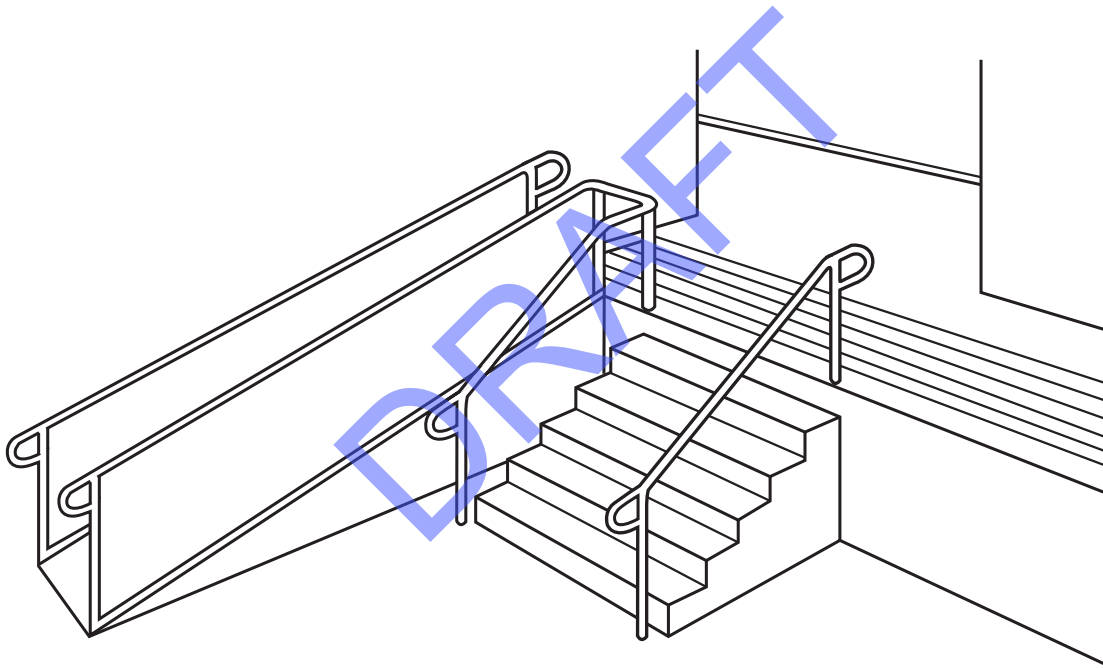
- residential occupancies;
- *buildings* of Group F Division 1 occupancy, as defined by the National Building Code (latest

edition with all amendments); and

- *buildings* which are not intended to be occupied on a daily or full-time basis, including, but not limited to, automatic telephone exchanges, pump houses and substations.

The requirements of this section apply to all areas of a facility except

- *service rooms*
- elevator machine rooms
- janitor rooms
- *service spaces*
- *crawl spaces*
- *attic or roof spaces*



DRAFT

4.1.1 SPACE AND REACH REQUIREMENTS

4.1 ACCESS AND CIRCULATION

RATIONALE

The dimensions and manoeuvring characteristics of wheelchairs, scooters and other mobility devices are as varied as the people who use them. Traditionally, accessibility standards have taken a conservative approach to wheelchair manoeuvrability, reflecting the needs of a physically strong individual using a manual wheelchair. Such an approach excludes the many users without such a degree of strength or those using a larger mobility device. This standard more accurately reflects the vast array of equipment that is used by persons to access and use facilities, as well as the diverse range of user ability. This standard incorporates more generous space requirements, particularly related to the dynamic movement of people using wheelchairs, scooters or other assistive devices.

APPLICATION

Space and reach range provisions for persons who use wheelchairs, scooters and other mobility devices shall comply with this section.

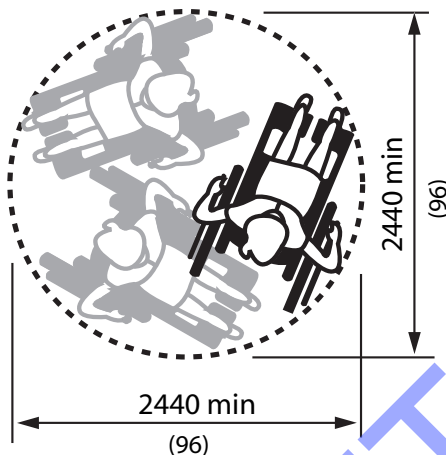


Figure 4.1.1.1
360° Turning Space

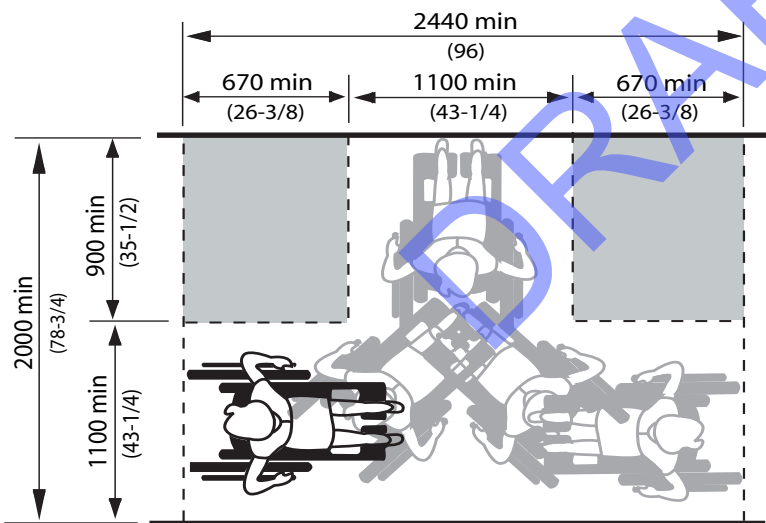


Figure 4.1.1.2
180° Turning Space

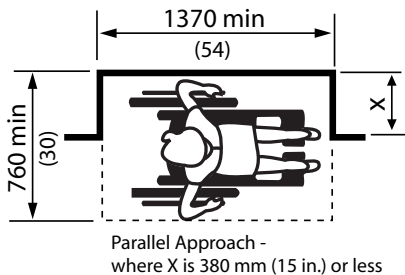


Figure 4.1.1.3
Clearances at Alcove

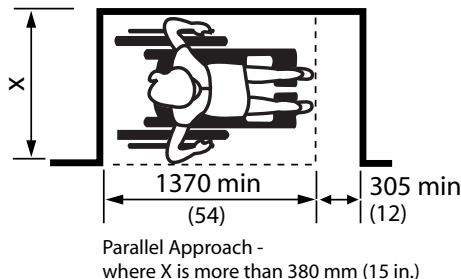


Figure 4.1.1.4
Clearances at Alcove

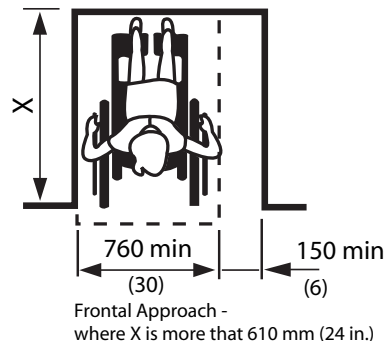


Figure 4.1.1.8
Clearances at Alcove

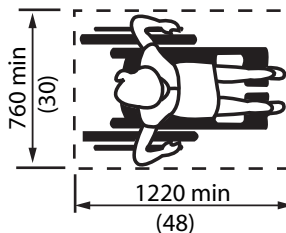


Figure 4.1.1.5
Clear Floor Space for Wheelchair

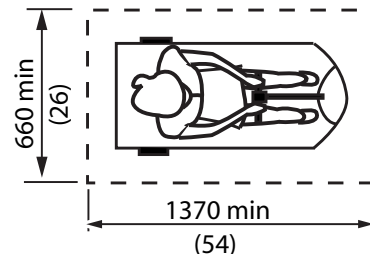
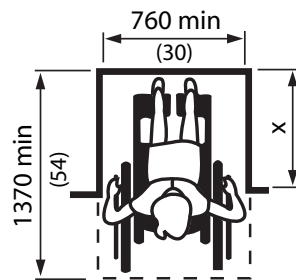


Figure 4.1.1.6
Clear Floor Space for Scooter



Frontal Approach - where X is 610 mm (24 in.) or less
Figure 4.1.1.7
Clearances at Alcove

4.1 ACCESS AND CIRCULATION

4.1.1 SPACE AND REACH REQUIREMENTS

DESIGN REQUIREMENTS

The *space* required for a wheelchair to make a 360-degree turn is a *clear floor space* of 2440 mm (96 in.) in diameter (Figure 4.1.1.1) or for a 180-degree turn, as shown in Figure 4.1.1.2.

The minimum *clear floor space* or ground *space* necessary to accommodate the largest

dimensional requirement of a single, stationary wheelchair or scooter and its' occupant shall be 760 mm (30 in.) x 1370 mm (54 in.). (Refer to Figures 4.1.1.5 and 4.1.1.6)

The minimum *clear floor space* or ground *space* for wheelchairs or scooters may be positioned for forward or parallel approach to an object.

Clear floor space or ground *space* for wheelchairs may be part of the knee *space* required under some objects.

One full, unobstructed side of the *clear floor space* or ground *space* for a wheelchair or scooter shall adjoin or overlap an *accessible route* or adjoin another wheelchair *clear floor space*. If a *clear floor space* is located in an alcove or otherwise confined on all or part of three sides, additional manoeuvring clearances shall be provided as shown in Figures 4.1.1.3, 4.1.1.4, 4.1.1.7 and 4.1.1.8.

The surface of *clear floor* or ground *spaces* for wheelchairs and scooters shall comply with 4.1.2.

If the *clear floor space* only allows forward approach to an object, the maximum high forward reach allowed shall be 1200 mm (47 in.). The minimum low forward reach is 400 mm (15-3/4 in.). Refer to Figure 4.1.1.11. If the high forward reach is over an obstruction, reach and clearances shall be as shown in Figures 4.1.1.12 and 4.1.1.13.

If the *clear floor space* allows parallel approach to an object, the maximum high side reach allowed shall be 1370 mm (54 in.) and the low side reach no less than 230 mm (9 in.) above the floor. Refer to Figure 4.1.1.9. If the side reach is over an obstruction, the reach and clearances shall be as shown in Figure 4.1.1.9 and 4.1.1.13. Notwithstanding these requirements, the National Building Code requires all controls for the operation of *facility services* or safety devices, including electrical switches, thermostats and intercom switches, be mounted 400 mm (16 in.) to 1200 mm (47 in.) above the floor.

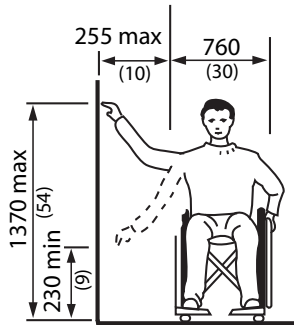


Figure 4.1.1.9
Side Reach

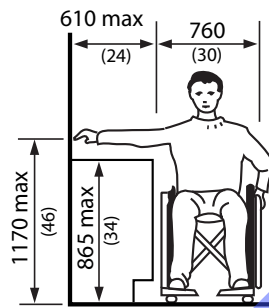


Figure 4.1.1.10
Side Reach over an Obstruction

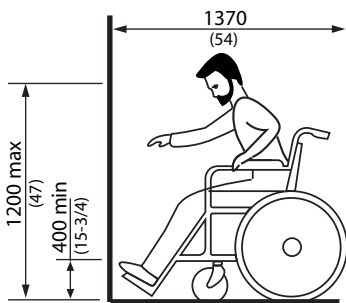


Figure 4.1.1.11
Forward Reach

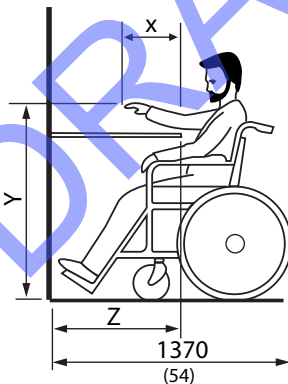


Figure 4.1.1.12
Forward Reach over an Obstruction

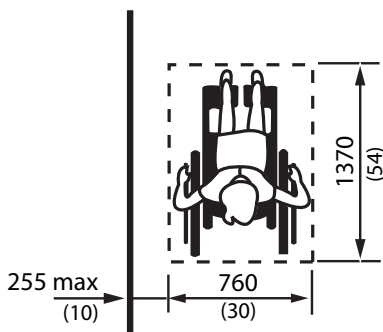


Figure 4.1.1.13
Side Reach - Maximum Distance to Wheelchair

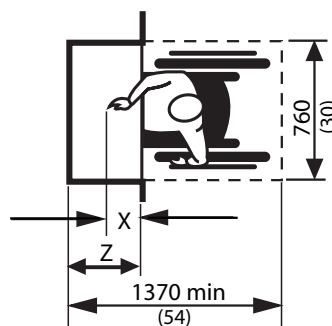


Figure 4.1.1.14
Forward Reach over an Obstruction

NOTE: In Diagrams 4.1.1.12 and 4.1.1.14, X shall be less than or equal to 635 mm (25 in.); Z shall be greater than or equal to X.

When X is less than 510 mm (20 in.), then Y shall be 1220 mm (48 in.) maximum.

When X is 510 to 635 mm (20 to 25 in.), then Y shall be 1120 mm (44 in.) maximum.

4.1.2 GROUND AND FLOOR SURFACES

4.1 ACCESS AND CIRCULATION

RATIONALE

Design decisions related to ground and floor surfaces will influence every person who enters the building. Irregular surfaces, such as cobblestones or pea-gravel finished concrete, are difficult for both walking and pushing a wheelchair. Slippery surfaces are hazardous to all individuals and especially hazardous for seniors and others who may not be sure-footed.

Glare from polished floor surfaces can be uncomfortable for all users and can be a particular obstacle to persons with a visual *impairment* by obscuring important orientation and safety features. Pronounced colour contrast between walls and floor finishes may be helpful for persons with a visual *impairment*, as are changes in colour/texture where a change in level or function occurs.

Patterned floors should be avoided, as they can create visual confusion.

Thick pile carpeting makes pushing a wheelchair very difficult. Small and uneven changes in floor level represent a further barrier to using a wheelchair but also present a tripping hazard to ambulatory persons.

Openings in any ground or floor surface such as grates or grilles can catch canes or wheelchair wheels.

APPLICATION

Ground and floor surfaces along all routes generally used by staff and public and within all areas generally used by staff and public shall comply with this section.

DESIGN REQUIREMENTS

Ground and floor surfaces shall be stable, firm, slip-resistant and glare-free.

Changes in level, except for elevators and other elevating devices, shall conform to Table 4.1.2.

Carpets or carpet tile shall

- be securely fixed;
- have a firm cushion, pad or backing, where used;
- have a level loop, textured loop, level cut pile, or level cut/uncut pile texture with a maximum pad and pile height of 13 mm (1/2 in.); and
- have exposed edges fastened to floor surfaces with trim conforming to Table 4.1.2.

Gratings located in walking surfaces shall

- have spaces not greater than 13 mm (1/2 in.) wide in one direction; and
- be placed so that the long dimension is across the dominant direction of travel.

RELATED SECTIONS

- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.4.8 Detectable Warning Surfaces](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

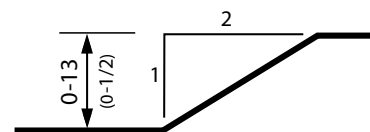


Figure 4.1.2.1
Changes in Level

Vertical Rise	Edge Treatment
less than 13 mm (1/2 in.)	Bevel, maximum slope 1:2
Over 13 mm (over 1/2 in.)	Treat as a sloped floor, ramp or curb ramp

Table 4.1.2
Changes in Level

OPENINGS LARGER THAN 13 (1/2 in.) MAY CATCH WHEELCHAIR WHEELS OR CANES

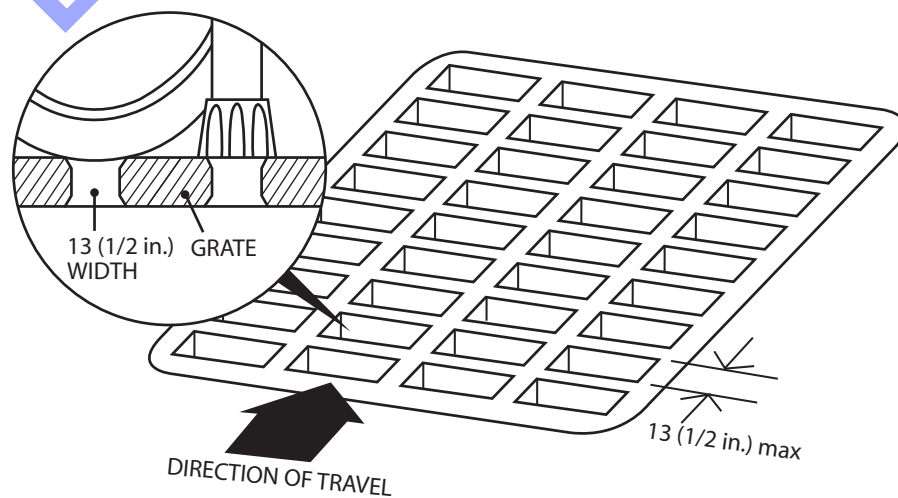


Figure 4.1.2.2
Grills and Gratings

4.1 ACCESS AND CIRCULATION

4.1.3 PROTRUDING & OVERHEAD OBJECTS

RATIONALE

The creation of pathways free from protruding objects or freestanding obstacles is important to all *facility* users. An object protruding from a wall above the detection range of a cane is dangerous for persons with a visual *impairment* or a pedestrian distracted by a conversation. The underside of stairways is a common overhead hazard. Temporary construction barriers can also be hazardous if their lower edge is too high to be detected by a person using a long white cane for mobility. *Detectable warning surfaces* around freestanding obstacles, such as light standards, are advantageous to anyone using a pathway.

APPLICATION

Protruding objects from a wall, ceiling or other location shall comply with this section.

DESIGN REQUIREMENTS

Objects protruding from walls with their leading edges between 680 mm (26-3/4 in.) and 2100 mm (82-3/4 in.) from the floor shall protrude not more than 100 mm (4 in.) into pedestrian areas, such as walkways, halls, corridors, passageways or aisles.

Objects attached to a wall with their leading edges at or below 680 mm (26-3/4 in.) from the floor may protrude any amount.

Freestanding objects shall not have any overhang of more than 300 mm (11-3/4 in.) between 680 mm (26-3/4 in.) and 2100 mm (82-3/4 in.) from the ground or floor.

The maximum height of the bottom edge of freestanding objects with a *space* of more than 300 mm (11-

3/4 in.) between supports shall be 680 mm (26-3/4 in.) from the ground or floor.

Protruding objects shall not reduce the *clear* width required for an *accessible route* or manoeuvring *space*.

The minimum *clear* headroom in pedestrian areas, such as walkways, halls, corridors, passageways, or aisles, shall be 2100 mm (82-3/4 in.).

A detectable *guard*, guardrail or other barrier having its leading edge at or below 680 mm (26-3/4 in.) from the floor shall be provided where the headroom of an area adjoining an *accessible route* is reduced to less than 2100 mm (82-3/4 in.).

RELATED SECTIONS

- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.4.8 Detectable Warning Surfaces](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

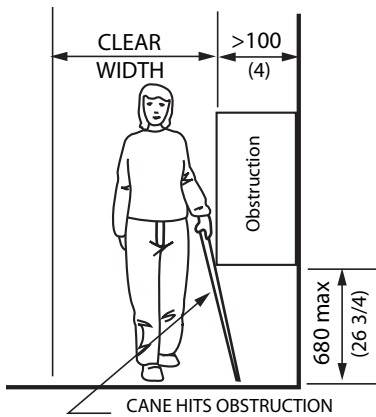


Figure 4.1.3.1
Limits of Protruding Objects

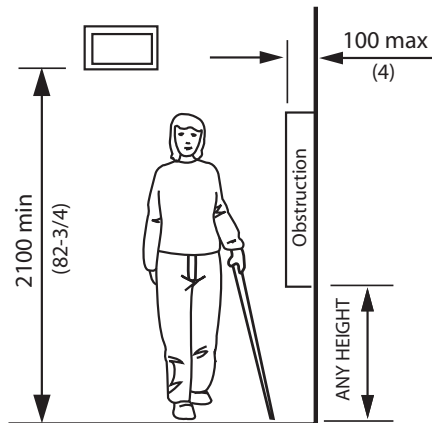


Figure 4.1.3.2
Limits of Protruding Objects

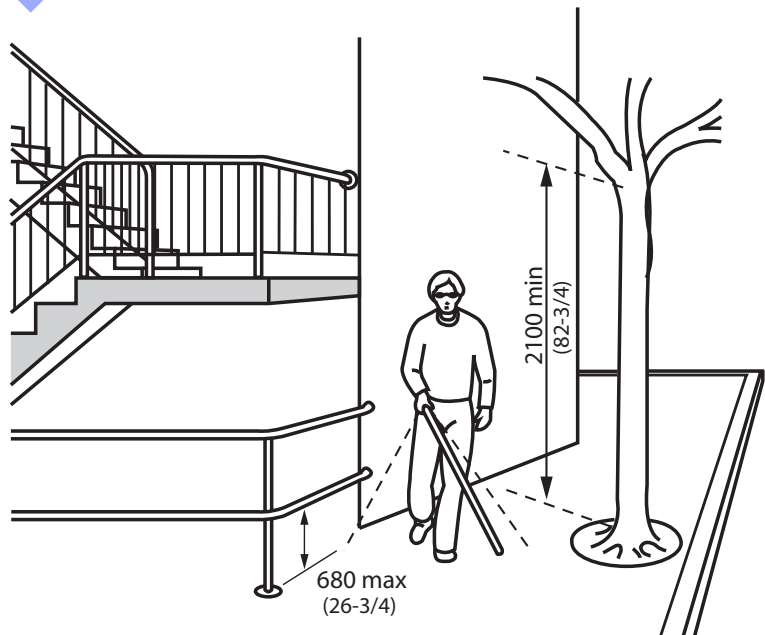


Figure 4.1.3.3
Overhead Obstructions

4.1.4 ACCESSIBLE ROUTES, PATHS & CORRIDORS

4.1 ACCESS AND CIRCULATION

RATIONALE

Routes of travel through a facility should address the full range of individuals that may use them. They must provide the *clear* width necessary for persons using wheelchairs or scooters, those pushing strollers or those travelling in pairs. Consideration should be given not just to the width of items, such as wheelchairs and scooters, but also to their manoeuvrability. While a corridor may be wide enough for a person to drive a scooter in a straight line, it may not be possible to make a turn around a corner. The preferred minimum width for *accessible routes* is 1830 mm (72 in.).

Strong colour contrasts and/or tactile pathways set into floors may be used to assist individuals with a visual *impairment* to negotiate an environment. Edge protection that guards a change in level is an important safety feature for all users.

APPLICATION

Wherever possible, all routes, paths or corridors shall comply with this section.

At least one *accessible route* complying with this section shall be provided within the boundary of the *site* from *accessible parking spaces*, passenger-loading zones (if provided), and public streets or sidewalks to the *accessible facility entrance* they serve. The *accessible route* shall, to the maximum extent feasible, coincide with the route for the general public.

At least one *accessible route* shall connect *accessible buildings, facilities, elements* and *spaces* that are on the same *site*. It is preferable to have all routes *accessible*.

Except where essential obstructions in a work area would make an *accessible route* hazardous, an *accessible route* shall connect *accessible entrances* with all *accessible spaces* and *elements* within the *facility*. An *accessible route* complying with this section shall be provided within all normally *occupiable floor areas*. Exceptions: The provision of an *accessible route* does not apply

- to *service rooms*
- to *elevator machine rooms*
- to *janitor rooms*
- to *service spaces*
- to *crawl spaces*

- to *attic or roof spaces*
- to high-hazard industrial occupancies
- within portions of a floor area with fixed seats in an *assembly occupancy* where these portions are not part of an *accessible route* to *spaces* designated for wheelchair use; or
- within a suite of residential occupancy.

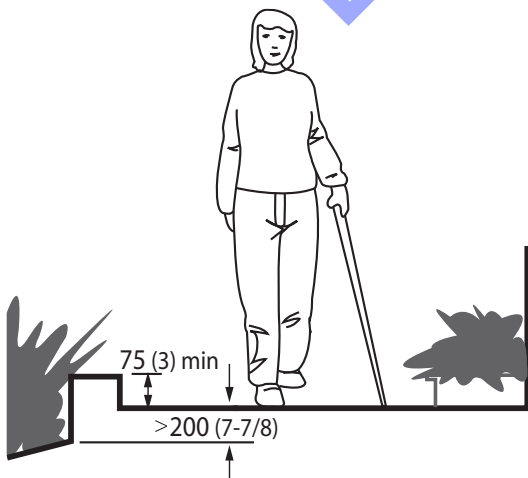


Figure 4.1.4.1
Edge Protection

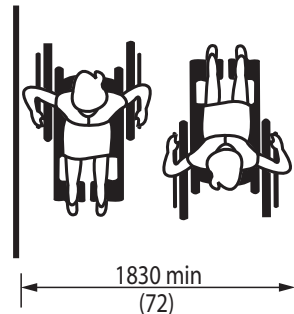
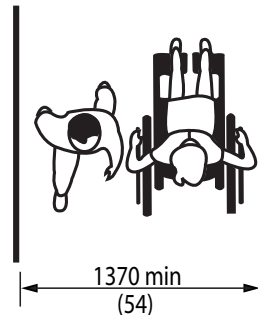
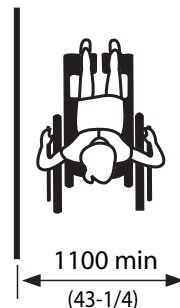


Figure 4.1.4.2
Access Widths

4.1 ACCESS AND CIRCULATION

4.1.4 ACCESSIBLE ROUTES, PATHS & CORRIDORS

APPLICATION
(Continued)

Accessible routes are permitted to include *ramps, curb ramps, stairs, elevators or other elevating devices* (as permitted in [4.1.15](#)) where a difference in elevation exists.

A walkway or pedestrian bridge connecting two barrier-free storeys in different buildings shall form part of an accessible route and shall comply with this section.

DESIGN REQUIREMENTS

The minimum *clear* width of an *accessible route* shall be 1100 mm (43-1/4 in.) except

- at doors - refer to [4.1.6](#);
- where additional manoeuvring *space* is required at doorways (See [4.1.6](#));
- at U-turns around obstacles less than 1220 mm (48 in.) wide, it shall be 1220 mm (48 in.);
- for exterior routes, it shall be 1220 mm (48 in.);
- where *space* is required for two wheelchairs to pass, it shall be 1830 mm (72 in.); and
- at secondary circulation routes within open office areas, where systems-furniture work station clusters are used, it shall be 920 mm (36 in.).

Accessible routes shall

- have a *running slope* not steeper than 1:25 (4%);
- have a *cross slope* not steeper than 1:50 (2%); and
- where the *accessible route* incorporates a *curb ramp*, the *curb ramp* portion of the *accessible route* shall comply with [4.1.10](#).

Every *accessible route* less than 1830 mm (72 in.) wide shall be provided with an unobstructed passing space of not less than 1830 mm (72 in.) in width and 1830 mm (72 in.) in length, located not more than 30 meters (98 ft. 5 in.) apart.

Except at stairs and at elevated platforms such as performance areas or loading docks, where the edge(s) of an *accessible route, path* or *corridor* is not level with the adjacent surface, the edge(s) shall

be protected

- by a colour contrasting curb of at least 75 mm (3 in.) high where the change in level is between 200 mm (7-7/8 in.) and 600 mm (23-5/8 in.); and
- by a *guard* which meets the requirements of the National Building Code where the change in level is greater than 600 mm (23-5/8 in.).

Where there is a change in direction along an *accessible route* and the intended destination of the route is not evident, directional signage shall be provided.

All portions of an *accessible route* shall be equipped to provide a minimum level of illumination of 50 lux (4.6 ft-candles). Exception: In outdoor park settings where routes are not normally illuminated, additional illumination is not required.

Accessible routes, paths or *corridors* having a slope steeper than 1:25 (4%) shall be designed as *ramps*, in compliance with [4.1.9](#).

Accessible routes shall incorporate level rest areas spaced no more than 30 metres (98ft. - 5in.) apart.

Designated areas for snow piling to be provided at exterior *accessible routes*, located away from pedestrian routes.

RELATED SECTIONS

- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.9 Ramps](#)
- [4.1.10 Curb Ramps](#)
- [4.2.3 Elevated Platforms](#)
- [4.4.7 Signage](#)
- [4.4.8 Detectable Warning Surfaces](#)
- [4.4.12 Glare and Light Sources](#)
- [4.4.13 Lighting](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

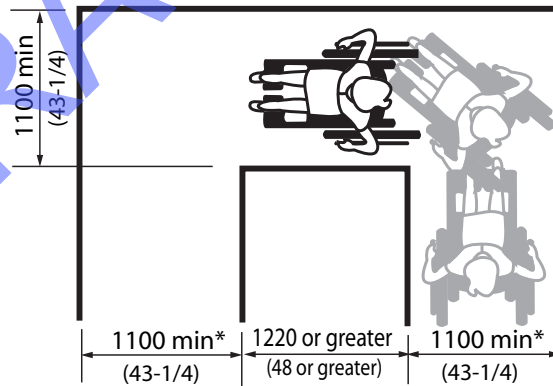


Figure 4.1.4.3
Turn around an Obstacle

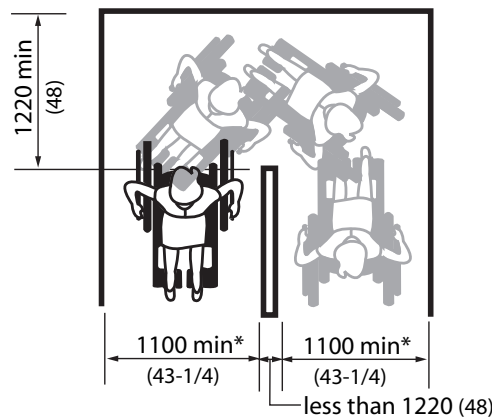


Figure 4.1.4.4
Turn around an Obstacle

Figures 4.1.4.3 and 4.1.4.4 illustrate interior routes. Dimensions marked * to be increased to 1220 mm (48 in.) at exterior routes.

4.1.5 ENTRANCES

4.1 ACCESS AND CIRCULATION

RATIONALE

Design decisions concerning entrances will have an immediate impact on the independence and dignity of everyone entering a facility. Entrances that address the full range of individuals using the facility promote a spirit of inclusion that separate *accessible* entrances do not. Features such as canopies can limit the influence of weather conditions on this already busy area and also make an entrance more obvious to a person with a cognitive disability or someone unfamiliar with the facility.

APPLICATION

All *entrances* used by staff and/or the public shall be *accessible* and comply with this section. In a retrofit situation where it is *technically infeasible* to make all staff and public *entrances accessible*, at least 50% of all staff and public *entrances* shall be *accessible* and comply with this section. In a retrofit situation where it is *technically infeasible* to make all public *entrances accessible*, the primary entrances used by staff and the public shall be *accessible*.

Accessible public *entrances* must be provided in a number at least equivalent to the number of exits required by the National Building Code. (This paragraph does not require an increase in the total number of public *entrances* required for a *facility*.)

An *accessible* public *entrance* must be provided to each tenancy in a *facility*.

In police stations and municipal courts subject to [4.5.8](#) and [4.5.9](#), public *entrances* that are secured shall be *accessible*, as required in [4.5.8](#) and [4.5.9](#).

If direct access is provided for pedestrians from an enclosed parking garage to a *facility*, at least one direct *entrance* from the parking garage to the *facility* must be *accessible*.

If access is provided for pedestrians from a pedestrian tunnel, walkway or pedestrian bridge, at least one *entrance* to the *facility* from each tunnel, walkway or bridge must be *accessible*.

If the only *entrance* to a *facility* or tenancy is a *service entrance*, that *entrance* shall be *accessible*.

Entrances which are not *accessible* shall have directional *signage* complying with [4.4.7](#) which indicates the nearest *accessible entrance*.

Accessible entrances shall be identified with *signage* complying with applicable provisions of [4.4.7](#).

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.6 Doors](#)

[4.1.7 Gates, Turnstiles and Openings](#)

[4.1.8 Windows, Glazed Screens and Sidelights](#)

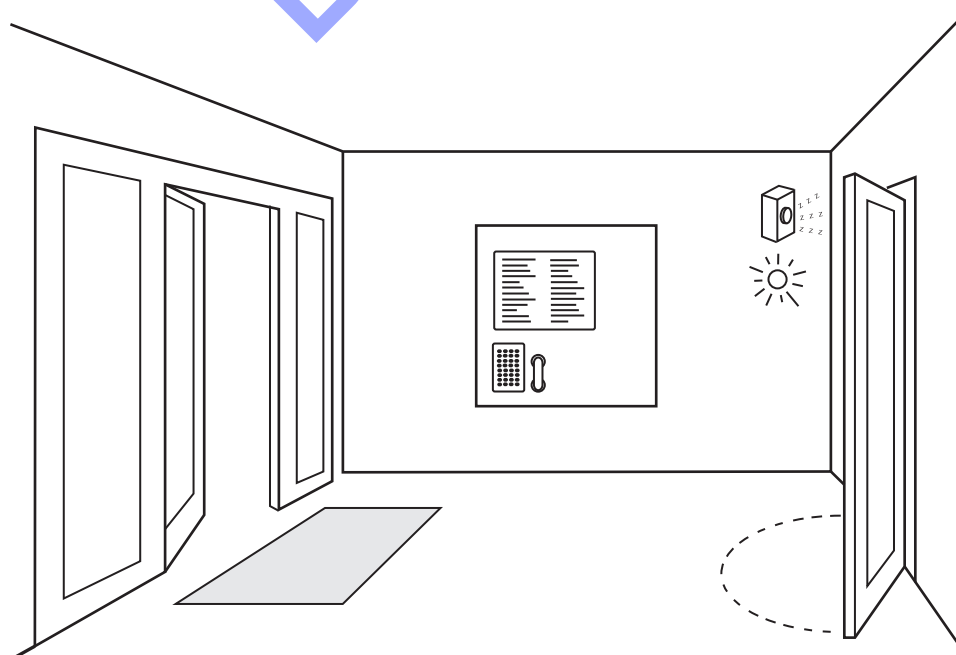
[4.4.2 Controls and Operating Mechanisms](#)

[4.4.7 Signage](#)

[4.4.10 Information Systems](#)

[4.4.11 Card Access, Safety and Security Systems](#)

[4.4.13 Lighting](#)



4.1 ACCESS AND CIRCULATION

4.1.6 DOORS

RATIONALE

Sufficiently wide doorways are advantageous to individuals using wheelchairs or scooters, pushing strollers, or making a delivery. However, a raised threshold at the base of the door could impede any one of these same individuals. This same group, with the addition of children, seniors or even someone carrying packages, would have difficulty opening a heavy door and would benefit from some form of automatic door opener. Where permitted and where feasible, entrances without doors are preferred.

Independent use of doors is desirable. Reliance on assistance from others to open doors is not an *accessible* or dignified solution.

Careful thought to the direction of the door swing can enhance the usability and limit the hazard to other pedestrians. Sliding doors can be easier for some individuals to operate, and can also require less wheelchair manoeuvring *space*. Doors that require two hands to operate are not considered to be *accessible*. Revolving doors are not *accessible* for persons using wheelchairs and strollers. Also, the coordination required to use such doors may be difficult for children or a person with a cognitive disability.

Glazed doors can present a hazard to all individuals and especially those with a visual *impairment*. The inclusion of colour-contrast strips across the glass, mounted at eye level, as well as colour-contrasting door frames and door hardware, will increase the safety and visibility of a glazed door for a person with a visual *impairment*.

APPLICATION

All doors used by staff or the public shall comply with this section. In a retrofit situation where it is *technically infeasible* to make all doors *accessible*, at least one door at each *accessible space* shall comply with this section.

Exception: Doors not requiring full user passage, such as shallow closets, may have the *clear* opening

reduced to 510 mm (20 in.) minimum.

Each door that is an *element* of an *accessible route* shall comply with this section.

Each door required by [4.4.1](#) (Emergency Exits, Fire Evacuation and Areas of Rescue Assistance) shall comply with this section.

Where a door system incorporates multiple door leaves at a single location, at least one of the door leaves shall comply with this section.

Power operators shall be provided at the following door locations:

- entrances required by [4.1.5](#);
- washrooms that include an *accessible* toilet stall, where there is no individual washroom on the same floor. Exception: Where there is at least one other male and female washroom with *accessible* toilet stalls on the same floor, that are equipped with a power door operator;
- individual washrooms equipped with a door having a self-closing device;

- change rooms that contain *accessible* toilet and shower facilities, as well as a private *accessible* change room; and
- intermediate doorways across primary circulation routes within a *facility*. Exception: Doors that are held-open using electromagnetic hold-open devices.

Mats and mat sinkages at doors shall comply with this section.

Revolving doors or turnstiles shall not be the only means of passage at an *accessible entrance* or along an *accessible route*. An *accessible* gate or door shall be provided adjacent to the turnstile or revolving door and shall be designated to facilitate the same use pattern.

Frameless glass doors and/or sidelights shall not be used.

Door hardware on all doors throughout a facility (not only those deemed *accessible*), shall comply with the door hardware requirements of this section.

Context	Floor Space Required (in mm)		
	Depth	Width	Space beside latch
Side-hinged door - Front approach (Figure 4.1.6.4)			
Pull side	1525 (60 in.)	1600 (63 in.) (*1525 (60 in.))	600 (23-5/8 in.)
Push side	1370 (54 in.)	1250 (49-1/4 in.) (*1220 (48 in.))	300 (11-3/4 in.)
Side-hinged door - Latch-side approach (Figure 4.1.6.3)			
Pull side	1370 (54 in.) (*1220 (48 in.))	1600 (63 in.) (*1525 (60 in.))	600 (23-5/8 in.)
Push side	1370 (54 in.) (*1100 (43-1/4 in.))	1525 (60 in.)	600 (23-5/8 in.)
Side-hinged door - Hinge-side approach (Figure 4.1.6.2)			
Pull side	2440 (96 in.) (*1525 (60 in.))	2440 (96 in.) (*1525 (60 in.))	600 (23-5/8 in.)
Push side	1370 (54 in.) (*1100 (43-1/4 in.))	1830 (72 in.)	450 (17-3/4 in.)
Sliding door (Figure 4.1.6.5)			
Front approach	1370 (54 in.)	1100 (43-1/4 in.) (*920 (36 in.))	50 (2 in.)
Side approach	1370 (54 in.) (*1100 (43-1/4 in.))	1550 (61 in.) (*1370 (54 in.))	600 (23-5/8 in.)

Table 4.1.6 Manoeuvring Space at Doors

In retrofit situations where it is *technically infeasible* to provide the required clearances at doors, the clearances may be reduced as shown by the asterisk (*).

4.1.6 DOORS

4.1 ACCESS AND CIRCULATION

DESIGN REQUIREMENTS

Where permitted, rooms without doors are preferred.

Accessible doors shall be on an accessible route that complies with 4.1.4.

The minimum clear opening of doorways shall be 950 mm (37-1/2 in.), measured between the face of the door and the opposite door stop with the door open 90 degrees. In a retrofit situation where it is technically infeasible to provide this clearance, the minimum clear opening of doorways may be reduced to 850 mm (33-1/2 in.).

Doors shall have level wheelchair-manoeuvring space on both sides of the door. Unless equipped with a power door operator, doors shall have a clear space beside the latch, as described in Table 4.1.6.

Exception: The clear space is not required on the inactive side of a door, where access is provided from one side only - such as to a closet.

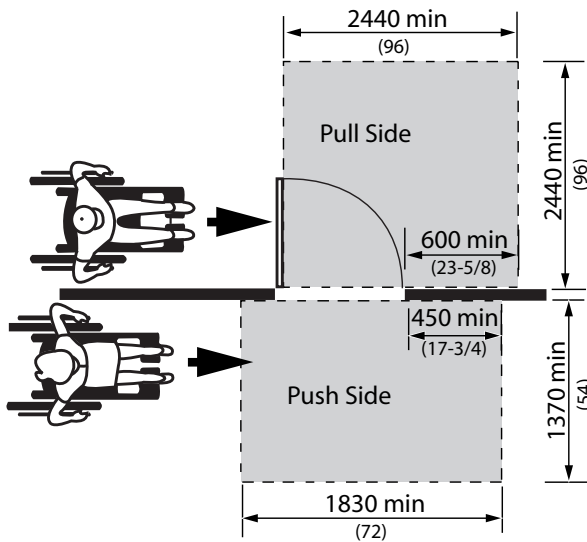


Figure 4.1.6.1
Hinge Side Approach
at Hinged Doors

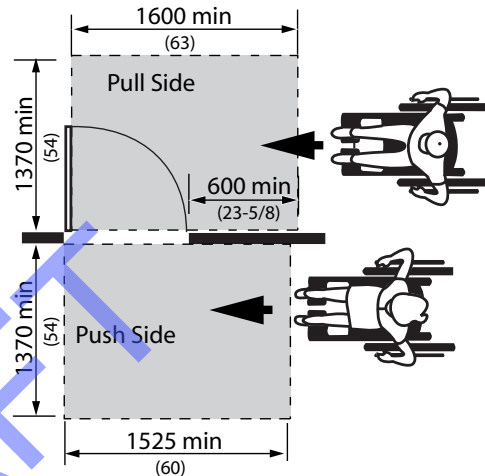


Figure 4.1.6.2
Latch Side Approach
at Hinged Doors

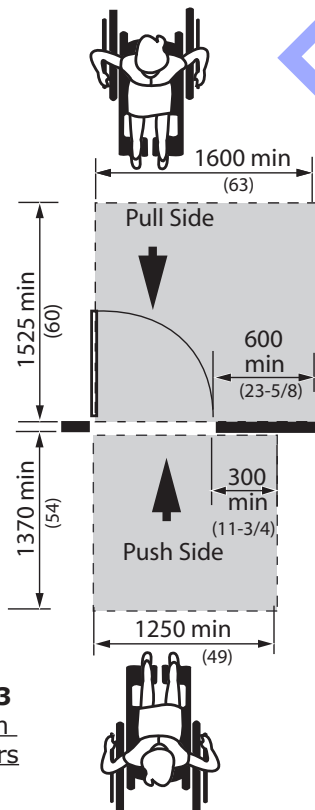


Figure 4.1.6.3
Front Approach
at Hinged Doors

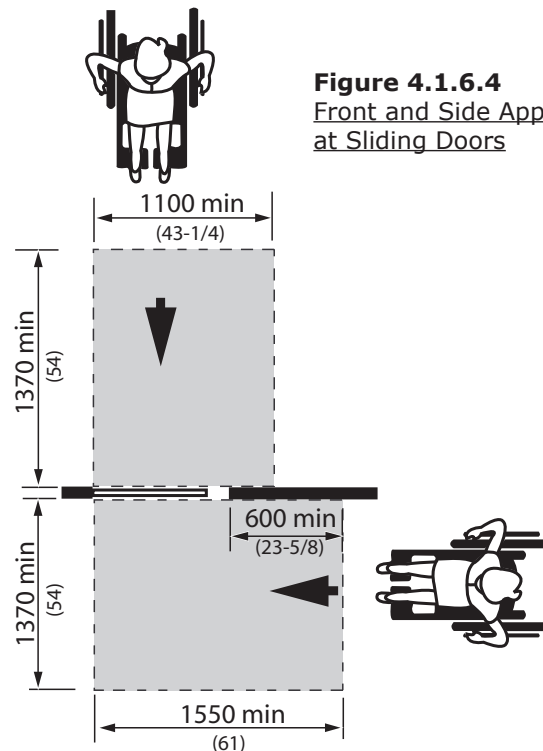


Figure 4.1.6.4
Front and Side Approach
at Sliding Doors

4.1 ACCESS AND CIRCULATION

4.1.6 DOORS

DESIGN REQUIREMENTS
(Continued)

The required *clear space* beside the latch is to be unobstructed for the full height of the door.

The minimum *space* between two hinged or pivoted doors in series shall be 1370 mm (54 in.), plus the width of any door swinging into the *space*.

Thresholds shall

- be not more than 13 mm (1/2 in.) high; and
- be bevelled at a maximum slope of 1 in 2 at changes in level not more than 13 mm.

Door hardware (operating devices such as handles, pulls, latches, and locks) shall

- be operable by one hand;
- not require fine finger control, tight grasping, pinching, or twisting of the wrist to operate; and
- be mounted between 900 mm (35 in.) and 1000 mm (39-3/8 in.) from the floor.

Operating hardware on sliding doors shall be exposed and usable from both sides when sliding doors are fully open.

The maximum door opening force for pushing or pulling open a door shall be

- 38 N (8.5 lb.) for exterior hinged doors;
- 22 N (4.6 lb.) for interior hinged doors; and
- 22 N (4.6 lb.) for sliding or folding doors.

Door closers shall be adjusted to the least pressure possible, but never more than the opening forces noted in this section.

The sweep period of door closers shall be adjusted so that, from an open position of 90 degrees, the door will take not less than 3 seconds to move to a semi-closed position of approximately 12 degrees.

Power-assisted swinging doors shall

- take not less than 3 seconds to move from the closed to the fully open position; and
- require a force of not more than 66 N (13.8 lb.) to stop door movement.

Permanent mats and metal gratings at *entrances* and in vestibules shall be sunk level with the floor, so as not to create a tripping hazard.

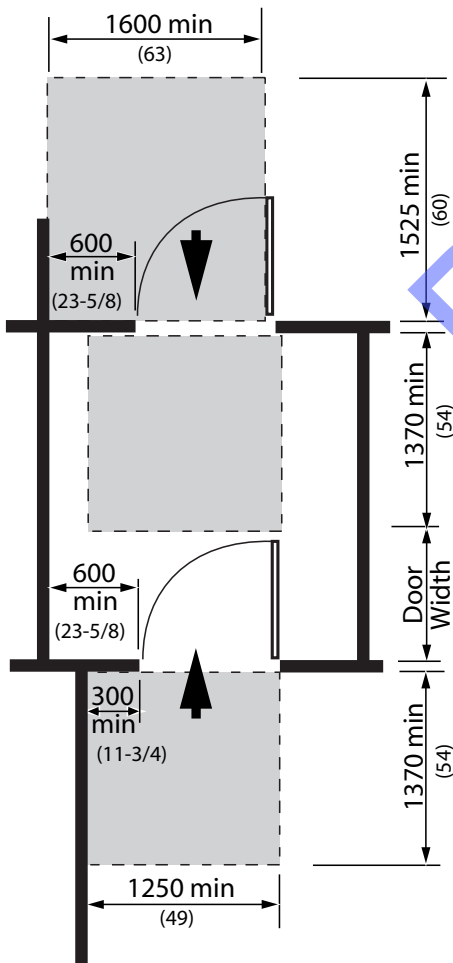


Figure 4.1.6.5
Manoeuvring Space at Doors in Series

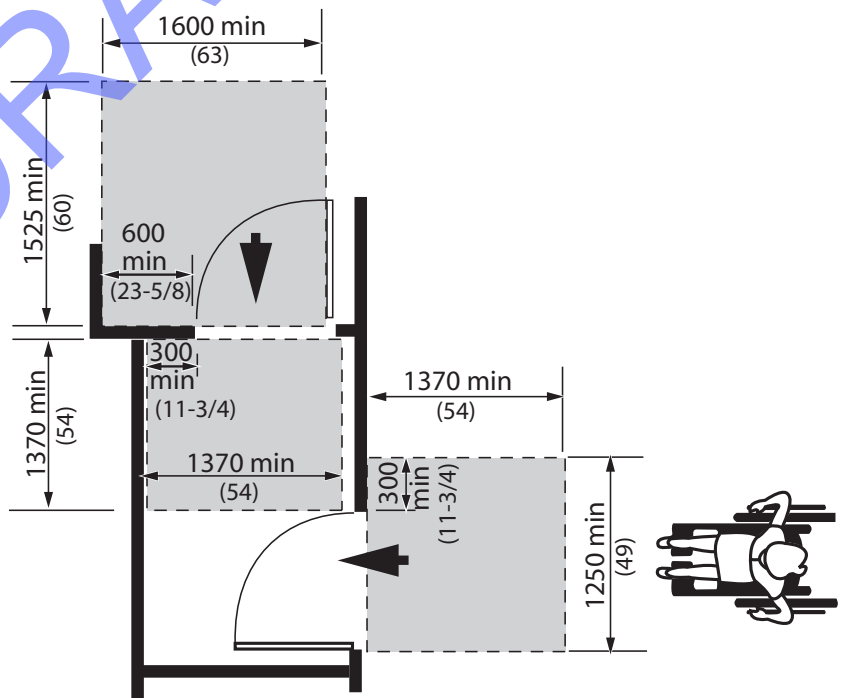


Figure 4.1.6.6
Manoeuvring Space at Doors in Series

4.1.6 DOORS

4.1 ACCESS AND CIRCULATION

Occasional mats (e.g. runners used in bad weather) should be level with the floor surface and/or have a gently bevelled edge, so as not to create a tripping hazard.

Where power door operators are provided they shall

- be located to allow a person using a wheelchair or scooter to stop immediately adjacent to the control (refer to [4.1.1](#));
- be located at least 600 mm (23-5/8 in.) from any inside corner;
- if located on hinge side of door it controls, be located not less than 600 mm (23-5/8 in.) beyond the door swing, where the door opens towards the control;
- have its centre located 1000 - 1100 mm (39-3/8 - 43-1/4 in.) from the floor;
- incorporate controls that are clearly visible and minimum 150 mm (5-7/8 in.) in diameter;
- incorporate the International Symbol of Access for Persons with Disabilities;
- where pressure-sensitive mats, overhead beams or proximity scanners are used to detect traffic, incorporate systems that will detect individuals using wheelchairs or scooters; and
- where exterior doors swing open into a pedestrian area, incorporate safety *guards* that comply with [4.1.3](#), projecting a minimum of 300 mm (11-3/4 in.) beyond both sides of the open door. (See Figure 4.1.6.8)

Where doors are not equipped with a closing device, the edge of door shall be colour contrasted to the face of the door. (See Figure 4.1.6.9)

Doors and/or door frames shall incorporate pronounced colour contrast, to differentiate them from the surrounding environment. Door handles and other operating mechanisms shall incorporate pronounced colour contrast, to differentiate them from the door itself.

Where a door incorporates glazing or is fully glazed, it shall comply with Section [4.1.8](#) (Windows, Glazed Screens and Sidelights).

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.7 Gates, Turnstiles and Openings](#)

[4.1.8 Windows, Glazed Screens and Sidelights](#)

[4.4.2 Controls and Operating Mechanisms](#)

[4.4.7 Signage](#)

[4.4.10 Information Systems](#)

[4.4.11 Card Access, Safety and Security Systems](#)

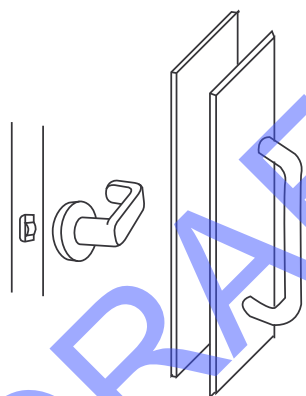


Figure 4.1.6.7
[Examples of Accessible Hardware](#)

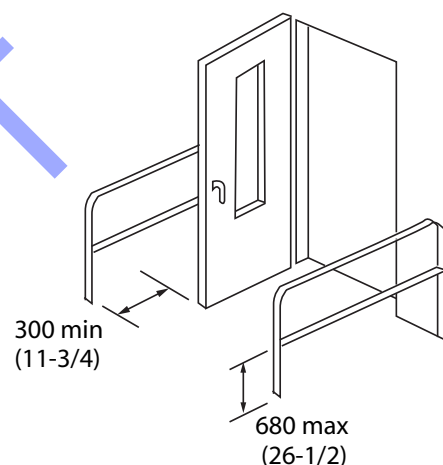


Figure 4.1.6.8
[Detectable Safety Guards](#)

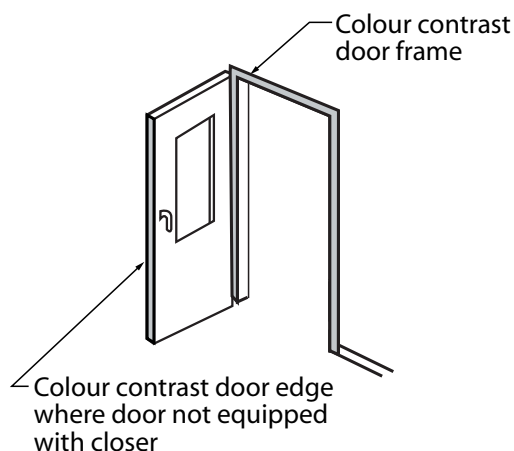


Figure 4.1.6.9
[Colour Contrast at Doors](#)

4.1 ACCESS AND CIRCULATION

4.1.7 GATES, TURNSTILES AND OPENINGS

RATIONALE

Gates and turnstiles should address the full range of users that may pass through them. Single-bar gates designed to be at a convenient waist height for ambulatory persons are at neck and face height for children and chest height for persons who use wheelchairs or scooters.

Revolving turnstiles are a physical impossibility for a person in a wheelchair to negotiate. They are also difficult for persons using canes or crutches, or persons with poor balance. An adjacent opening of an *accessible* width is essential for wheelchair access, as well as access for those using other mobility devices, strollers, walkers or delivery carts.

APPLICATION

Gates, turnstiles and openings shall comply with this section.

DESIGN REQUIREMENTS

Where gates or openings are provided through fences or screens to *public use* areas, such openings shall be *accessible* (i.e., a minimum of 950 mm (37-1/2 in.) wide, to allow free passage for persons who use a wheelchair or scooter. (Note: Hardware should be suitable for autonomous use, and any closing device should not be spring-loaded).

Where turnstiles or other ticketing control devices are utilized which are not *accessible*, a gate or opening which is *accessible* shall be provided in the same location and shall incorporate the International Symbol of Access for Persons with Disabilities.

Turnstiles shall incorporate a pronounced colour contrast to differentiate them from the surrounding environment.

Where gates are incorporated into a chain-link fencing system, the poles at either side of the gate shall incorporate a pronounced colour contrast from the fence and the surrounding environment.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.6 Doors](#)
- [4.1.8 Windows, Glazed Screens and Sidelights](#)
- [4.4.2 Controls and Operating Mechanisms](#)
- [4.4.7 Signage](#)
- [4.4.10 Information Systems](#)
- [4.4.11 Card Access, Safety and Security Systems](#)

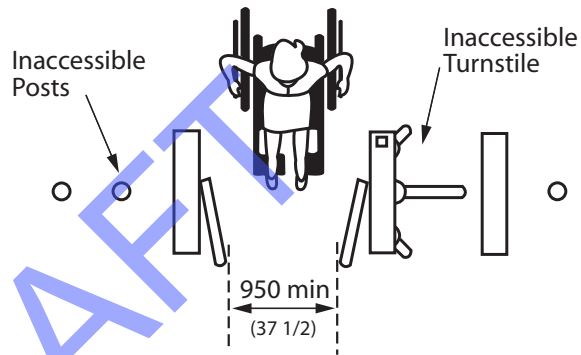


Figure 4.1.7.1
Access at Turnstile

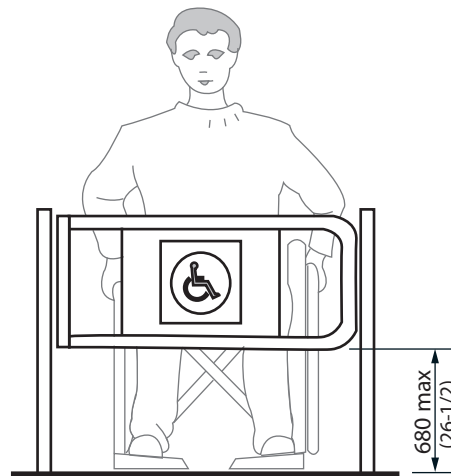


Figure 4.1.7.2
Access at Turnstile

4.1.8 WINDOWS, GLAZED SCREENS & SIDELIGHTS**4.1 ACCESS AND CIRCULATION****RATIONALE**

Broad expanses of glazing in screens, sidelights and doors can be difficult to detect. While this may be a particular concern to persons with a visual *impairment*, it is possible for anyone to walk into a clear sheet of glazing especially if they are distracted or in a hurry.

Persons who use wheelchairs or scooters experience the *facility* from a seated position thereby lowering their eye level and reach range. This necessitates the need for lower sill heights and easily reached operating mechanisms. Window controls and operating devices should also respect the limitations of hand strength or dexterity encountered with different types of *disabilities*, including arthritis.

APPLICATION

Windows, glazed screens, fully-glazed sidelights, fully-glazed doors and vision panels in doors shall comply with this section.

Frameless glass doors and/or sidelights shall not be used.

DESIGN REQUIREMENTS

Fully-glazed doors and sidelights at exterior *entrances* or vestibules, as well as fully-glazed interior doors, screens and sidelights shall be clearly identified with a horizontal row of decals, or a continuous stripe, minimum 50 mm (2 in.) wide and of highly contrasting colour, mounted with its centre line between 1475 mm (58 in.) and 1525 mm (60 in.) from the floor or ground. Additionally, a second row of decals, or a continuous stripe, a minimum 50 mm (2 in.) wide and of highly contrasting colour shall be provided, mounted with its centreline between 1170 mm (46 in.) and 1220 mm (48 in.) above the floor or ground.

Where decals are used, they shall be located at a maximum of 150 mm (5-7/8 in.) from centre to centre. The decals can either be 50 mm (2 in.) square or round, and/or of a special design (e.g., a

logo) provided the solid portion of the decals provides a high colour contrast and is easy to identify by persons with a visual impairment.

Where etched or patterned glass is used, decals or stripes of a highly contrasting colour shall still be provided.

Where frameless glass vision panels are used, exposed edges shall be identified with a vertical safety stripe, applied to cap the ends of each exposed glass panel.

Where viewing windows or vision panels are provided,

- the sill height shall be no more than 760 mm (30 in.) from the floor; and

- where horizontal transoms are incorporated, the transoms shall not be located between 1060 mm (42 in.) and 1220 mm (48 in.) from the floor.

In *facilities* with operable windows, window opening hardware shall

- be mounted between 400 mm (15-3/4 in.) and 1200 mm (47 in.) from the floor;
- be operable using one hand; and
- not require fine finger control, tight grasping, pinching, or twisting of the wrist to operate.

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.4.2 Controls and Operating Mechanisms](#)

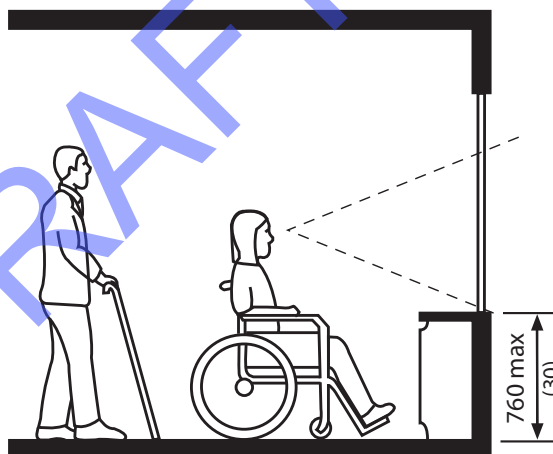


Figure 4.1.8.1
Window Sill
Height

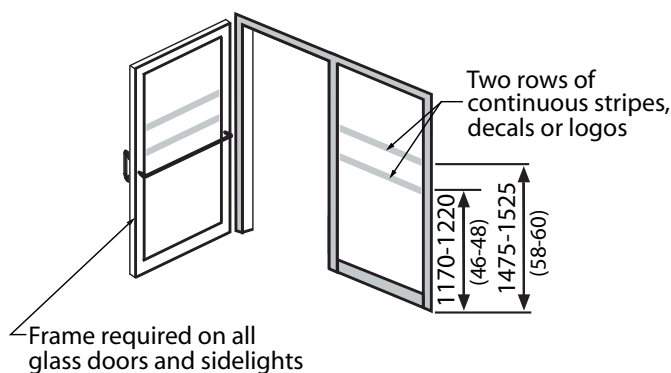


Figure 4.1.8.2
Fully Glazed Doors, Sidelights
and Vision Panel Markings

4.1 ACCESS AND CIRCULATION

4.1.9 RAMPS

RATIONALE

Traditionally, *ramps* have been synonymous with wheelchair accessibility. However, *ramps* can be problematic in providing accessibility. *Ramps* can be difficult and dangerous to negotiate. Also, the physical *space* required for ramps makes them cumbersome to integrate into a *facility*. However, where a change in level already exists or cannot be avoided, a properly designed *ramp* can provide access for those using wheelchairs or scooters, pushing strollers or moving packages on a trolley.

The design of the *ramp* is critical to its usefulness and safety. A steeply inclined *ramp* is difficult to ascend when using a wheelchair, and can increase the risk of the wheelchair tipping backwards. Descending a steep *ramp* can also be hazardous. Any cross slope will further increase the effort required to negotiate the *ramp*. Manoeuvring space at the top and bottom are also important factors in a *ramps* usability. Level areas at points along a long *ramp* enable an individual to rest.

Textured surfaces, edge protection and *handrails* all provide important safety features. Heated surfaces are recommended to address the safety concerns associated with snow and ice.

APPLICATION

Any part of an *accessible route* with a slope steeper than 1:25 shall be considered a *ramp* and shall comply with this section.

DESIGN REQUIREMENTS

Accessible ramps shall be on an *accessible route* complying with 4.1.4.

Where an accessible ramp is located in a barrier-free path of travel serving a building entrance, signage in compliance with 4.4.7 shall be installed to indicate the location of the accessible ramp and the accessible entrance.

The *running slope* shall be between 1:20 and 1:25. In a retrofit situation where it is *technically infeasible* to provide a *ramp* with a *running slope* between 1:20 and 1:25, a *running slope* not steeper than 1:12 may be used. Shallower slopes are preferred.

The maximum *cross slope* of *ramp* surfaces shall be 1:50.

Ramps shall have level landings at the top and bottom of each run and also where the *ramp* changes direction.

The maximum horizontal length between landings shall not exceed 9 m (29'-6").

Landings shall

- be at least as wide as the widest *ramp* run leading to it;
- have a minimum size not less than 2440 x 2440 mm (96 x 96 in.) if located at the top or

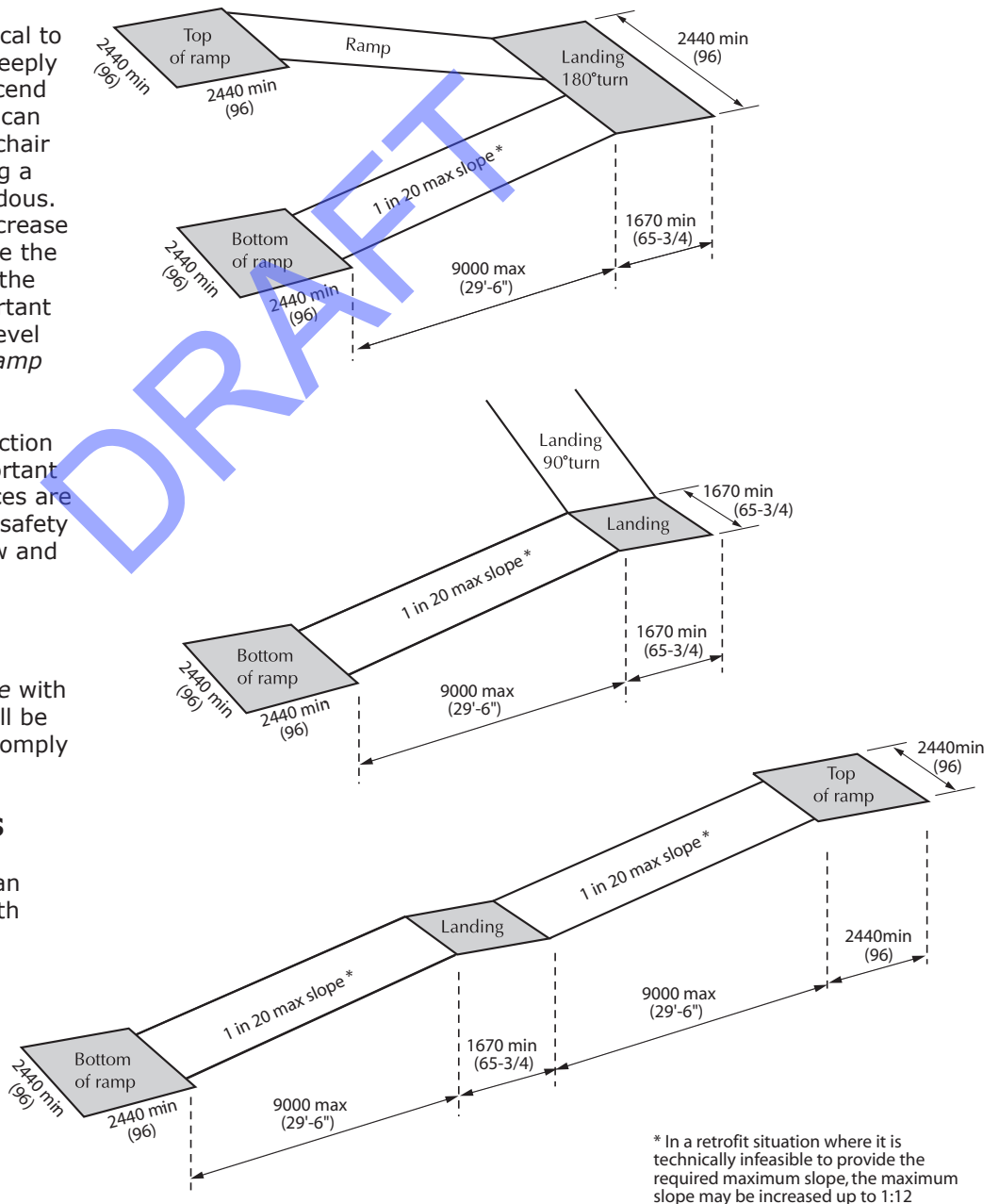


Figure 4.1.9.1
Minimum Ramp Landing Dimensions

4.1.9 RAMPS

4.1 ACCESS AND CIRCULATION

bottom of a *ramp* or if served by a doorway. (In a retrofit situation where creating a suitably sized landing is *technically infeasible*, the required landing size may be reduced to 1670 x 1670 mm. (65-3/4 x 65-3/4 in.);

- where an intermediate landing at the switchback of a U-shaped *ramp* (Refer to Figure 4.1.9.1), have a length not less than 1670 mm (65-3/4 in.) and a width not less than 2440 mm (96 in.). In a retrofit situation where creating a suitably sized landing is *technically infeasible*, the required landing width may be reduced to 2120 mm (84in);

- where an intermediate landing at the corner of an L-shaped *ramp* (Refer to Figure 4.1.9.1), have a length and width not less than 1670 mm (65-3/4 in.); and
- where an intermediate landing at a straight *ramp* (Refer to Figure 4.1.9.1), have a length not less than 1670 mm (65-3/4 in.).

Ramp and landing surfaces shall be slip-resistant.

Outdoor *ramps* and their approaches shall be designed so that water will not accumulate on walking surfaces.

Edges of *ramps* and landings shall be protected with a wall or *guard* on all sides.

- Where a *guard* is provided, it shall
- comply with the requirements of the National Building Code;
 - be provided
 - with a curb at least 75 mm (3 in.) high on any side of the *ramp* where no solid enclosure or *guard* is provided; and
 - with railings or other barriers that extend to within 50 mm (2 in.) of the finished *ramp*, or have a curb not less than 75 mm (3 in.) high.

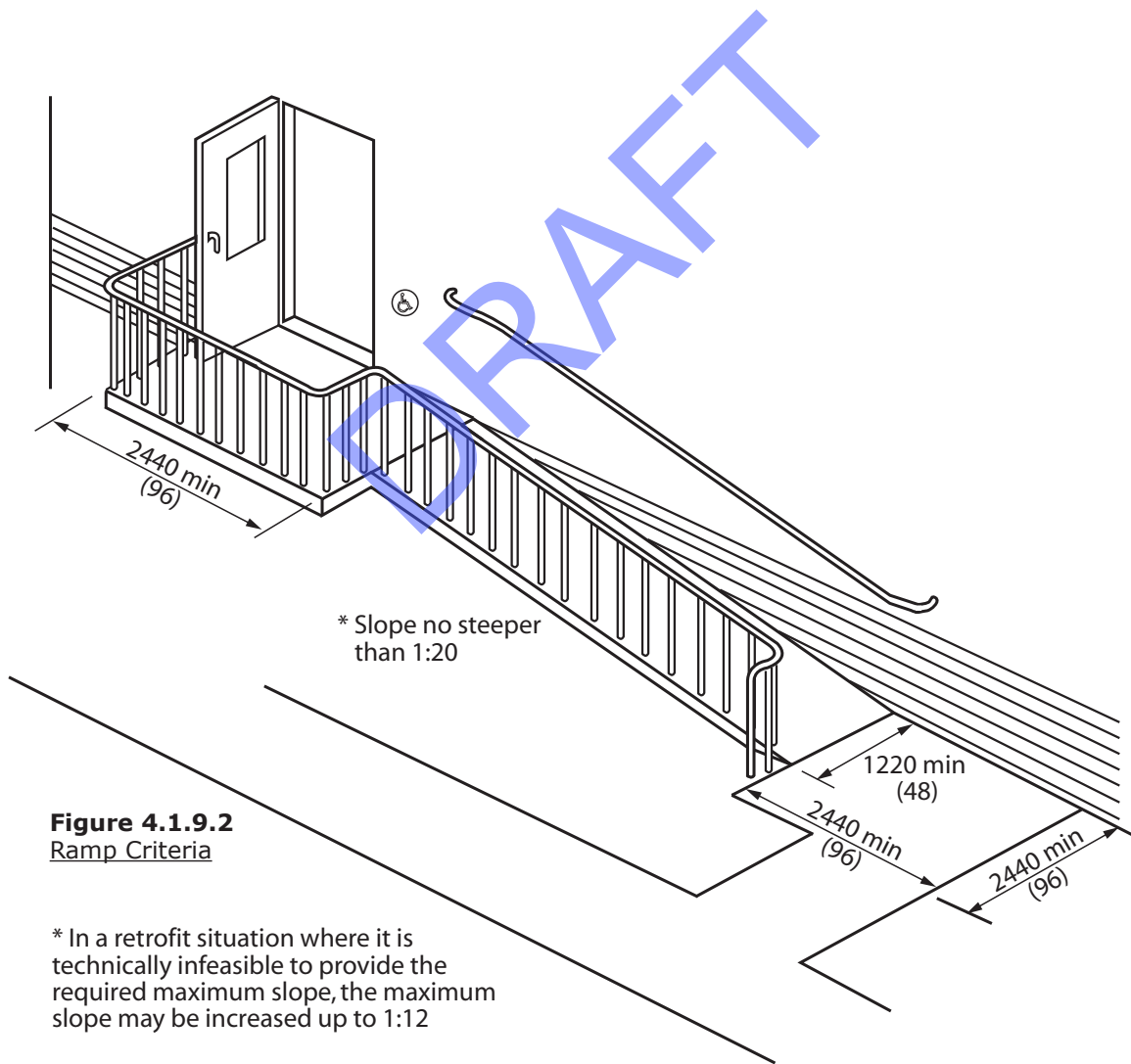


Figure 4.1.9.2
Ramp Criteria

* In a retrofit situation where it is technically infeasible to provide the required maximum slope, the maximum slope may be increased up to 1:12

4.1 ACCESS AND CIRCULATION

4.1.9 RAMPS

DESIGN REQUIREMENTS
(Continued)

A ramp run with a rise greater than 150 mm (6 in.) shall have handrails which

- are on both sides;
- comply with 4.1.12;
- are continuous on the inside of switchback (U-shaped) or L-shaped ramps;
- extend horizontally at least 300 mm (11-3/4 in.) beyond the top and bottom of the ramp and return to the wall, floor, or post;

- measure between 865 mm (34 in.) and 920 mm (36 in.) from the ramp surface to the top of the handrail; and
- have a width between handrails of 950 mm - 1100 mm (37-1/2 to 43-1/4 in.).

EXCEPTION: Where a ramp serves as an aisleway for fixed seating, the requirement for ramp handrails does not apply.

Designated areas for snow piling to be provided at exterior ramps, located away from pedestrian routes.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.6 Doors](#)
- [4.1.10 Curb Ramps](#)
- [4.1.12 Handrails](#)
- [4.4.7 Signage](#)
- [4.4.8 Detectable Warning Surfaces](#)
- [4.4.12 Glare and Light Sources](#)
- [4.4.13 Lighting](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

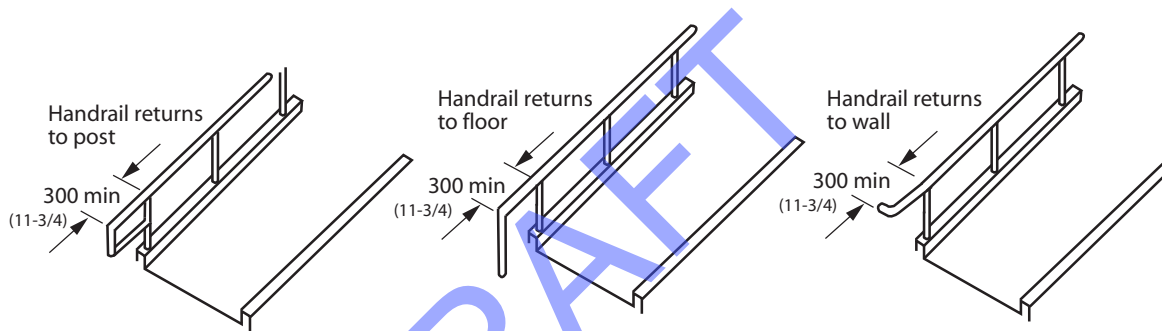


Figure 4.1.9.3
Horizontal Handrail Extensions

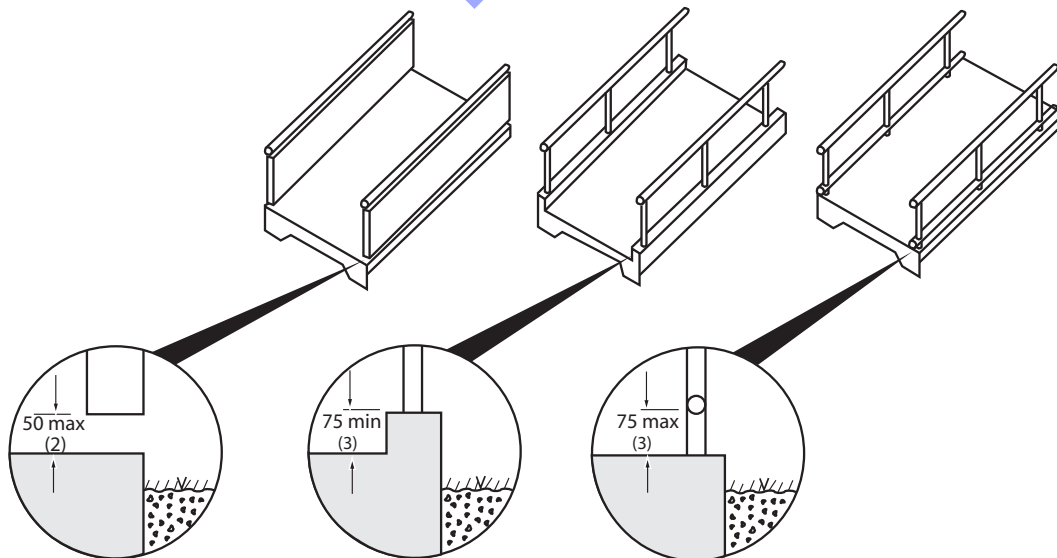


Figure 4.1.9.4
Edge Protection at Ramps

4.1.10 CURB RAMPS

4.1 ACCESS AND CIRCULATION

RATIONALE

In the interest of moving people safely and efficiently off a roadway, the design of curb ramps is very important. The same issues related to the slopes of ramps apply equally to slopes of curb ramps. A well-designed curb ramp can be spoiled by an uneven or gapped transition between the road surface and curb ramp. Flared sides on the curb ramp eliminate the hazard of pedestrians stepping off of an edge. While a smooth transition and minimal slope are ideal for someone in a wheelchair, they are a potential hazard to an individual with a visual impairment who may not notice the transition from sidewalk to street. Textured surfaces become an important safety feature in this scenario.

Snow accumulation at curb ramps should be removed completely after each snow fall.

APPLICATION

Curb ramps complying with this section shall be provided wherever any path of travel crosses a curb.

DESIGN REQUIREMENTS

Accessible curb ramps shall be on an accessible route complying with 4.1.4.

The running slope shall be between 1:50 and 1:20 (2%-5%). In a retrofit situation where it is technically infeasible to achieve these slopes, a running slope no steeper than 1:12 (8.3%) may be used.

The minimum width of curb ramps, exclusive of flared sides, shall be 1500 mm (59 in.), except where the Alternate Ramp Curb configuration is used (Refer to Figure 4.1.10.2), where the minimum width at the top of the ramp may be reduced to 1220 mm (48 in.).

Flared sides shall typically be 900 mm (35-1/2 in.) as illustrated, measured at the curb location, with a slope not more than 1"12 where pedestrians are likely to walk across them.

Curb ramp configuration shall be as illustrated in Figures 4.1.10.1 to 4.1.10.7.

The maximum cross fall of gutters and road surfaces immediately adjacent to curb ramps shall be 1:20.

Figure 4.1.10.1 Standard Curb Ramp

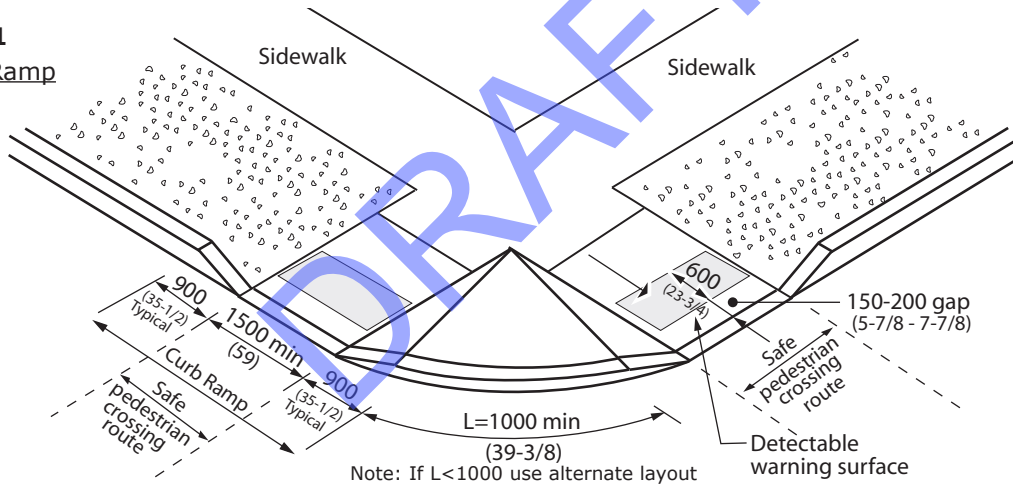
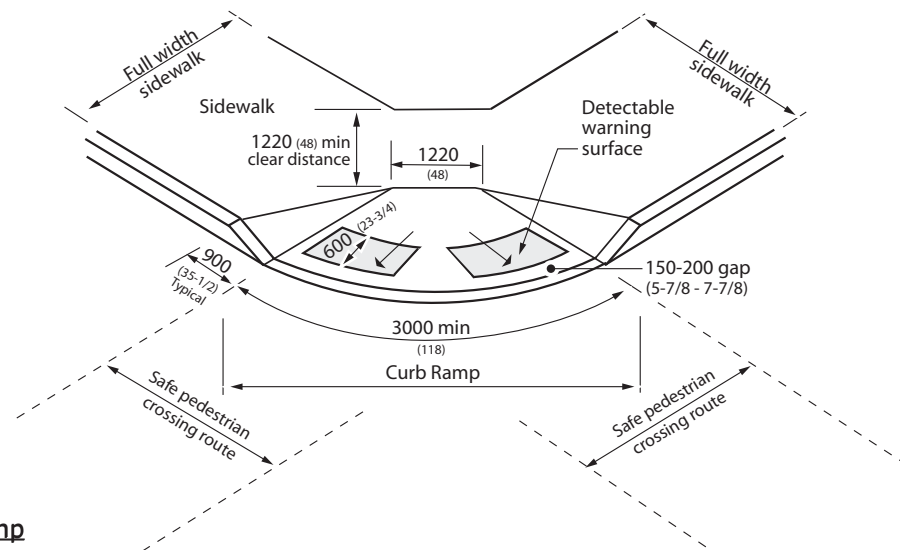


Figure 4.1.10.2 Alternate Curb Ramp



4.1 ACCESS AND CIRCULATION

4.1.10 CURB RAMPS

DESIGN REQUIREMENTS
(Continued)

Curb ramps at pedestrian crosswalks shall be wholly contained within the area designated for pedestrian use.

Surfaces of curb ramps shall

- be slip-resistant; and
- incorporate a truncated dome detectable warning surface
 - in compliance with 4.4.8;
 - 600 mm (23-3/4) long, starting 150-200 (5-7/8 to 7-7/8 in) back from the edge of the curb;
 - extending the entire width of the ramp; and
 - have a smooth transition from the ramp and adjacent surfaces.

Designated areas for snow piling to be provided at all curb ramps, located away from pedestrian routes.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.4.8 Detectable Warning Surfaces](#)
- [4.4.12 Glare and Light Sources](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

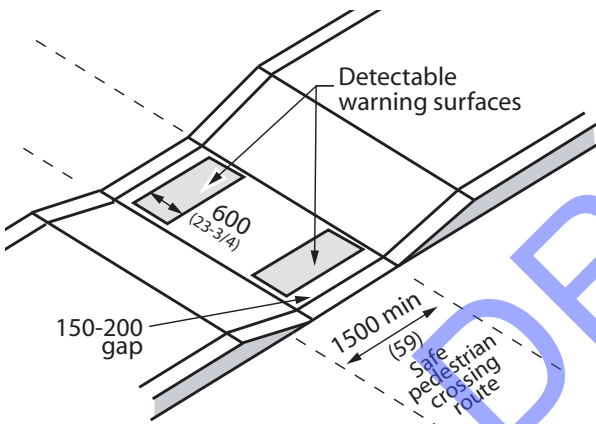


Figure 4.1.10.3
Curb Ramp at Narrow Median Sidewalk Crossing

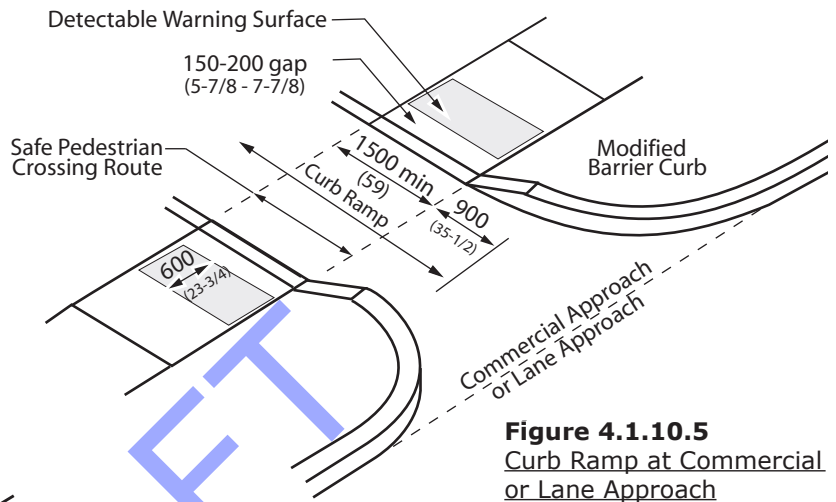


Figure 4.1.10.5
Curb Ramp at Commercial or Lane Approach

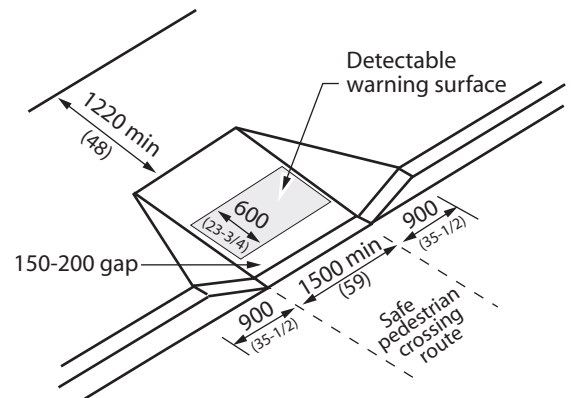


Figure 4.1.10.6
Curb Ramp at Mid-Block Crossing

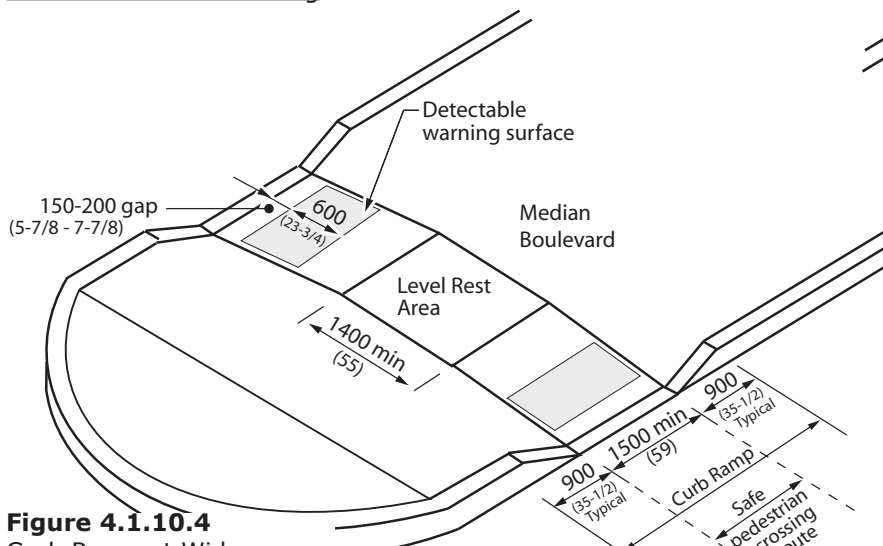


Figure 4.1.10.4
Curb Ramp at Wide Median Sidewalk Crossing

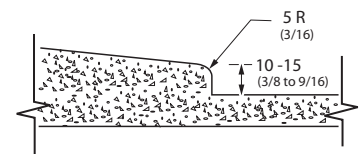


Figure 4.1.10.7
Curb Ramp Transition at Pavement

4.1.11 STAIRS

4.1 ACCESS AND CIRCULATION

RATIONALE

Stairs that are comfortable for many adults may be challenging for children, seniors or persons of short stature. Poorly designed nosings can present tripping hazards, particularly to persons with prosthetic devices or those using canes. Cues to warn a person with a visual impairment of an upcoming set of stairs are vitally important.

The appropriate application of *handrails* will aid all users navigating stairways.

APPLICATION

Interior and exterior stairs shall comply with this section. In a retrofit situation

- stairs need not comply if they connect levels that are *accessible* by an elevator, *ramp* or other *accessible* means of vertical access; and
- dimensional changes to steps and landings are not required however all other design requirements must be met.

DESIGN REQUIREMENTS

A flight of stairs shall

- have uniform riser heights (rise) and uniform tread depths (run);
- have a rise not more than 180 mm (7 in.) and not less than 125 mm (4-7/8 in.) high;
- have a run not more than 355 mm (14 in.) and not less than 280 mm (11 in.) deep, measured from riser to riser;
- incorporate *detectable warning surfaces* in compliance with [4.4.8](#); and
- have no open risers.

Nosings shall

- project not more than 25 mm (1 in.);
- have no abrupt undersides;
- have a curved or bevelled leading tread edge of between 6 mm (1/4 in.) and 10 mm (3/8 in.);
- where projecting, be sloped to the riser at an angle not less than 60 degrees to the horizontal;
- be illuminated to a level of at least 100 lux (9.2 ft-candles);

- be slip-resistant; and
- have the horizontal and vertical surface of the stair nosing in colour contrast with the remainder of the riser and the tread.

Stairs shall incorporate *detectable warning surfaces* in compliance with [4.4.8](#).

Handrails for stairs shall

- comply with [4.1.12](#);
- be installed on both sides;
- be of uniform height, ranging between 865 mm (34 in.) and 920 mm (36 in.) above the stair nosing;
- have a continuous inside *handrail* on switchback stairs; and
- extend at the bottom of the stairs for a distance of one tread depth beyond the first riser, then horizontally not less than 300 mm (11-3/4 in.), at a height ranging between 865 mm (34 in.) and 920 mm (36 in.) above the floor;

- extend horizontally at the top of the stairs not less than 300 mm (11-3/4 in.), at a height ranging between 865 mm (34 in.) and 920 mm (36 in.) above the floor; and
- return to the wall, or post in a manner that will not obstruct pedestrian travel or create a hazard.

Designated areas for snow piling to be provided at exterior stairs, located away from pedestrian routes.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.6 Doors](#)
- [4.1.12 Handrails](#)
- [4.4.7 Signage](#)
- [4.4.8 Detectable Warning Surfaces](#)
- [4.4.12 Glare and Light Sources](#)
- [4.4.13 Lighting](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

Figure 4.1.11.1
Stair Design Criteria

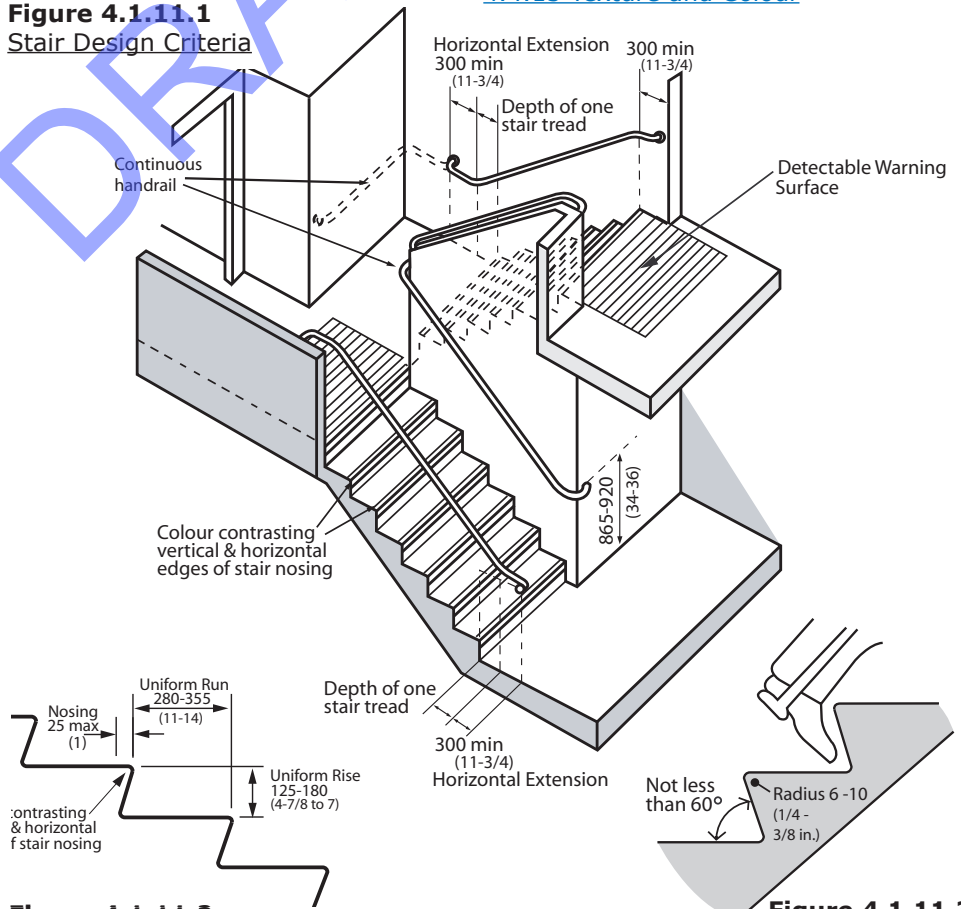


Figure 4.1.11.2
Stair Tread Criteria

Figure 4.1.11.3
Raked Riser

4.1 ACCESS AND CIRCULATION

4.1.12 HANDRAILS

RATIONALE

In the design of *handrails*, consideration must be given to the range of hands that will grasp them. A *handrail* profile should be graspable for an adult hand as well as a child or a person with arthritis. The same is true for the heights of *handrails*.

Extensions of the *handrails* at the top and bottom of stairs, along with the use of a contrasting colour, provide important cues for a person with a visual *impairment*, and provide a support to ensure a safe and stable gait before ascending or descending the stairs. A continuous *handrail* with no interruptions ensures that a handhold will not be broken.

The *clear space* between the wall and *handrail* is also essential, as it must provide a *clear* area for the hand and knuckles but must not offer enough space into which an arm may slip during a fall or stumble on the stairs.

APPLICATION

Handrails shall comply with this section.

DESIGN REQUIREMENTS

Handrails shall

- be mounted 865 - 920 mm (34-36 in.) high, measured vertically from a line drawn through the outer edges of the stair nosings or from the surface of a ramp;
- have a circular section 30-40 mm (1-3/16 in. - 1-9/16 in.) in diameter or any non-circular shape, with a graspable portion that has a perimeter not less than 100 mm (4 in.) and not more than 125 mm (5 in.) whose largest cross-sectional dimension is not more than 45 mm (1-3/4 in.);
- be free of any sharp or abrasive *elements*;
- have continuous gripping surfaces, without interruption by newel posts, other construction *elements*, or obstructions that can break a handhold; and
- have a *clear space* between the *handrail* and the wall of
 - at least 50 mm (2 in.); or
 - at least 60 mm (2-3/8 in.) where the wall has a rough surface.
- be terminated in a manner that will not obstruct pedestrian travel or create a hazard.

A recess containing a *handrail* shall extend at least 450 mm (17-3/4 in.) above the top of the rail.

Handrails and their supports shall be designed and constructed to withstand the loading values obtained from the nonconcurring application of

- a concentrated load of not less than 0.9 kN (200 lb.) applied at any point and in any direction; and
- a uniform load of not less than 0.7 kN/m (47 lb./ft.) applied in any direction to the *handrail*.

Handrails shall incorporate a pronounced colour contrast, to differentiate them from the surrounding environment.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.9 Ramps](#)
- [4.1.11 Stairs](#)
- [4.4.15 Texture and Colour](#)

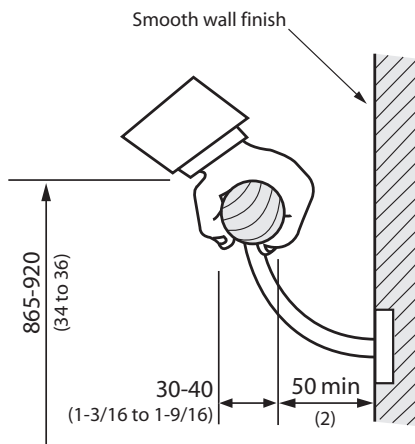


Figure 4.1.12.1
Handrail

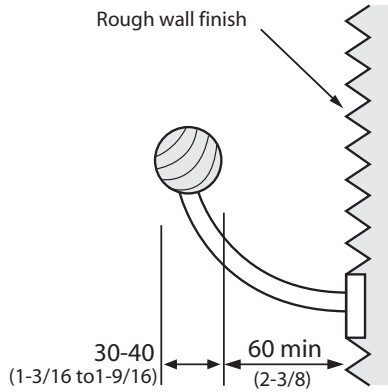


Figure 4.1.12.2
Handrail at Rough Wall

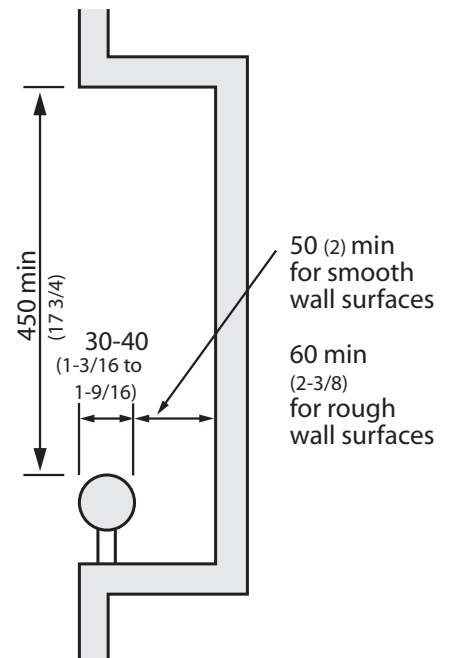


Figure 4.1.12.3
Handrail in Recess

4.1.13 ESCALATORS

4.1 ACCESS AND CIRCULATION

RATIONALE

Boarding and stepping off of an escalator can be challenging for many persons who could have difficulty with the timing or agility. In addition, any lack of contrast on the edge of steps makes it difficult to determine the position of the steps or judge their speed. *Detectable warning surfaces* extending in front of the escalator provide warning to any pedestrian, especially someone with a visual *impairment*. Contrasting colour strips on stair edges are also necessary.

APPLICATION

Escalators shall comply with this section.

Where escalators are provided, an alternate *accessible route* shall also be provided in the same vicinity as the escalator.

DESIGN REQUIREMENTS

Escalator installations shall include high definition (colour contrast) of tread edges and nosing.

Detectable warning surfaces in compliance with [4.4.8](#) shall be provided at the head and foot of the escalator.

The surface of escalator treads shall be in a matte finish, to minimize reflected glare.

Lighting over escalators shall be a minimum of 200 lux (18.4 ft-candles), evenly distributed, from a low-glare light source.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.4.7 Signage](#)
- [4.4.8 Detectable Warning Surfaces](#)
- [4.4.12 Glare and Light Sources](#)
- [4.4.13 Lighting](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

DRAFT

4.1 ACCESS AND CIRCULATION

4.1.14 ELEVATORS

RATIONALE

The buttons used on elevators need to address a range of functional issues, including reach, dexterity and visual impairments, as discussed in 4.4.2 and 4.4.15. More specific to elevators is the need to provide audible cues for individuals with a visual impairment to identify different floor levels, as well as the direction of travel. These are, in fact, of benefit to anyone who uses the elevator. Adequate door-closing delays provide individuals using mobility devices additional time to reach, enter or exit the elevator car. The installation of a mirror can assist individuals using mobility devices to back out of an elevator where there is not sufficient space to turn around.

APPLICATION

One passenger elevator complying with this section shall serve each level, including mezzanines, in all multi-storey facilities, unless exempted below. If more than one elevator is provided, each passenger elevator shall comply with this section.

Freight elevators shall not be required to meet the requirements of this section, unless the only elevators provided are used as combination passenger and freight elevators for use by the public and employees.

Elevator access is not required:

- in elevator pits, elevator penthouses, mechanical rooms, piping or equipment catwalks;
- when accessible ramps in compliance with 4.1.9 are used in lieu of an elevator;
- to levels of fire halls and ambulance stations not served by grade-level entry, which do not contain public use facilities; and
- when platform lifts (wheelchair lifts) in compliance with 4.1.15 and applicable Provincial Codes are used in lieu of an elevator, only under the following conditions:
 - to provide an accessible route to a performing area in an assembly occupancy;

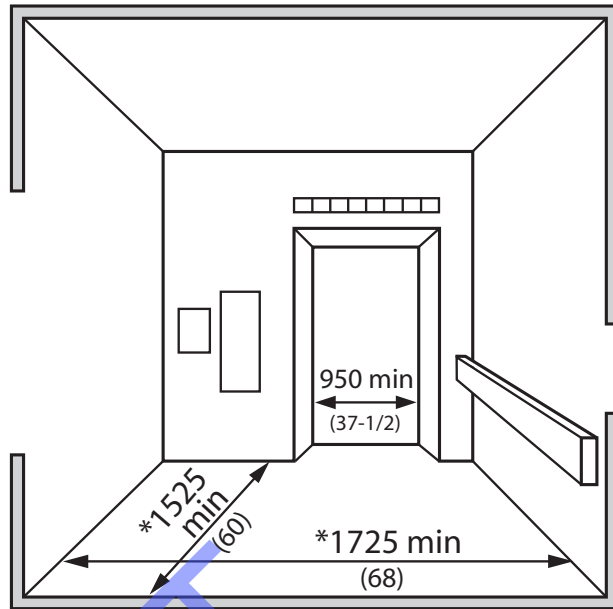


Figure 4.1.14.1
Elevator Cab

* In high-use public facilities, increase minimum dimensions to 2030 x 1525 mm (80 x 60 in.)

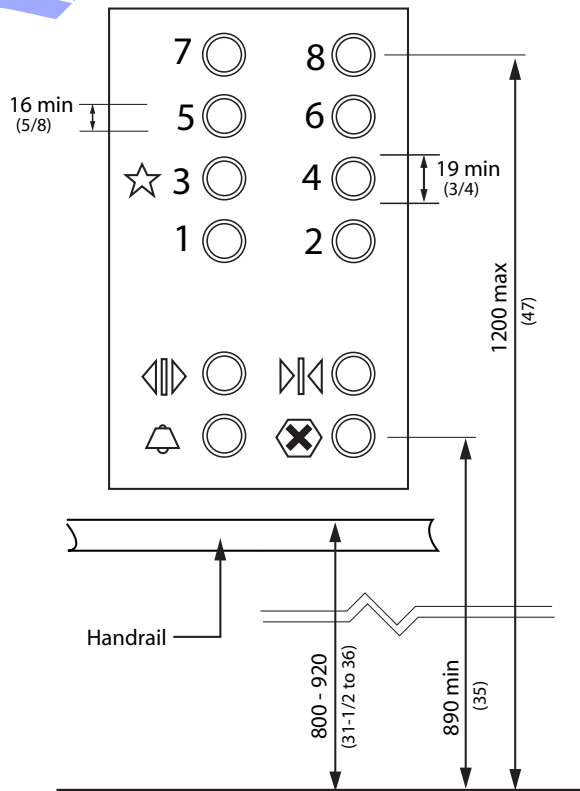


Figure 4.1.14.2
Control Panel

4.1.14 ELEVATORS

4.1 ACCESS AND CIRCULATION

- to comply with wheelchair viewing position line-of-sight and dispersion requirements of [4.3.2](#);
- to provide access to incidental occupied spaces and rooms that are not open to the general public and which house no more than five persons, including, but not limited to, equipment control rooms and projection booths; and
- to provide access to raised judges' benches, clerks' stations, speakers' platforms, jury boxes and witness stands or to depressed areas, such as the well of a court.

DESIGN REQUIREMENTS

Accessible elevators shall be on an accessible route in compliance with [4.1.4](#).

Accessible elevators shall be identified by signage in compliance with applicable provisions of [4.4.7](#).

Elevators shall be automatic and be provided with a two-way automatic-leveling device to maintain the floor

level to ± 13 mm (1/2 in.).

Power-operated horizontally sliding car and landing doors opened and closed by automatic means shall be provided.

The clear width for elevator doors shall be minimum 950 mm (37-1/2 in.). In a retrofit situation where it is *technically infeasible* to provide a clear width of 950 mm (37-1/2 in.), the clear elevator door width may be reduced to 900 mm (35 in.).

Doors shall be provided with a door re-opening device that will function to stop and reopen the car door and an adjacent hoist way door to minimum 950 mm (37-1/2 in.), in the event the car door is obstructed while closing. This re-opening device shall also be capable of sensing an object or person in the path of a closing door at a nominal 125 ± 25 mm (5 ± 1 in.) and 735 ± 25 mm (29 ± 1 in.) above the floor without requiring contact for activation.

Elevator doors should remain fully open for minimum 8 seconds. This time may be reduced by operation of the door-close button.

The minimum distance between the walls or between wall and door,

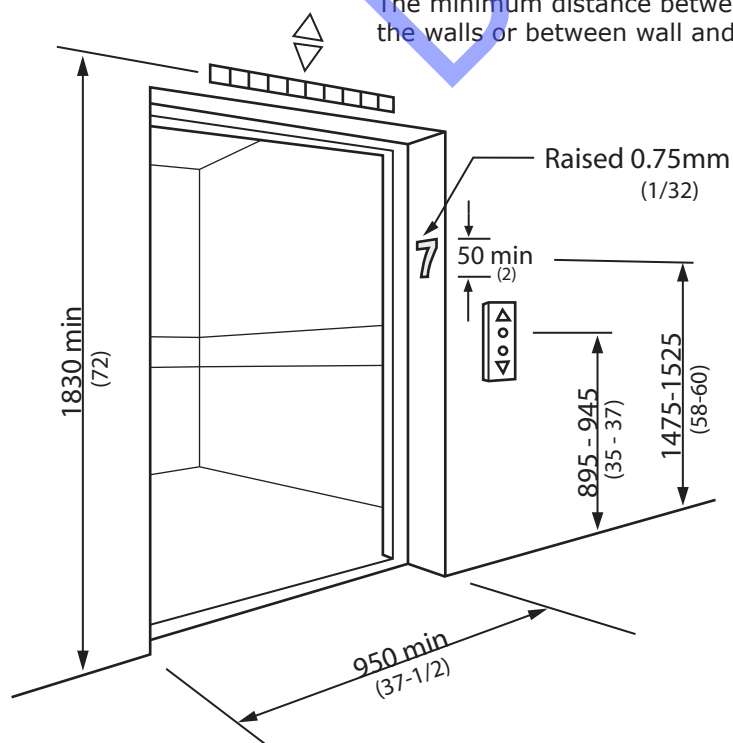


Figure 4.1.14.3
Elevator Entry

excluding return panels, shall not be less than 1725 x 1525 mm (68 in. x 60 in.). In facilities with high public use, such as arenas, libraries or entertainment complexes, the distance between walls or between wall and door shall be 2030 x 1525 mm (80 in. x 60 in.). Exception: In a retrofit situation where it is *technically infeasible* to install an appropriately sized elevator, a LU/LA (Limited Use/Limited Application) elevating device with a platform length of at least 1525 mm (60 in.), may be used.

Car controls shall be readily accessible from a wheelchair upon entering an elevator.

Floor register buttons in elevator cabs shall

- be a minimum 19 mm (3/4 in.) in size and may be raised, flush or recessed. The depth of flush or recessed buttons when they are being operated shall not exceed 10 mm (3/8 in.); and
- be provided with visual and momentary audible indicators to show when each call is registered. The visual indicators shall be extinguished when each call is answered.

All car control buttons shall be designated by Grade 2 Braille characters and by raised standard alphabet characters for letters, Arabic characters for numbers, and standard symbols. Markings shall be a minimum of 16 mm (5/8 in.) high and raised a minimum of 0.75 mm (1/32 in.), placed immediately to the left of the buttons to which they apply. Exception: Where the call buttons are mechanical, the raised markings may be on the buttons.

Emergency car controls and door-operating buttons shall be grouped together at the bottom of the control panel. The centre line of the alarm button and the emergency stop switch shall be not less than 890 mm (35 in.) above the floor. The centre line of the highest floor button shall be no higher than 1200 mm (47 in.) above the floor. Other controls may be located where it is convenient.

4.1 ACCESS AND CIRCULATION

4.1.14 ELEVATORS

DESIGN REQUIREMENTS
(Continued)

An indicator shall be provided in the car to show the position of the car in the hoist way, by illuminating the indicator corresponding to the landing at which the car is stopped or passing. Indication characters shall be on a contrasting colour background and a minimum of 16 mm (5/8 in.) high.

Floors of elevator cabs shall have a firm and slip-resistant surface that permits easy movement of wheelchairs or scooters.

Handrails shall be provided on all non-access walls at a height of 800 to 920 mm (31-1/2 to 36 in.) with a space of 40 to 45 mm (1-9/16 to 1-3/4 in.) between the rails and wall.

The illumination at the car controls and landing sill shall be not less than 100 lux (10 ft-candles).

The centre line of hall call buttons shall be 920 ± 25 mm (36 ± 1 in.) above the floor. Buttons shall be a minimum of 20 mm (13/16 in.) in size, mounted one above the other.

Hall visual indication shall be provided to show each call that is registered and that is extinguished when the call is answered.

Hall or in-car lanterns shall be provided. The centre line of the fixture shall be a minimum of 1830 mm (72 in.) above the floor. An audible signal shall be provided when the elevator stops at the landing. Visual *elements* shall be a minimum of 60 mm (2-3/8 in.) in the smallest direction.

All elevator hoist way *entrances* shall have raised Arabic numerals and Braille floor designations provided on both jambs. The characters shall be a minimum of 50 mm high (2 in.) and raised at least 0.75 mm (1/32 in.) and shall be placed on both sides of the door jambs, with the centreline at 1500 ± 25 mm (59 ± 1 in.) from the floor.

As the car stops at a floor, the floor

and direction of travel shall be announced using voice-annunciation technology.

Elevators shall be linked by an emergency call system to a monitored location within the *facility* with two-way communication ability. The highest *operable portion* of the 2-way communication system shall be a maximum of 1200 mm (47 in.) above the floor of the car. It shall be identified by a raised symbol and lettering located adjacent to the device. The symbol shall be a minimum of 38 mm (1-1/2 in.) high and raised a minimum of 0.75 mm (1/32 in.). Permanently attached plates are acceptable. If the system uses a handset, then the length of the cord from the panel to the handset shall be minimum 735 mm (29 in.). Additionally, the handset shall be equipped with a receiver that generates a magnetic field in the area of the receiver cap, and the handset shall have a volume control and shall comply with CSA Standard T515. If the system is located in a closed compartment, the compartment door and hardware shall conform to 4.4.2. The emergency intercommunication system shall not require voice communication.

Lighting in elevator cabs shall be minimum 100 lux (9.2 ft-candles), measured at the floor level and at the same lighting level as the adjacent lobby *space*.

Mirrors shall not be used below a height of 2000 mm (78-3/4 in.)

within elevator cabs as a finish material on the wall opposite the door.

Where the dimension of elevator cabs is less than 1500 mm (59 in.) in any direction, an angled mirror shall be provided above a height of 2000 mm (78-3/4 in.) on the wall opposite the door, to assist persons who use wheelchairs to back out.

Floor finishes within elevator cabs shall comply with 4.1.2.

Where an elevator serves only two floors, it shall be programmed to move automatically, without the need to activate in-car control buttons.

Elevator doors shall incorporate pronounced colour contrast, to differentiate them from the surrounding environment.

There shall be a pronounced colour contrast between the car sill and the *facility* floor.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.6 Doors](#)
- [4.1.12 Handrails](#)
- [4.1.15 Platform Lifts](#)
- [4.4.2 Controls and Operating Mechanisms](#)
- [4.4.7 Signage](#)
- [4.4.9 Public Address Systems](#)
- [4.4.11 Card Access, Safety and Security Systems](#)
- [4.4.12 Glare and Light Sources](#)
- [4.4.13 Lighting](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

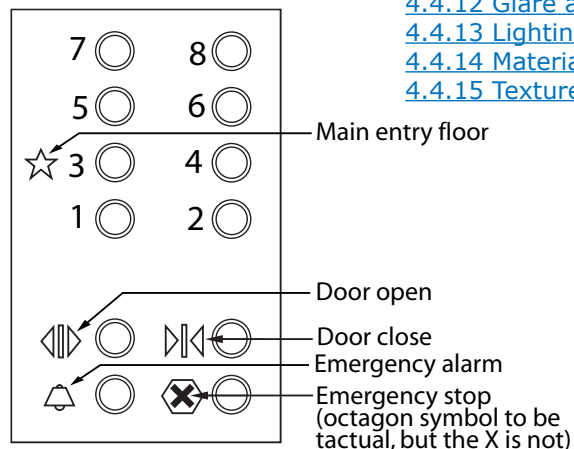


Figure 4.1.14.4
Tactile Symbols

4.1.15 PLATFORM LIFTS

4.1 ACCESS AND CIRCULATION

RATIONALE

Platform lifts are typical in retrofit applications. Elevators that are used by all facility users are preferred to platform lifts which tend to segregate persons with disabilities and limit space at *entrance* and stair locations. Furthermore, independent access is often compromised, as platform lifts are often controlled by key operation. Whenever possible, grading or integrated elevator access should be incorporated to avoid the use of lifts.

If there are no suitable alternatives, lifts must be selected to permit the spatial requirement of larger mobility devices such as scooters.

APPLICATION

Accessible platform lifts shall comply with this section.

Platform lifts may only be used in lieu of an elevator or *ramp* where allowable under [4.1.14](#).

Exception: Where it is *technically infeasible* to install an elevator, LU/LA (Limited Use/Limited Application) elevating device, or other *accessible* means of change of level.

DESIGN REQUIREMENTS

Accessible platform lifts shall

- be on an *accessible route* complying with [4.1.4](#);
- be identified with *signage* complying with applicable provisions of [4.4.7](#);
- comply with CSA standard CAN/CSA B355 (latest edition); and
- facilitate unassisted entry, operation, and exit from the lift.

The platform size shall be no less than 890 x 1525 mm (35 x 60 in.).

The platform shall incorporate safety wheel-guards along all exposed edges.

The doors to the platform lift shall comply with [4.1.6](#).

Controls and operating mechanisms shall comply with [4.4.2](#).

Platform lifts shall be linked by an emergency call system to a monitored location within the *facility*, with two-way communication ability. The highest *operable portion* of the two-way communication system shall be a maximum of 1200 mm (47 in.) from the floor of the platform. If the

system uses a handset, then the length of the cord from the panel to the handset shall be at least 735 mm (29 in.). If the system is located in a closed compartment, the compartment door and hardware shall conform to [4.4.2](#).

Floor finishes within platform lifts shall comply with [4.1.2](#) and [4.4.14](#).

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.2 Ground and Floor Surfaces](#)

[4.1.6 Doors](#)

[4.1.12 Handrails](#)

[4.1.14 Elevators](#)

[4.4.2 Controls and Operating Mechanisms](#)

[4.4.7 Signage](#)

[4.4.9 Public Address Systems](#)

[4.4.11 Card Access, Safety and Security Systems](#)

[4.4.12 Glare and Light Sources](#)

[4.4.13 Lighting](#)

[4.4.14 Materials and Finishes](#)

[4.4.15 Texture and Colour](#)

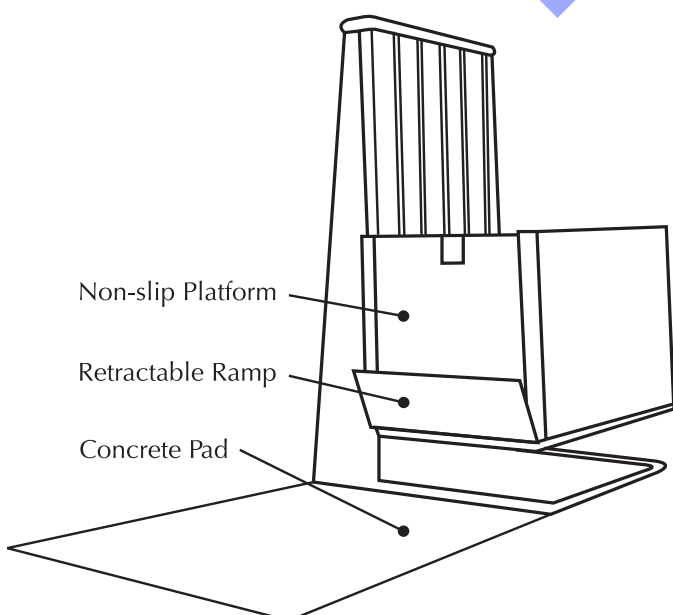


Figure 4.1.15.1
Vertical Platform Lift

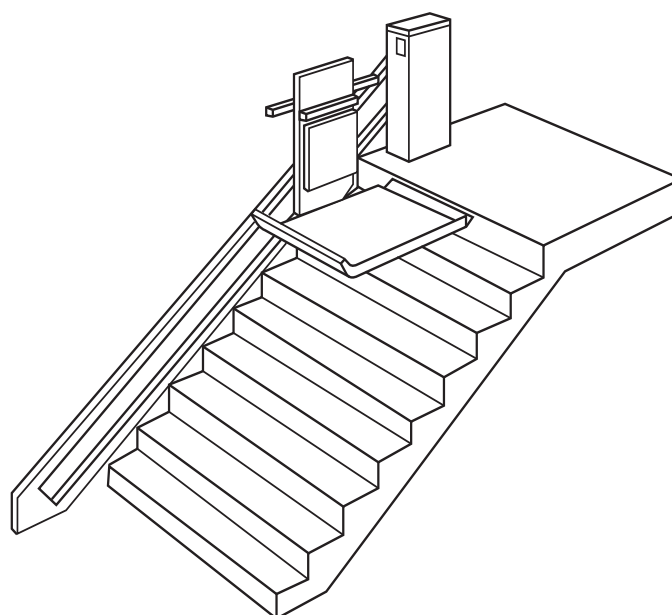


Figure 4.1.15.2
Inclined Platform Stair-Lift

4.2 WASHROOM FACILITIES

4.2.1 TOILET FACILITIES

RATIONALE

As an integral feature of a *facility*, washroom *facilities* should accommodate the range of people that will use the space. Although many persons with disabilities use toilet *facilities* independently, some may require assistance. Where the individual providing assistance is of the opposite gender then typical gender-specific washrooms are awkward and an individual washroom is preferred.

Parents and caregivers with small children and strollers may also benefit from a large, individual washroom with toilet and change *facilities* contained within the same *space*.

Circumstances such as wet surfaces and the act of transferring between toilet and wheelchair or scooter can make toilet *facilities* accident-prone areas. An individual falling in a washroom with a door that swings inward could prevent his or her own rescuers from opening the door. Due to the risk of accidents, design decisions such as door swings and material finishes have safety implications and therefore make toilet *facilities* a prime location for emergency call switches. The appropriate design of all features will increase the usability and safety of all toilet *facilities*.

The identification of washrooms involves design issues that must be considered. For children or someone who cannot read text, a symbol or pictogram is preferred. A person with a visual *impairment* would also benefit from accessible *signage*. Features such as colour-contrasting door frames and door hardware will also increase accessibility.

APPLICATION

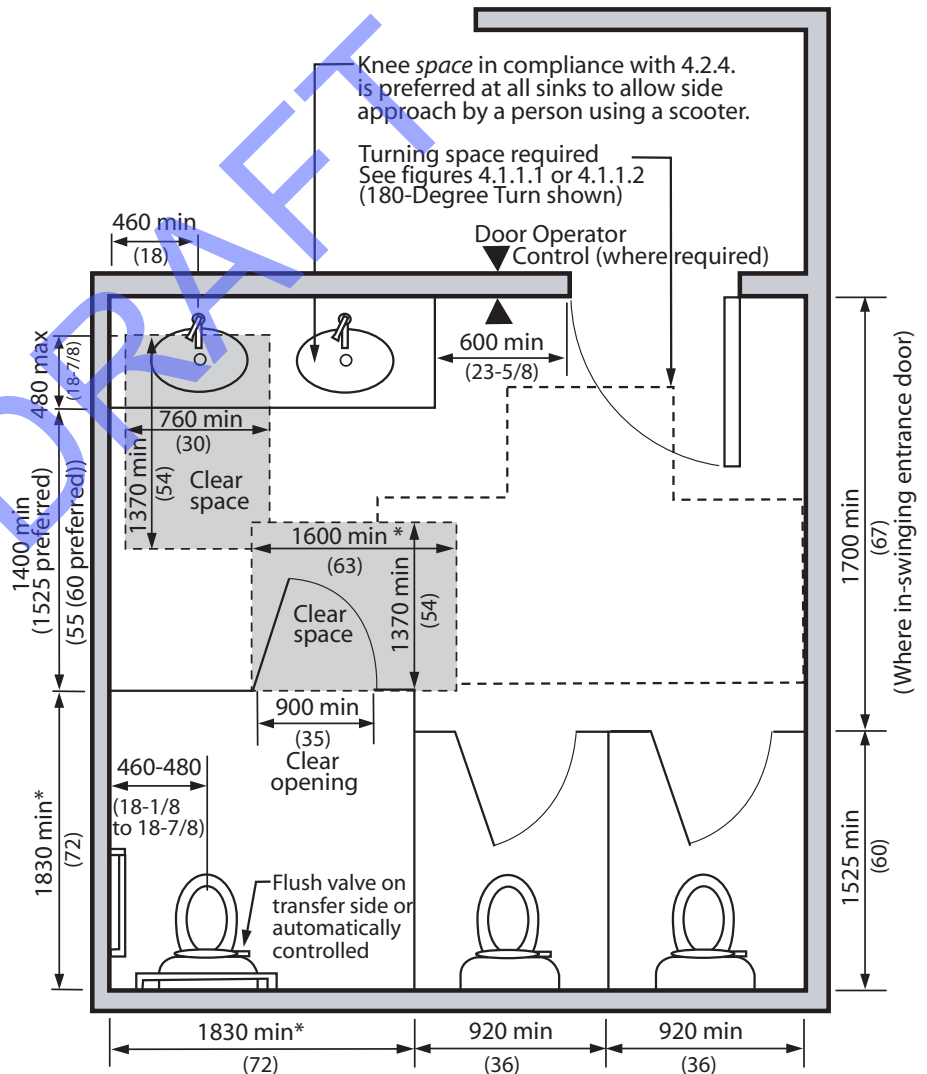
Where toilet *facilities* are provided, each public or *common use* toilet *facility* shall comply with this section. Other toilet rooms provided for the use of occupants of specific

spaces (i.e. a private toilet room for the occupant of a private office) shall be *adaptable*.

In a retrofit situation where it is *technically infeasible* to make existing public or *common use* toilet *facilities* accessible, the installation of at least one individual washroom per floor and in compliance with 4.2.7, located in the same area as existing toilet *facilities*, will be permitted in lieu of modifying existing toilet *facilities* to be *accessible*.

In addition to any *accessible* public or *common use* toilets, at least one individual washroom in compliance with 4.2.7 shall be provided in all public buildings and on every floor level in *assembly areas* where the floor incorporates *common* or *public use* washroom *facilities* containing four or more toilet and/or urinal fixtures.

If individual washrooms are not visible from the common or *public use* washrooms, directional *signage* in compliance with 4.4.7 shall be provided.



NOTE: In a retrofit situation where it is *technically infeasible* to provide the required clearances, the dimension marked with an * may be reduced to 1525 mm (60 in.).

Figure 4.2.1.1
Washroom Dimensions

4.2.1 TOILET FACILITIES

4.2 WASHROOM FACILITIES

Where bathing *facilities* are provided on a *site*, in conjunction with or in addition to toilet *facilities*, each such public or *common use* bathing *facility* shall comply with this section in addition to [4.2.8](#), [4.2.9](#), and other applicable sections of this standard.

For single-user portable toilet units clustered at a single location, a minimum of 5% but no less than one toilet unit in compliance with this section shall be provided at clusters wherever typical inaccessible units are provided. (Exception: Portable toilet units at construction *sites* used exclusively by construction personnel are not required to comply with this section.)

Where an individual washroom is provided primarily for the use of persons of both genders with physical *disabilities*, in lieu of *facilities* for persons with physical *disabilities* in washrooms used by the general public, the individual washroom shall be provided on the same floor level within 45 m (147 ft. 8 in.) of the washrooms used by the general public.

DESIGN REQUIREMENTS

Accessible toilet *facilities* shall

- be on an *accessible route* complying with [4.1.4](#);
- be identified with *signage* complying with applicable provisions of [4.4.7](#);
- incorporate a *clear floor space* to allow a person in a wheelchair to make a 180-degree turn; and
- incorporate even illumination throughout of at least 100 lux (10 ft-candles).

All entrance doors to *accessible* toilet rooms shall

- comply with [4.1.6](#);
- not swing into the *clear floor space* required for any fixture;
- have a minimum 1700 mm (67) clearance between the inside face of an in-swinging entrance door and the outside face of an adjacent toilet stall.

Accessible fixtures and controls within toilet and bathing rooms shall

- be on an *accessible route* complying with [4.1.4](#).
- have a minimum clearance of 1400 mm (55) between the outside face of the *accessible* stall and any wall-mounted fixture or obstruction.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.3 Protruding and Overhead Objects](#)
- [4.1.6 Doors](#)
- [4.2.2 Toilet Stalls](#)
- [4.2.3 Toilets](#)
- [4.2.4 Lavatories](#)
- [4.2.5 Urinals](#)
- [4.2.6 Washroom Accessories](#)
- [4.2.7 Individual Washrooms](#)
- [4.2.8 Bathtubs](#)
- [4.2.9 Shower Stalls](#)
- [4.2.10 Grab Bars](#)
- [4.4.2 Controls and Operating Mechanisms](#)
- [4.4.7 Signage](#)
- [4.4.12 Glare and Light Sources](#)
- [4.4.13 Lighting](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

4.2 WASHROOM FACILITIES

4.2.2 TOILET STALLS

RATIONALE

Manoeuvrability of a wheelchair or scooter is the principal consideration in the design of an *accessible* stall. The increased size of the stall is required to ensure there is sufficient *space* to facilitate proper placement of a wheelchair or scooter to accommodate transfer onto the toilet fixture. Not only is *space* required for mobility equipment, there may also be instances where an individual requires assistance and the stall will have to accommodate a second person.

Door swings are normally outward for safety reasons and *space* considerations, but this makes it difficult to close the door once inside. A handle mounted part way along the door makes it easier for someone to close the door behind them.

Minimum requirements for non-*accessible* toilet stalls are included to ensure that persons who do not use wheelchairs or scooters can be adequately accommodated within any toilet stall. Universal features include *accessible* hardware and a minimum stall width to accommodate persons of large stature or parents with small children.

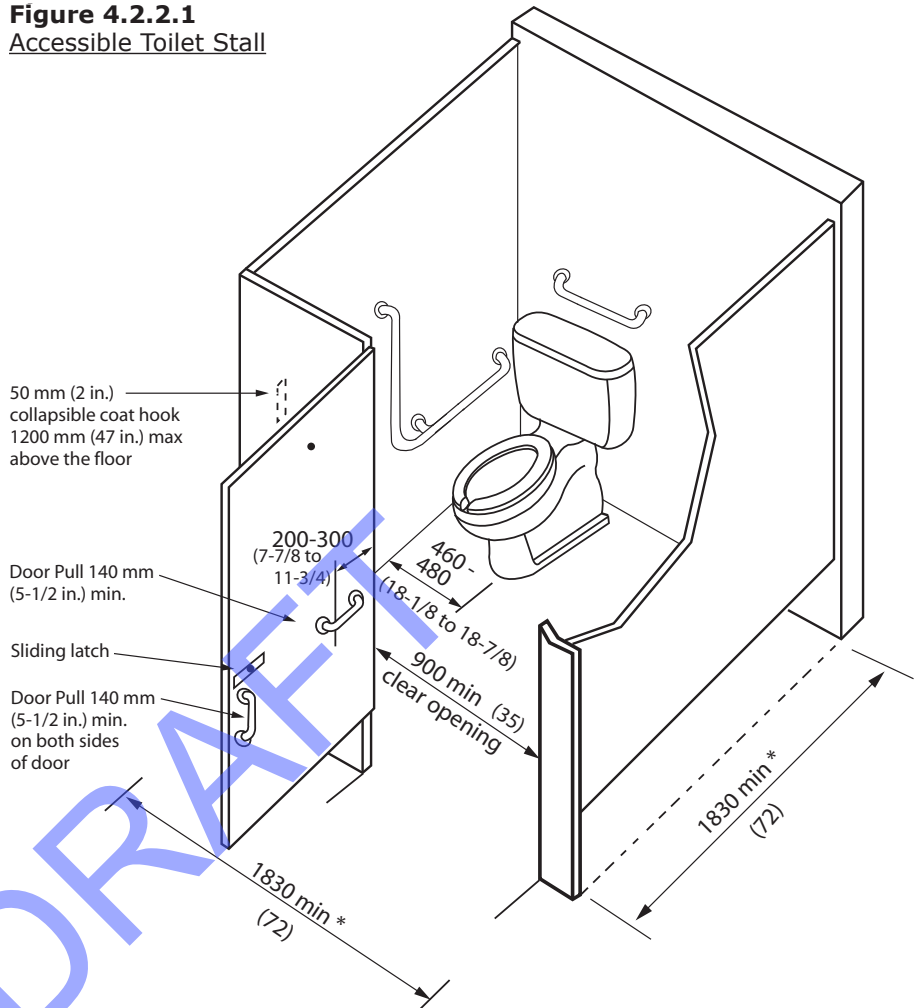
APPLICATION

Accessible toilet stalls shall comply with this section.

Where toilet stalls are provided in a toilet or bathing *facility*, then the number of *accessible* toilet stalls designated to accommodate persons with *disabilities* shall comply with Table 4.2.2.

All other toilet stalls within a *facility* (i.e., those considered to be non-*accessible*) shall be minimum 920 mm (36 in.) wide by 1525 mm (60 in.) long, and shall incorporate door-locking mechanisms in compliance with this section.

Figure 4.2.2.1
Accessible Toilet Stall



NOTE: In a retrofit situation where it is *technically infeasible* to provide the required clearances, the dimensions marked with an * may be reduced. Refer to 4.2.2 - Design Requirements.

# of toilet stalls within the washroom	Required # of <i>accessible</i> toilet stalls
1 - 5	1
More than 5	2

Table 4.2.2
Number of Accessible Toilet Stalls

4.2.2 TOILET STALLS

4.2 WASHROOM FACILITIES

DESIGN REQUIREMENTS

All toilet stall doors shall be capable of being locked from the inside by a device that is operable with one hand; does not require fine finger control, tight grasping, pinching, or twisting of the wrist; and requires a force of not more than 22 N (4.9 lb.) to activate (e.g., sliding bolt or lever).

Accessible toilet stalls shall

- be on an *accessible route* in compliance with [4.1.4](#).
- have internal dimensions at least 1830 x 1830 mm (72 x 72 in.). In a retrofit situation where providing the required internal dimensions is *technically infeasible*, the internal dimensions may be reduced to 1525 x 1525 mm (60 x 60 in.);
- have a toilet fixture in compliance with [4.2.3](#);
- be equipped with a collapsible coat hook mounted not more than 1200 mm (47 in.) above the floor on a side wall and projecting not more than 50 mm (2 in.) from the wall; and
- have a minimum 920 mm (36 in.) wide *clear transfer space* on one side of the toilet fixture. In a retrofit situation where it is *technically infeasible* to provide a 920 mm (36 in.) wide *clear transfer space*, this *space* may be reduced to 760 mm (30 in.). See [4.2.3](#) for more details.

Where more than one *accessible* toilet stall is provided within a toilet or bathing *facility*, the stalls shall be configured with the *clear transfer space* (i.e., the *open space* beside the toilet) on opposite sides of the toilet fixtures.

Accessible toilet stall doors shall

- provide a clear opening of at least 900 mm (35 in.) with the door in the open position. In a retrofit situation where it's *technically infeasible* to provide the required *clear opening*, the *clear opening* may be reduced to 810 mm (32 in.);
- swing outward, unless additional *clear floor space* of at least 760 mm x 1370 mm (30 in. x 54 in.) is provided within the stall and

- does not interfere with the arc of the door swing;
- be aligned with the *clear transfer space* adjacent to the toilet fixture;
- be equipped with gravity hinges so that the door closes automatically;
- be provided with a "D"-type contrasting-coloured door pull, at least 140 mm (5-1/2 in.) long, on the inside of an out-swinging door, located so that the centre line is between 200 and 300 mm (7-7/8 in. and 11-3/4 in.) from the hinged side of the door; and
- be provided with a "D"-type contrasting-coloured door pull at least 140 mm (5-1/2 in.) long, on both sides of the door, located near the latch;

Door hardware (operating devices such as handles, pulls, latches, and locks) shall

- be operable by one hand;
- not require fine finger control, tight grasping, pinching, or twisting of the wrist to operate; and

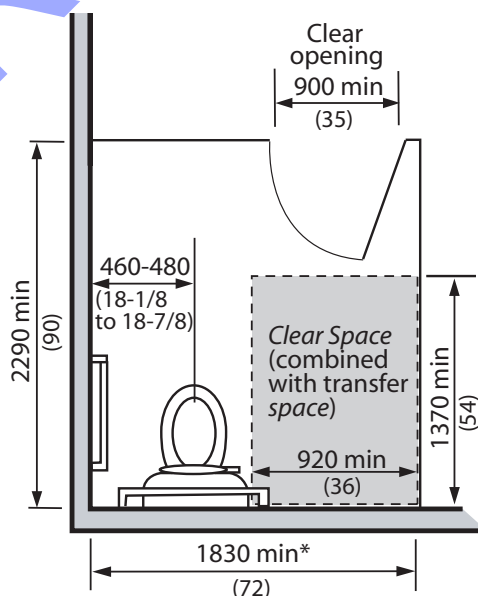
- be mounted between 810 mm (32 in.) and 1200 mm (47 in.) above the floor.

Toilet stall partitions and doors shall be colour-contrasted with the surrounding environment.

Toilets, flush controls and other *elements* shall be designed to meet the requirements of [4.2.3](#).

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.3 Protruding and Overhead Objects](#)
- [4.1.6 Doors](#)
- [4.2.3 Toilets](#)
- [4.2.6 Washroom Accessories](#)
- [4.2.10 Grab Bars](#)
- [4.4.2 Controls and Operating Mechanisms](#)
- [4.4.13 Lighting](#)
- [4.4.15 Texture and Colour](#)



Note: In a retrofit situation where it is *technically infeasible* to provide the required clearances, the dimension marked with an * may be reduced to 1525 mm (60 in.) and the *clear transfer space* may be reduced to 760 mm (30 in.).

Figure 4.2.2.2
Accessible Toilet Stall with
In-Swinging Door

4.2 WASHROOM FACILITIES

4.2.3 TOILETS

RATIONALE

Automatic flush controls are preferred. If flushing mechanisms are not automated, then consideration must be given to the ability to reach a switch and the hand strength or dexterity required to operate it. Lever style handles on the transfer side of the toilet facilitate these considerations.

Appropriate placement of grab bars makes sitting and standing or transfers between the toilet and a mobility device safer.

APPLICATION

Accessible toilets shall comply with this section. Wall-mounted toilets are preferred.

DESIGN REQUIREMENTS

Toilet fixtures shall have

- the top of the seat between 430 and 460 mm (17 and 18-1/8 in.) above the floor;
- no spring-activated seat;
- a back support where there is no seat lid or tank; and
- the tank top securely attached.

Toilets shall be located between 460-480 mm (18-1/8 to 18-7/8 in.) away from the adjacent wall measured from the edge of the toilet to the surface of the wall.

A *clear transfer space*, minimum 920 mm (36 in.) wide designed to permit a wheelchair or scooter to back into a *clear space* beside a toilet fixture, shall be provided on one side of the toilet fixture in all accessible toilet stalls (see 4.2.2.) and in individual washrooms (see 4.2.7.). In a retrofit situation where it is *technically infeasible* to provide a 920 mm (36 in.) wide *clear transfer space*, this *space* may be reduced to 760 mm (30 in.).

The *clear transfer space* shall be clear of obstructions (such as garbage bins or baby change tables). EXCEPTION: Sanitary napkin disposal units may be

installed within the transfer space provided they are recessed or protrude not more than 100 mm (4 in.) into this space.

Toilet flush controls shall be

- hand-operated on the transfer side of the toilet; or
- be electronically automatically controlled.

Hand-operated flush controls shall comply with 4.4.2.

Toilets shall be equipped with grab bars that shall

- comply with 4.2.10;
- mounted horizontally on the side wall closest to the water closet and shall extend not less than 450 mm (17-3/4 in.) in both directions from the most forward point of the water closet.
- be at least 600 mm (23-5/8 in.) in length, mounted horizontally on the wall behind the toilet,

from 840 mm (33 in.) to 920 mm (36 in.) above the floor, if the water closet does not have an attached tank.

Toilet-paper dispensers shall be

- wall mounted;
- located below the grab bar;
- in line with or not more than 300 mm (11-3/4 in.) in front of the toilet seat;
- not less than 600 mm (23-5/8 in.) above the floor; and
- contrasting in colour to the wall.

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.2.2 Toilet Stalls](#)

[4.2.10 Grab Bars](#)

[4.4.2 Controls and Operating Mechanisms](#)

[4.4.13 Lighting](#)

[4.4.15 Texture and Colour](#)

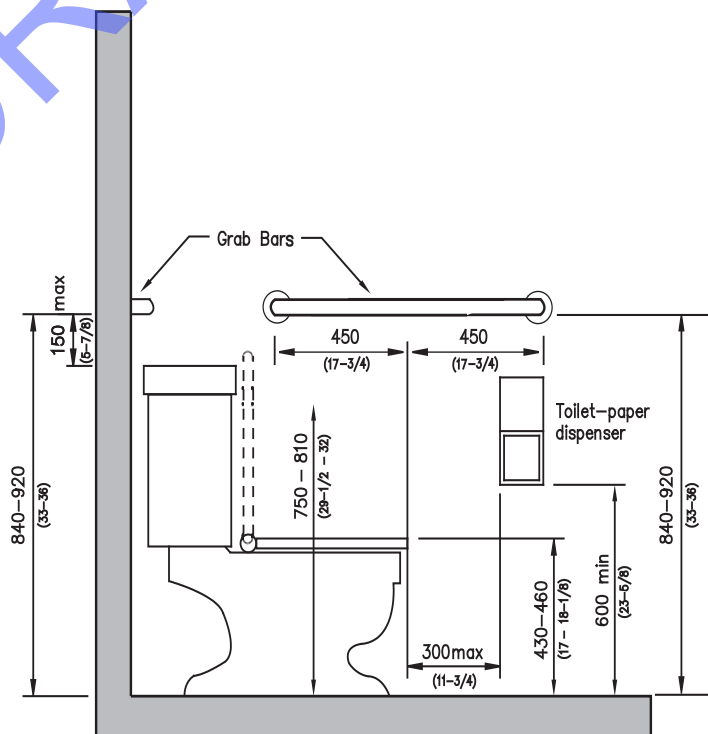


Figure 4.2.3.1
Grab Bar Configuration

4.2.4 LAVATORIES

RATIONALE

The accessibility of lavatories will be greatly influenced by their operating mechanisms. While faucets with remote-eye technology may initially confuse some individuals, their ease of use is notable. Individuals with hand strength or dexterity difficulties can use lever-style handles. For an individual in a wheelchair, a lower counter height and clearance for knees under the counter would be required. This lower counter may also serve children. The insulating of hot water pipes protects the legs of an individual using a wheelchair. This is particularly important when a disability impairs sensation such that the individual would not sense that their legs were being burned. The combination of shallow sinks and higher water pressures can cause unacceptable splashing at lavatories.

APPLICATION

All lavatories shall comply with this section. In a retrofit situation where it is *technically infeasible* to have all lavatories comply with this section, at least one lavatory in each *accessible* washroom shall comply.

DESIGN REQUIREMENTS

Lavatories shall

- be on an *accessible route* complying with [4.1.4](#);
- be mounted so that the minimum distance between the centre line of the fixture and the side wall is 460 mm (18-1/8 in.);
- have the top located between 820 mm (32-1/4 in.) and 840 mm (33 in.) above the floor;
- have a knee *space* of at least
 - 760 mm (30 in.) wide;
 - 735 mm (29 in.) high at the front edge;
 - 685 mm high (27 in.) at a point 205 mm (8-1/8 in.) back from the front edge; and
 - 230 mm (9 in.) high over the distance from a point 280 mm (11 in.) to a point 430 mm (16-7/8 in.) back from the front edge;

- have a minimum *clear floor space* 760 mm wide (30 in.) and 1370 mm (54 in.) deep, of which a maximum of 480 mm (18-7/8 in.) in depth may be under the lavatory;
- have hot water and drain pipes insulated if they abut the clearances noted above, or limit the water temperature to a maximum of 43 degrees Celsius (100 degrees F); and
- have soap and towel dispensers that are
 - located to be *accessible* to persons who use wheelchairs or scooters (i.e., not having to reach over the lavatory to access the devices);
 - located so that the dispensing height is not more than 1200 mm (47 in.) above the floor;
 - located in close proximity to the *accessible* lavatory;
 - operable with one hand;
 - colour-contrasted from the surrounding environment; and
 - in compliance with [4.4.2](#).

Faucets and other controls shall

- be in compliance with [4.4.2](#);

4.2 WASHROOM FACILITIES

- have lever-style handles (not self-closing) operable with a clenched fist, or be electronically controlled; and
- be located so that the distance from the centre line of the faucet to the edge of the basin, or where the basin is mounted in a vanity, to the front edge of the vanity is not more than 485 mm (19-1/8 in.).

The front apron of a vanity shall have a minimum clearance of 760 mm (30 in.) wide by 735 mm (29 in.) high.

Shelves or other projections above lavatories shall be located so they will not present a hazard to persons with a visual *impairment*.

Where mirrors are provided at lavatories or vanity units, they shall comply with [4.2.6](#).

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.4.2 Controls and Operating Mechanisms](#)
- [4.4.13 Lighting](#)
- [4.4.15 Texture and Colour](#)

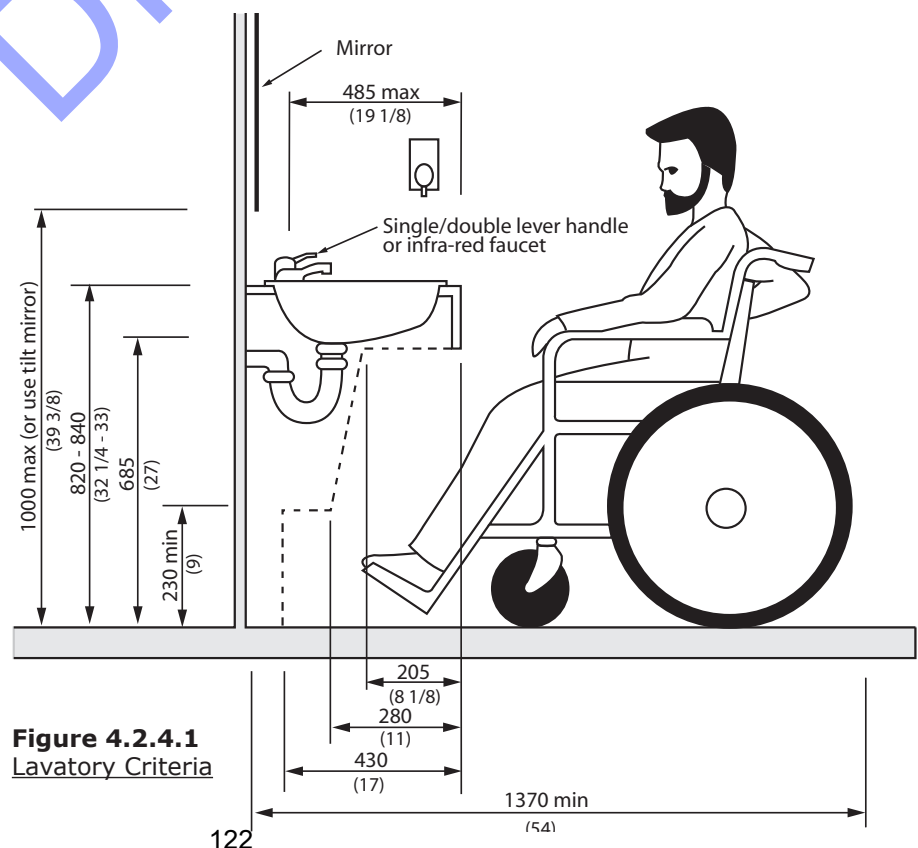


Figure 4.2.4.1
Lavatory Criteria

4.2 WASHROOM FACILITIES

4.2.5 URINALS

RATIONALE

A *clear floor space* is required in front of urinals to manoeuvre a mobility device. The provision of grab bars may assist an individual in rising from a seated position and to steady themselves. Floor-mounted urinals accommodate children and persons of short stature as well as enable easier access to drain personal care devices. Flush controls should be lever-style or automatic (preferred).

Strong colour contrasts between the urinal, the wall and the floor will assist persons with a visual impairment.

APPLICATION

Where urinals are provided in an *accessible toilet or bathing facility*, at least one shall comply with this section.

DESIGN REQUIREMENTS

Urinals shall be

- wall-mounted with an elongated rim located between 488 and 512 mm (19-1/4 - 20-3/16 in.) above the finished floor; or
- floor-mounted with the rim at the finished floor level.

Urinals shall be at least 345 mm (13-1/2 in.) deep, measured from the outer face of the urinal rim to the back of the fixture.

A *clear floor space* of 800 mm x 1370 mm (31 in. x 54 in.) shall be provided in front of the urinal to allow for a forward approach. This *clear space* shall adjoin or overlap an *accessible route* and shall comply with [4.1.1](#).

Where privacy screens are provided

- there shall be at least 920 mm (36 in.) of clearance between them; and
- they shall incorporate a pronounced colour contrast, to differentiate them from the surrounding environment, with a vertical outer edge that contrasts with the screen and the surrounding environment.

Urinals shall have grab bars installed on each side that

- comply with [4.2.10](#);
- are not less than 600 mm (23-5/8 in.) long;
- are mounted vertically
 - not more than 380 mm (15 in.) from the centre line of the urinal; and
 - with the lowest end located between 600 - 650 mm (23-5/8 - 25-1/2 in.) above the floor.

Flush controls shall be hand-operated or automatic, mounted at no more than 1120 mm (44 in.) above the finished floor, and shall comply with [4.4.2](#).

Where a washroom contains more than two urinals, one urinal shall be provided specifically for children that is

- installed with the rim no higher than 430 mm (17 in.) from the finished floor; or
- floor-mounted, with the rim level at the finished floor

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.4.2 Controls and Operating Mechanisms](#)

[4.4.13 Lighting](#)

[4.4.15 Texture and Colour](#)

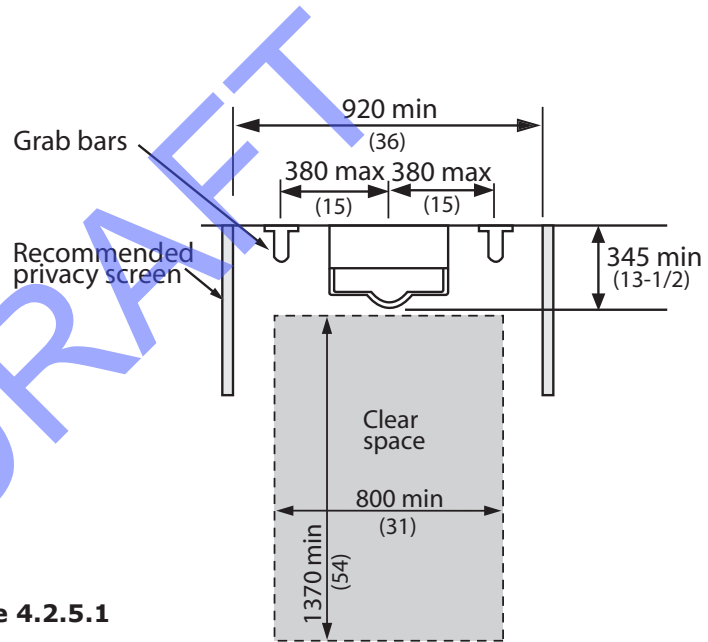


Figure 4.2.5.1
Urinal

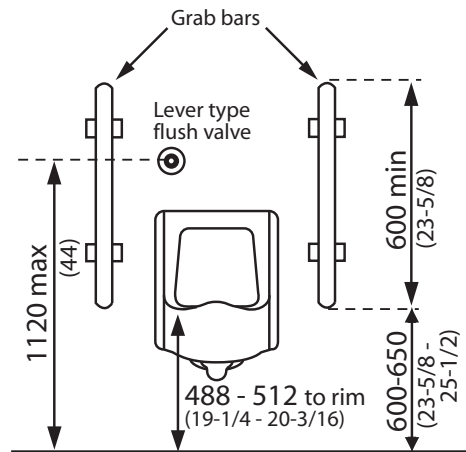


Figure 4.2.5.2
Urinal

4.2.6 WASHROOM ACCESSORIES

4.2 WASHROOM FACILITIES

RATIONALE

Design issues related to washroom accessories include the hand strength and dexterity required to operate mechanisms. Reaching the accessories is another concern. Accessories that require the use of two hands to operate can present difficulties for a range of persons with disabilities when the ability to reach or balance is impaired. Section 4.4.2 addresses operating mechanisms in greater detail.

APPLICATION

Where washroom accessories are provided in a toilet or bathing facility, they shall comply with this section. In a retrofit situation where it is *technically infeasible* to make all washroom accessories comply with this section, at least one of each type of washroom accessory shall comply in all *accessible* toilet or bathing facilities.

DESIGN REQUIREMENTS

Each type of washroom accessory provided, unless otherwise specified in 4.2.2 and 4.2.4, shall have *operable portions* and controls mounted between 900 mm (35 in.) and 1200 mm (47 in.) above the floor.

The operable controls and mechanisms of washroom accessories shall comply with 4.4.2.

Where mirrors are provided, at least one shall be

- mounted with its bottom edge not more than 1000 mm (39-3/8 in.) from the floor; or
- inclined from vertical to be usable by a person using a wheelchair.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.3 Protruding and Overhead Objects](#)
- [4.4.2 Controls and Operating Mechanisms](#)
- [4.4.13 Lighting](#)
- [4.4.15 Texture and Colour](#)

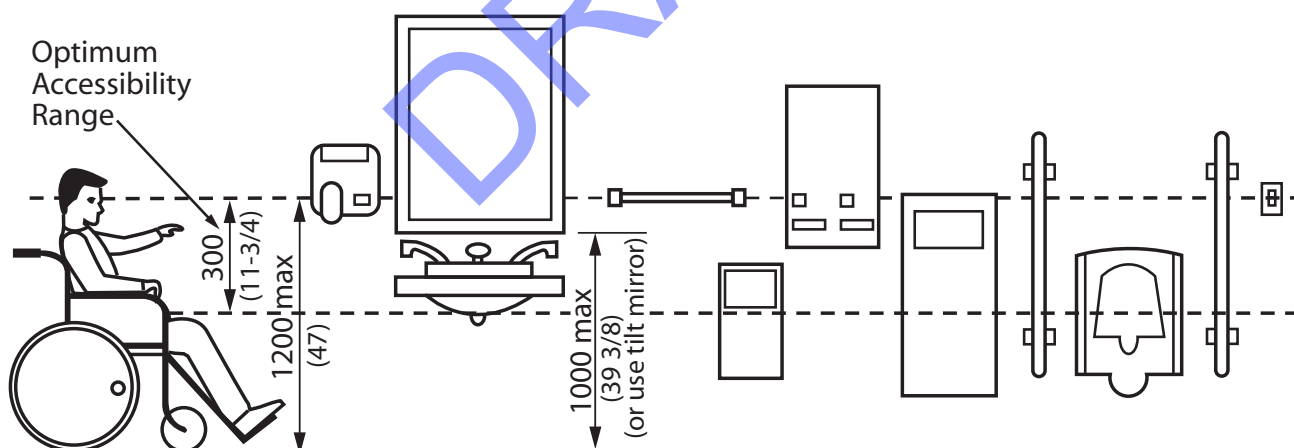


Figure 4.2.6.1
Washroom Accessories

4.2 WASHROOM FACILITIES

4.2.7 INDIVIDUAL WASHROOMS

RATIONALE

The provision of a separate individual washroom is advantageous in a number of instances. For an individual using a wheelchair, the extra *space* provided with a separate washroom is preferred to an accessible stall. Should an individual require an attendant to assist them in the washroom then the complication of a woman entering a men's washroom or vice versa is avoided. This same scenario would apply to a parent with a young child of a different gender.

In the event of an accident or fall by a single individual in this form of washroom, an emergency call switch and a means of unlocking the door from the outside are important safety features.

APPLICATION

Accessible individual washrooms shall comply with this section.

At least one individual washroom, in addition to any *accessible public use* or *common use* toilets, shall be provided

- in all public buildings; and
- on every floor level in assembly buildings where the floor incorporates *common* or *public use* washroom facilities containing four or more toilet and/or urinal fixtures.

If individual washrooms are not visible from the *public use* or *common use* toilets, directional signage complying with 4.4.7 shall be provided.

DESIGN REQUIREMENTS

Accessible individual washrooms shall be

- on an *accessible route* in compliance with 4.1.4;
- identified with *signage* in compliance with applicable provisions of 4.4.7.
- designed to permit a wheelchair to turn within an *open space* that has a diameter of not less than 2440 mm (96 in.). In a retrofit situation where providing the required turning space is *technically infeasible*, the turning space may be reduced to not less than 2130 mm (84 in.);
- provided with a lavatory conforming to 4.2.4;
- equipped with a toilet fixture

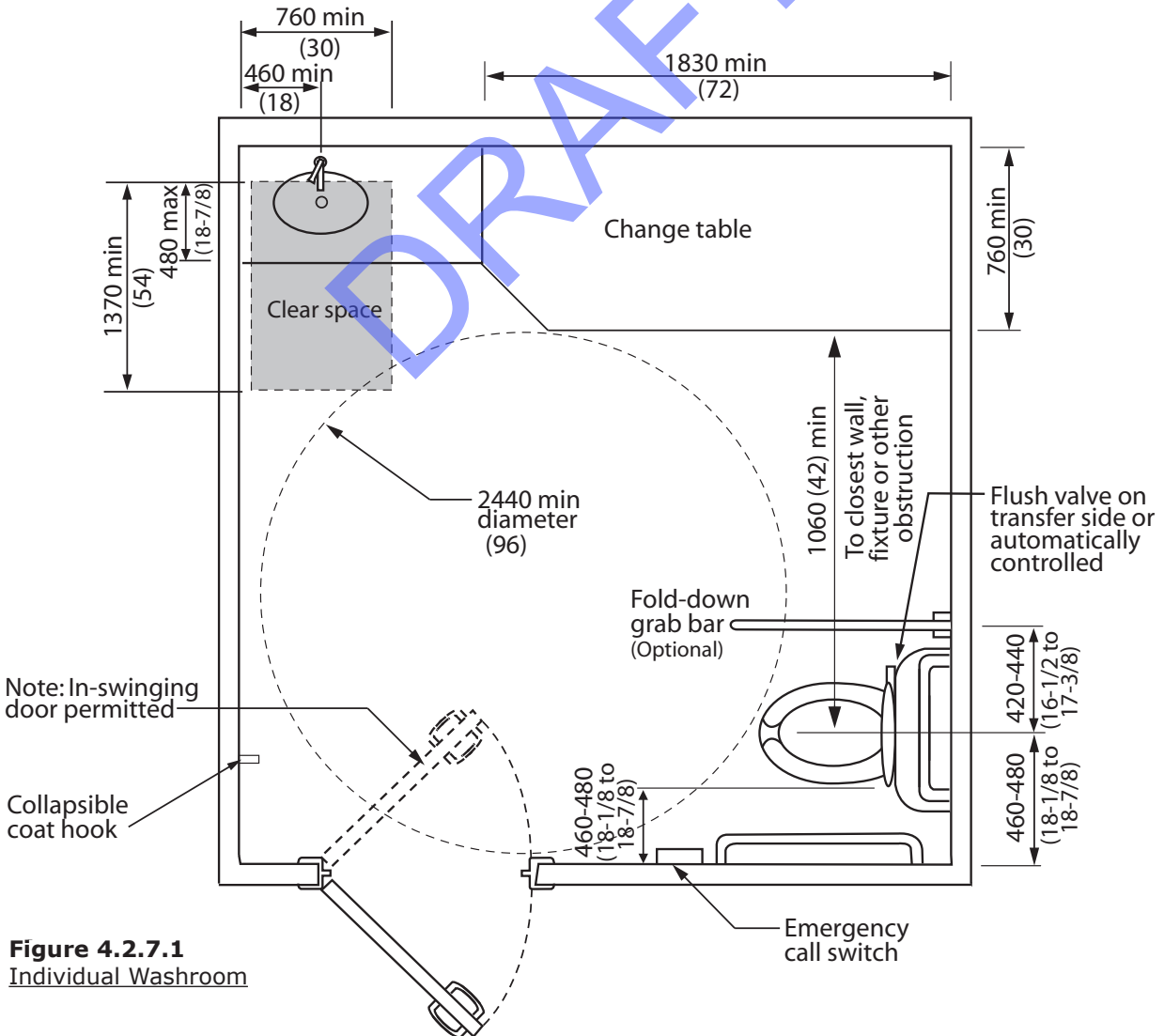


Figure 4.2.7.1
Individual Washroom

4.2.7 INDIVIDUAL WASHROOMS

4.2 WASHROOM FACILITIES

conforming to [4.2.3](#) that is located

- so that its edge is between 460 - 480 mm (18-1/8 to 18-7/8 in.) from an adjacent wall on one side; and
- so that its centre line is not less than 1060 mm (42 in.) to any wall, fixture or other obstruction on the other side.
- equipped with flush controls and other *elements* conforming to [4.2.3](#);
- equipped with grab bars conforming to [4.2.10](#);
- have fixture clearances conforming to [4.2.3](#) and [4.2.4](#);
- provided with a *clear* transfer space adjacent to the toilet fixture, as required by [4.2.3](#);
- equipped with a collapsible coat hook mounted not more than 1200 mm (47 in.) from the floor on a side wall and projecting not more than 50 mm (2 in.) from the wall;
- equipped with a shelf located not more than 1200 mm (47 in.) above the floor and installed in a location that will not create a hazard; and
- equipped with a mirror and washroom accessories complying with [4.2.6](#).

Accessible individual washroom doors shall

- comply with [4.1.6](#);
- have a graspable latch operating and locking mechanism located not less than 900 mm (35 in.) and not more than 1000 mm (39-3/8 in.) above the floor;
- be capable of being locked from the inside with one hand and being released from the outside in case of emergency;
- be provided with a "D"-type colour-contrasting door pull, minimum 140 mm (5-1/2 in.) long, and installed
 - on the inside of an out-swinging door,

- with the centre line located between 200 mm and 300 mm (7-7/8 in. and 11-3/4 in.) from the hinged side of the door, and
- not less than 900 mm (35 in.) and not more than 1000 mm (39-3/8 in.) above the floor;
- if it is an out-swinging door, be equipped with a door closer, spring hinges or gravity hinges so that the door closes automatically; and
- be provided with a power door operator, where the door is equipped with a self-closing device.

Where *accessible* individual washrooms are provided in assembly *buildings*, such as recreation centres, the washroom shall incorporate an emergency call system linked to a central monitoring location (e.g., office or switchboard).

Accessible individual washrooms shall incorporate a change table

- at least 760 mm (30 in.) wide by 1830 (72 in.) long;
- located with the change surface no higher than 865 mm (34 in.);
- which incorporates an adjacent *clear floor space* not less than 760 mm (30 in.) by 1370 mm (54 in.);
- designed to carry a minimum load of 1.33 kN (300 lbs.);
- located on an *accessible route* in compliance with [4.1.4](#); and
- if of the fold-down type, have no operable portions higher than 1200 mm (47 in.).

OPTIONAL:

- be equipped with a fold-down grab bar at least 760 mm (30 in.) in length at the open side of the toilet, mounted 420 - 440 mm (16-1/2 - 17-3/8 in.) from the centre line of the toilet and 630 - 690 mm (24-3/4 - 27-1/8 in.) above the floor.

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.2 Ground and Floor Surfaces](#)

[4.1.3 Protruding and Overhead Objects](#)

[4.1.6 Doors](#)

[4.2.3 Toilets](#)

[4.2.4 Lavatories](#)

[4.2.5 Urinals](#)

[4.2.6 Washroom Accessories](#)

[4.2.10 Grab Bars](#)

[4.4.2 Controls and Operating Mechanisms](#)

[4.4.7 Signage](#)

[4.4.11 Card Access, Safety and Security Systems](#)

[4.4.12 Glare and Light Sources](#)

[4.4.13 Lighting](#)

[4.4.14 Materials and Finishes](#)

[4.4.15 Texture and Colour](#)

4.2 WASHROOM FACILITIES

4.2.8 BATHTUBS

RATIONALE

Bathtubs can present a slipping hazard. Slip-resistant surfaces are an important feature and will benefit any individual, including those with *disabilities*. Grab bars also provide stability. Operating systems are subject to limitations in hand strength, dexterity and reach.

APPLICATION

Where bathtubs are provided, all bathtubs shall comply with this section. In a retrofit situation where it is *technically infeasible* to have all bathtubs comply with this section, at least 10%, but never less than one, in each bathing *facility* shall comply with this section.

DESIGN REQUIREMENTS

Accessible bathtubs shall be on an accessible route complying with [4.1.4](#).

Accessible bathtubs shall have

- a clear floor space at least 920 mm wide (36 in.) along the full length of the bathtub (the lavatory can encroach a maximum of 300 mm (11-3/4 in.) into this space, provided the available clear floor space complies with [4.2.4](#));
- faucet handles of the lever type that are not spring-loaded, or are automatically operable;
- faucet handles that are located so as to be usable by a person seated in the bathtub;
- faucets and other controls mounted not more than 450 mm (17-3/4 in.) above the bathtub rim;
- a shower head complying with [4.2.9](#);
- unless the bathtub is freestanding, be equipped with an "L" shaped grab bar or a horizontal grab bar and a vertical grab bar conforming to [4.2.10](#) mounted on the wall
 - where each leg of the "L" being at least 920 mm (36 in.) in length;
 - with the legs of the "L" being separated by a 90 degrees;

- with the horizontal leg of the "L" being located 150 - 200 mm (5-7/8 - 7-7/8 in.) above and parallel to the rim of the bathtub; and
- if a horizontal grab bar is used, it shall be 1200 mm long located along the length of the bathtub at 1800 mm (7 in.) to 280 mm (11 in.) above the bathtub rim.
- with the vertical leg of the "L" being located 300 - 450 mm (11-3/4 - 17-3/4 in.) from the control end of the tub.
- with a vertical grab bar which is at least 1220 mm (48 in.) long, mounted vertically at the foot end of the tub adjacent to the clear floor space, with the lower end 180 - 280 mm (7 - 11 in.) above the bathtub rim.
- controls equipped with a pressure-equalizing or

thermostatic-mixing valve, operable from the seated position and in compliance with [4.4.2](#);

- soap holder(s) which can be reached from the seated position, ideally fully recessed;
- Enclosures for bathtubs shall not
- obstruct controls;
 - interfere with a person transferring from a wheelchair; or
 - have tracks mounted on the bathtub rim.

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.2.6 Washroom Accessories](#)

[4.2.10 Grab Bars](#)

[4.4.2 Controls and Operating Mechanisms](#)

[4.4.13 Lighting](#)

[4.4.15 Texture and Colour](#)

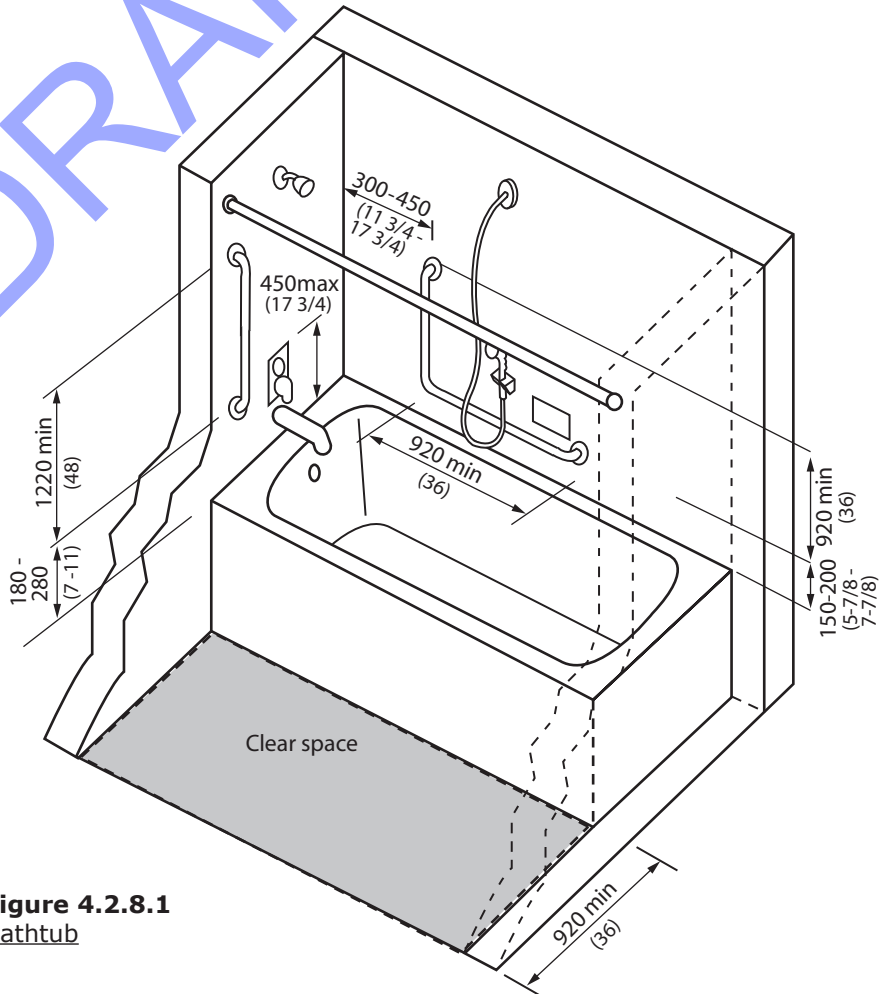


Figure 4.2.8.1
Bathtub

4.2.9 SHOWER STALLS

RATIONALE

Roll-in or curbless shower stalls eliminate the hazard of stepping over a threshold and are essential for persons with *disabilities* who use wheelchairs or other mobility devices in the shower. Grab bars and non-slip materials are safety measures which will support any individual. Additional equipment such as a hand-held shower head or a folding bench, may be an asset to someone with a *disability* but also convenient for others. Equipment that contrasts in colour from the shower stall itself will assist individuals with a visual *impairment*.

APPLICATION

Where shower stalls are provided, all shower stalls shall comply with this section. In a retrofit situation where it is *technically infeasible* to have all shower stalls comply with this section, at least 10%, but never less than one, in each bathing *facility* shall comply with this section.

DESIGN REQUIREMENTS

Accessible shower stalls shall

- be on an *accessible route* complying with 4.1.4;
- be at least 1525 mm (60 in.) in width and 920 mm (36 in.) in depth;

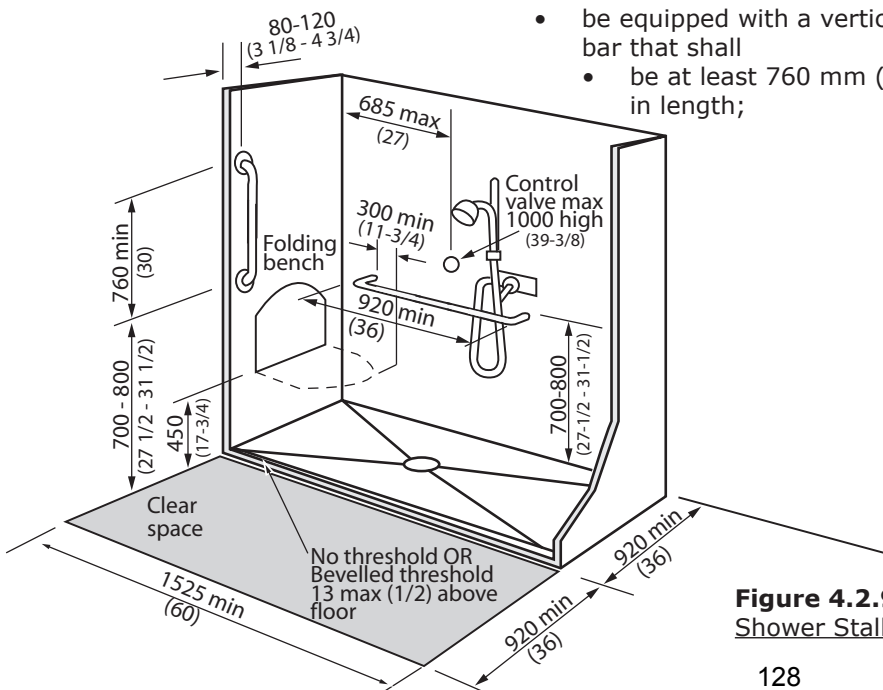


Figure 4.2.9.1
Shower Stall

- have a *clear floor space* at the *entrance* to the shower of at least 920 mm (36 in.) in depth and the same width as the shower, except that fixtures are permitted to project into that *space*, provided access to the shower is not restricted;
- have a slip-resistant floor surface;
- have no threshold, or a bevelled threshold not exceeding 13 mm (1/2 in.) above the finished floor;
- be equipped with a wall-mounted folding seat that is not spring-loaded, or make provisions for a portable seat that is
 - 450 mm (17-3/4 in.) wide and 400 mm (15 in.) deep;
 - mounted approximately 450 mm (17-3/4 in.) above the floor; and
 - designed to carry a minimum load of 1.33 kN (300 lbs.);
- be equipped with a horizontal grab bar that shall
 - conform to 4.2.10;
 - be at least 920 mm (36 in.) in length;
 - be mounted horizontally between 700 mm and 800 mm (27-1/2 to 31-1/2 in.) above the floor; and
 - be located on the wall so at least 300 mm (11-3/4 in.) of its length is reachable from one side of the seat;
- be equipped with a vertical grab bar that shall
 - be at least 760 mm (30 in.) in length;
- be mounted 80 - 120 mm (3-1/8 - 4-3/4 in.) from the front edge, starting between 700 and 800 mm (27-1/2 and 31-1/2 in.) from the floor; and
 - conform to 4.2.10;
- be equipped with a pressure-equalizing or thermostatic-mixing valve in compliance with 4.4.2, located above the grab bar but no higher than 1000 mm (39-3/8 in.), maximum 685 mm (27 in.) from the seat wall;
- have soap holder(s) which can be reached from the seated position, ideally fully recessed; and
- be equipped with a shower head with at least 1500 mm (5 ft.) of flexible hose that can be used both as a fixed position shower head and as a hand held shower head. The shower spray unit shall be reachable from the seated positions and have an on/off control. EXCEPTION: The use of two fixed-height shower heads with the capability of adjusting the direction of water flow is permitted instead of a hand-held spray unit in *facilities* that may be subject to vandalism. The height of the higher shower head to be 1825 mm (72 in.). The height of the lower shower head to be 1400 mm (55-1/8 in.). A valve to direct water between the shower heads, in compliance with 4.4.2, shall be located adjacent to the shower control/mixing valve.

4.2 WASHROOM FACILITIES

Where the showerhead is mounted on a vertical bar, the bar shall be installed so as not to obstruct the use of the grab bar.

Enclosures for shower stalls shall not obstruct controls or obstruct transfer from a mobility device onto the shower seat.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.2.6 Washroom Accessories](#)
- [4.2.10 Grab Bars](#)
- [4.4.2 Controls and Operating Mechanisms](#)
- [4.4.13 Lighting](#)
- [4.4.15 Texture and Colour](#)

4.2 WASHROOM FACILITIES

4.2.10 GRAB BARS

RATIONALE

Grab bars are an important feature to those who require assistance in standing up, sitting down or stability while standing. Transferring between toilet and wheelchair or scooter may be another scenario where grab bars are utilized.

APPLICATION

Grab bars shall comply with this section.

DESIGN REQUIREMENTS

Grab bars shall

- be installed to resist a load of at least 1.3 kN (300 lb.), applied vertically or horizontally;
- be not less than 30 mm (1-3/16 in.) and not more than 40 mm (1-9/16 in.) in diameter;
- have a clearance of 35 mm (1-2/5 in.) to 45 mm (1-4/5 in.) from the wall;
- be free of any sharp or abrasive *elements*;
- be colour-contrasted with the surrounding environment; and
- have a slip-resistant surface.

Adjacent surfaces shall be free of any sharp or abrasive *elements*.

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.2.3 Toilets](#)

[4.2.5 Urinals](#)

[4.2.7 Individual Washrooms](#)

[4.2.8 Bathtubs](#)

[4.2.9 Shower Stalls](#)

[4.4.13 Lighting](#)

[4.4.15 Texture and Colour](#)

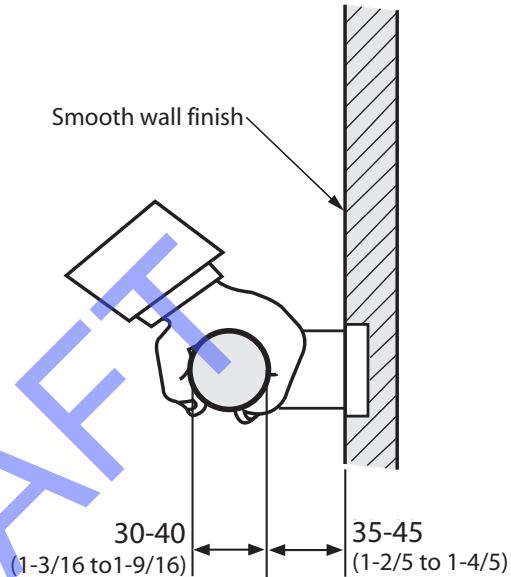


Figure 4.2.10.1
Grab Bar

4.3.1 DRINKING FOUNTAINS

4.3 OTHER AMENITIES

RATIONALE

When planning the design of drinking fountains, one should consider the limited height of children and that of a person using a wheelchair or scooter. In the same respect, there may be individuals who have difficulty bending who would require a higher fountain. The operating system should account for limited hand strength or dexterity. The placement of the fountain is also important. Fountains should be recessed, to avoid protruding into the path of travel, especially if they are wall mounted above the detectable height of a person using a cane. Angled recessed alcove designs allow more flexibility and less precision required by a person using a wheelchair or scooter.

APPLICATION

Where drinking fountains are provided on a floor level, at least one shall be *accessible* and shall comply with this section. Where more than one drinking fountain or water cooler is provided on a floor level, at least 50% shall be *accessible* and shall comply with this section.

Where only one drinking fountain is provided on a floor level, it shall incorporate components that are *accessible* to individuals who use mobility devices and to those who have difficulty stooping or bending.

DESIGN REQUIREMENTS

Accessible drinking fountains shall

- be located on an *accessible route* complying with 4.1.4;
- have a spout located near the front of the unit between 760 mm (30 in.) and 900 mm (35 in.) above the floor or ground surface;
- have a spout that directs the water flow in a trajectory that is parallel or nearly parallel to the front of the unit;
- have a spout that provides a water flow at least 100 mm (4 in.) high; and
- be equipped with controls that are located on the front of the unit, or on both sides of the unit, easily operated from a wheelchair or scooter using one hand with a force of not more than 22 N (4.9 lb.), or be automatically operable.

Cantilevered drinking fountains shall

- have a *clear floor space* of at least 760 mm (30 in.) by 1370 mm (54 in.);
- have a *knee space* between the bottom of the apron and the floor or ground of at least 760 mm (30 in.) wide, 200 mm (7-7/8 in.) deep and 685 mm (27 in.) high;
- have a *toe space* not less than 760 mm (30 in.) wide, 230 mm (9 in.) deep, and 230 mm (9 in.) high; and
- be recessed or otherwise located out of the circulation route.

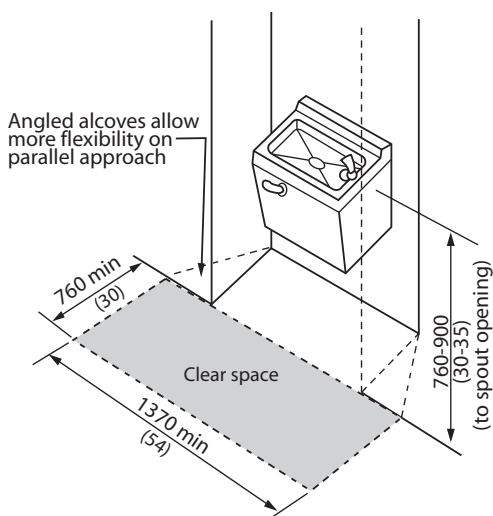


Figure 4.3.1.1 Parallel Approach

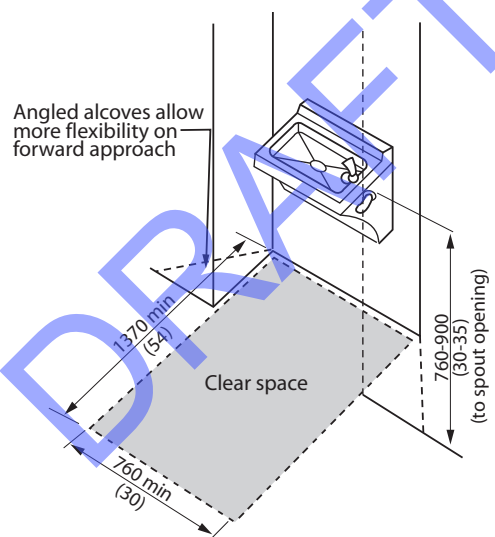


Figure 4.3.1.2 Forward Approach

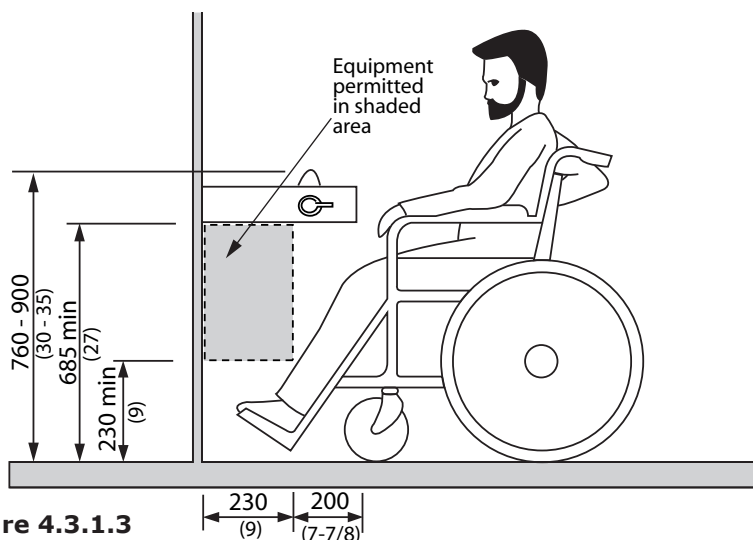


Figure 4.3.1.3 Clearances

Freestanding or built-in fountains not having a *knee space* shall have a *clear floor space* at least 1370 mm (54 in.) wide by 760 mm (30 in.) deep in front of the unit to accommodate a parallel approach.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.3 Protruding and Overhead Objects](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.4.13 Lighting](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

4.3 OTHER AMENITIES

4.3.2 VIEWING POSITIONS

RATIONALE

Designated viewing areas are required for individuals unable to use typical seating. Viewing areas need to provide adequate *space* to manoeuvre a mobility device as large as a scooter and should not be limited to one location. Designated companion seating should also be provided. Guards placed around a viewing area should not interfere with the line of sight of someone sitting in a wheelchair or scooter. A choice of locations and ticket price range should be available.

APPLICATION

In places of assembly occupancy with fixed seating, *accessible* wheelchair/scooter locations shall comply with this section and shall be provided in numbers as indicated by Table 4.3.2.

In addition, 1%, but not less than one, of all fixed seats shall be aisle seats with no armrests on the aisle side, or shall have removable or folding armrests on the aisle side. A sign or marker shall identify each of the seats. *Signage* notifying patrons of the availability of such seats shall be posted at the ticket office.

DESIGN REQUIREMENTS

Accessible wheelchair/scooter locations shall adjoin an *accessible route* complying with 4.1.4, without infringing on *egress* from any row of seating or any aisle requirement.

Each *accessible* wheelchair/scooter location shall be

- an integral part of any seating plan. Seats shall be distributed in a manner that provides people with physical disabilities a choice of admission prices and lines of sight comparable to those for members of the general public;
- clear and level, or level with removable seats;
- if the wheelchair/scooter enters from a side approach, not less than 920 mm (36 in.) wide and 1525 mm (60 in.) long;
- if the wheelchair/scooter enters from a front or rear approach,

- not less than 920 mm (36 in.) wide and 1370 (54 in.) long;
- arranged so that at least two designated wheelchair/scooter locations are side by side;
- arranged so that at least one companion fixed seat is provided next to each wheelchair seating area (Note: Companion seating to be calculated in addition to the required *accessible* seating spaces identified in Table 4.3.2); and
- where the seating capacity exceeds 100, provided in more than one location

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.3 Protruding and Overhead Objects](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.4.6 Assistive Listening Systems](#)
- [4.4.7 Signage](#)
- [4.4.9 Public Address System](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)
- [4.4.16 Acoustics](#)

Number of Fixed Seats in Seating Area	Minimum number of Spaces Required for Wheelchairs
Up to 100	2
101 to 200	3
201 to 300	4
301 to 400	5
401 to 600	6
Over 600	Not less than 1% of the seating capacity

Table 4.3.2
Wheelchair Viewing Locations



Figure 4.3.2.1
Sight Lines at Wheelchair Locations

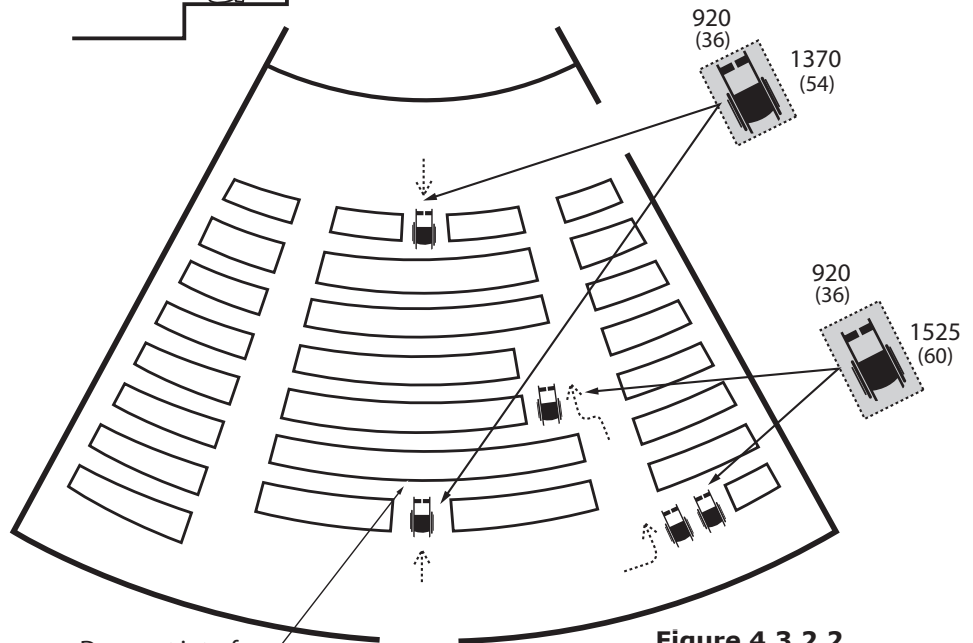


Figure 4.3.2.2
Distribution of Wheelchair Locations

4.3.3 ELEVATED PLATFORMS

4.3 OTHER AMENITIES

RATIONALE

Elevated platforms, such as stage areas, speaker podiums, etc., should be *accessible* to all. A marked *accessible route* should be provided, along with safety features to assist persons who are visually impaired.

APPLICATION

Elevated platforms provided for use by the general public, clients, customers or employees shall comply with this section.

DESIGN REQUIREMENTS

Elevated platforms shall

- be located on an *accessible route* that complies with [4.1.4](#);
- be capable of being illuminated to at least 100 lux (9.3 ft-candles) at floor level at the darkest point;

- be sized to safely accommodate wheelchairs and other mobility equipment in compliance with [4.1.1](#); and
- have open platform edges defined by a *detectable warning surface*.

The *detectable warning surface* on elevated platforms shall

- comply with the requirements of [4.4.8](#);
- be consistent throughout the setting;
- be positioned parallel to the open platform edge, extending the full length of the platform; and
- be a minimum depth of 600 mm (23-5/8 in.) and a maximum of 920 mm (36 in.), flush from the open edge of the platform.

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.2 Ground and Floor Surfaces](#)

[4.1.3 Protruding and Overhead Objects](#)

[4.1.4 Accessible Routes, Paths and Corridors](#)

[4.4.8 Detectable Warning Surfaces](#)

[4.4.13 Lighting](#)

[4.4.14 Materials and Finishes](#)

[4.4.15 Texture and Colour](#)

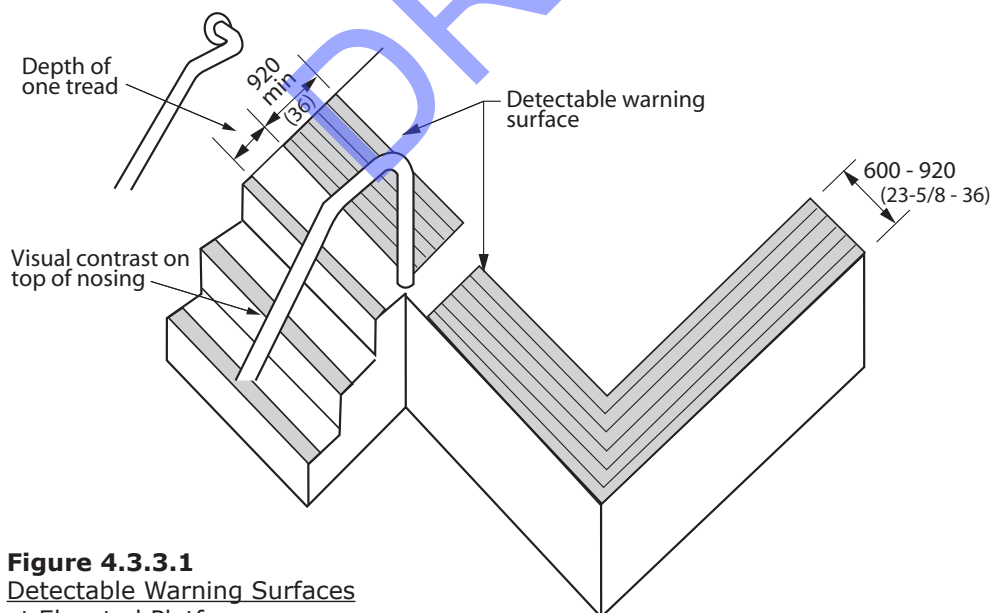


Figure 4.3.3.1
Detectable Warning Surfaces
at Elevated Platform

4.3 OTHER AMENITIES

RATIONALE

In addition to *accessible common use* dressing rooms, a separate unisex dressing room is useful. This is valuable in a scenario where an attendant of the opposite sex or a parent is assisting a child. Sufficient *space* should be allowed for two people and a wheelchair, along with benches and accessories.

The provision of *handrails* along circulation routes from dressing rooms to pool, gymnasium and other activity areas, will be of benefit to many *facility* users.

APPLICATION

Where dressing rooms are provided for use by the general public, patients, customers or employees, they shall comply with this section. In a retrofit situation where it is *technically infeasible* to have all dressing rooms comply with this section, 10% of dressing rooms, but never less than one, for each type of use in each cluster of dressing rooms shall be *accessible* and comply with this section.

At least one private *accessible* dressing room shall be provided within *accessible* change rooms at pools and gymnasiums.

DESIGN REQUIREMENTS

Accessible dressing rooms, and accessible elements within accessible dressing rooms, shall be located on an *accessible route* complying with [4.1.4](#).

Private *accessible* dressing rooms shall incorporate a *clear floor space* allowing a person using a wheelchair or scooter to make a 180-degree turn, accessed through either a hinged or sliding door. No door shall swing into any part of the required turning *space* within the private *accessible* dressing room. Turning *space* is not required within a private *accessible* dressing room accessed through a curtained opening of at least 950 mm (37-1/2 in.) wide, if *clear floor space* complying with section [4.1.1](#) renders the dressing room usable by a person in a wheelchair or scooter.

4.3.4 DRESSING ROOMS

All doors to *accessible* dressing rooms shall be in compliance with [4.1.6](#). Outward swinging doors shall not constitute a hazard to persons using adjacent circulation routes.

Every *accessible* dressing room shall have a 760 mm (30 in.) x 1830 mm (72 in.) bench fixed to the wall along the longer dimension. The bench shall

- be mounted 450 to 500 mm (17-3/4 in. to 19-5/8 in.) above the finished floor;
- have *clear floor space* provided alongside the bench to allow a person using a wheelchair or scooter to make a parallel transfer onto the bench;
- be designed to carry a minimum load of 1.33 kN (300 lb.); and

Where coat hooks are provided, they shall be a collapsible-style projecting not more than 50 mm (2 in.) from the wall. At least two collapsible coat hooks shall be mounted no higher than 1200 mm (47 in.) above the floor, and immediately adjacent to the *accessible* bench. (Note: Coat hooks should NOT be located over the *accessible* bench or in areas that may cause a hazard.)

Where dressing rooms are provided in conjunction with showers, swimming pools, or other wet

locations, they shall

- be designed with a slip-resistant floor surface that prevents the accumulation of standing water; and
- have a bench with a slip-resistant seat surface installed to prevent the accumulation of water.

Where mirrors, or other reflective surfaces, are provided in dressing rooms of the same use, *accessible* dressing rooms shall incorporate a full-length mirror or other reflective surface measuring at least 460 mm (18 in.) wide by 1370 mm (54 in.) high and shall be mounted in a position affording a view to a person on the bench, as well as to a person in a standing position.

Dressing rooms shall incorporate even illumination throughout of at least 100 lux (10 ft-candles).

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.2 Ground and Floor Surfaces](#)

[4.1.3 Protruding and Overhead Objects](#)

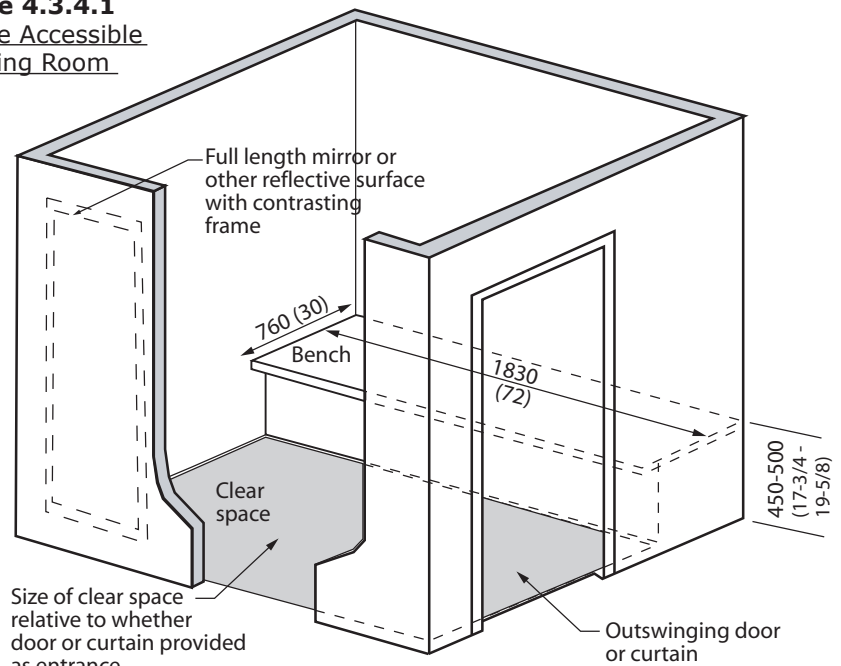
[4.1.4 Accessible Routes, Paths and Corridors](#)

[4.4.13 Lighting](#)

[4.4.14 Materials and Finishes](#)

[4.4.15 Texture and Colour](#)

Figure 4.3.4.1
Private Accessible
Dressing Room



4.3.5 OFFICES, WORK AREAS & MEETING ROOMS

4.3 OTHER AMENITIES

RATIONALE

Offices providing services or programs to the public should be *accessible* to all, regardless of mobility or functional profile. Furthermore, office and related support areas should be *accessible* to staff and visitors with varying levels of ability.

All persons, but particularly those with a hearing *impairment*, would benefit from having a quiet acoustic environment - background noise from mechanical equipment such as fans, should be minimal. Telephone equipment for individuals with hearing *impairments* may also be required.

Tables and workstations should address the knee *space* requirements of an individual in a wheelchair. Circulation areas also need to consider the spatial needs of mobility equipment as large as scooters.

Natural coloured task lighting, such as that provided through halogen bulbs, is a design feature that will facilitate use by all, especially persons with vision *impairments*. In locations where reflective glare may be problematic, such as large expanses of glass with reflective flooring, consideration should be given to providing blinds that can be louvred upwards.

APPLICATION

Wherever offices, work areas or *meeting rooms* are provided for use by the general public, employees, clients or customers, they shall comply with this section.

DESIGN REQUIREMENTS

Where offices, work areas and *meeting rooms* are provided for use by the general public, clients or customers, they shall

- be located on an *accessible route* complying with [4.1.4](#);
- where equipped with a door, the door shall comply with [4.1.6](#);
- incorporate a *clear floor space* allowing a person using a wheelchair or scooter to make a 180-degree turn;
- incorporate an *accessible route* throughout the *space* that does not require a person using a wheelchair or scooter to travel backwards to enter/leave the *space*;
- incorporate an *accessible route* that connects the primary activity *elements* within the office, work area or meeting room;
- incorporate knee clearances below work surfaces that comply with [4.3.7](#);
- incorporate access to storage, shelving or display units in compliance with [4.3.9](#) for use by the general public, clients or customers;
- provide a *clear floor space* that complies with [4.1.1](#) in front of all equipment such as photocopiers where such equipment is provided for use by the general public, clients or customers; and
- be equipped with an assistive listening system that complies with [4.4.6](#), where an assistive listening system is required.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.1.8 Windows, Glazed Screens and Sidelights](#)
- [4.3.7 Tables, Counters and Work Surfaces](#)
- [4.3.9 Storage, Shelving and Display Units](#)
- [4.4.2 Controls and Operating Mechanisms](#)
- [4.4.4 Visual Alarms](#)
- [4.4.6 Assistive Listening Systems](#)
- [4.4.12 Glare and Light Sources](#)
- [4.4.13 Lighting](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)
- [4.4.16 Acoustics](#)

4.3 OTHER AMENITIES

4.3.6 WAITING AND QUEUING AREAS

RATIONALE

Queuing areas for information, tickets or services should permit persons who use wheelchairs, scooters and other mobility devices as well as persons with a varying range of user ability to move through the line safely and conveniently.

Waiting and queuing areas need to provide *space* for mobility devices, such as wheelchairs and scooters. Queuing lines that turn corners or double back on themselves will need to provide adequate *space* to manoeuvre mobility devices. Providing *handrails* in queuing lines may be useful support for individuals and guidance for those with a visual *impairment*. The provision of benches in waiting areas is important for individuals who may have difficulty with standing for extended periods.

APPLICATION

Waiting and queuing areas shall comply with this section.

DESIGN REQUIREMENTS

Barriers at queuing areas shall be laid out in parallel, logical lines, spaced a minimum of 1100 mm (43 1/4 in.) apart.

Barriers at queuing areas, provided to streamline pedestrian movement, shall be firmly mounted to the floor, and should have rigid rails to provide support for waiting persons.

Where floor slots or pockets are included to receive temporary or occasional supports, such slots or pockets shall be level with the floor finish and have an integral cover, so as not to cause a tripping hazard.

Permanent queuing areas shall incorporate clearly defined floor patterns/colours/textures in compliance with [4.4.15](#), as an aid to guide persons with a visual *impairment*.

There shall be a pronounced colour contrast between ropes, bars or solid barriers used to define queuing areas and the surrounding environment.

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.2 Ground and Floor Surfaces](#)

[4.1.4 Accessible Routes, Paths and Corridors](#)

[4.4.5 Public Telephones](#)

[4.4.6 Assistive Listening Systems](#)

[4.4.7 Signage](#)

[4.4.9 Public Address Systems](#)

[4.4.10 Information Systems](#)

[4.4.12 Glare and Light Sources](#)

[4.4.13 Lighting](#)

[4.4.14 Materials and Finishes](#)

[4.4.15 Texture and Colour](#)

[4.4.16 Acoustics](#)

4.3.7 TABLES, COUNTERS AND WORK SURFACES

4.3 OTHER AMENITIES

RATIONALE

Tables, counters and work surfaces should accommodate the needs of a range of users. Consideration should be given to standing-use as well as seated use. For individuals using wheelchairs, tables need to be high enough to provide knee space and provide enough clear space for the wheelchair to pull into. The furniture placement at tables and manoeuvring space at counters should provide sufficient turning space for a person using a wheelchair or scooter.

APPLICATION

If fixed or built-in tables, counters and work surfaces (including, but not limited to, dining tables and study carrels) are provided in accessible public or common use areas, at least 10%, but not less than one, of the fixed or built-in tables, counters and work surfaces shall comply with this section.

DESIGN REQUIREMENTS

Accessible tables, counters and work surfaces shall be located on an accessible route complying with 4.1.4.

An accessible route complying with 4.1.4 shall lead to and around such fixed or built-in tables, counters and work surfaces.

Wheelchair seating spaces at accessible tables, counters and work surfaces shall incorporate a clear floor space of not less than 760 mm (30 in.) by 1370 mm (54 in.).

Where a forward approach is used to access a wheelchair seating space, a clear knee space of at least 760 mm (30 in.) wide, 485 mm (19 in.) deep and 685 mm (27 in.) high shall be provided. It may overlap the clear floor space by a maximum of 480 mm (18-7/8 in.).

The top of accessible tables, counters and work surfaces shall be located between 710 mm (28 in.) to 865 mm (34 in.) above the finished floor or ground surface.

Where speaker podiums are provided they shall

- be located on an accessible route in compliance with 4.1.4;
- be height-adjustable for use from a seated or standing position;
- incorporate clear floor space of at least 760 mm (30 in.) by 1370 mm (54 in.), configured for forward approach;
- incorporate clear knee space of at least 760 mm (30 in.) wide, 480 mm (18-7/8 in.) deep and 685 mm (27 in.) high; and
- incorporate controls and operating mechanisms in compliance with 4.4.2

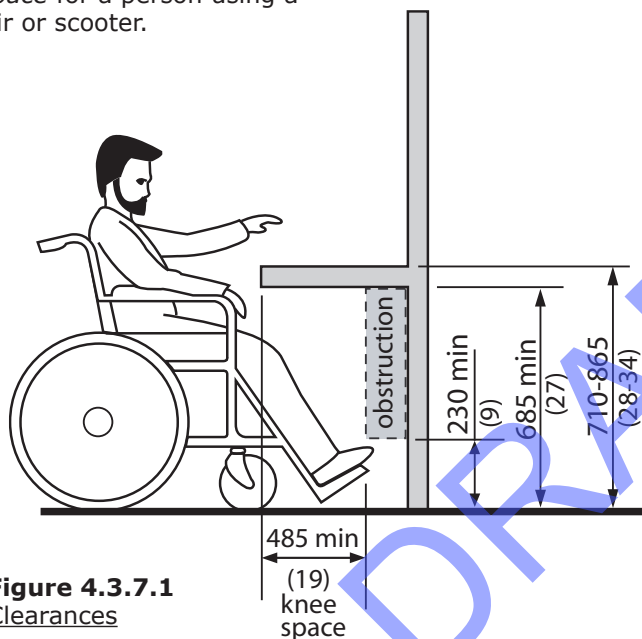


Figure 4.3.7.1 Clearances

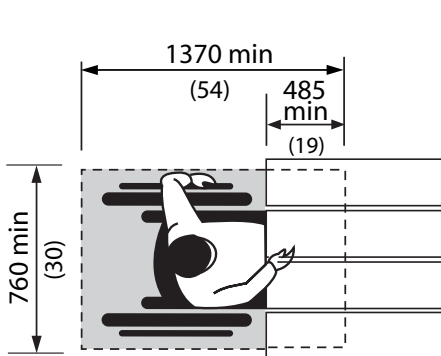


Figure 4.3.7.2 Frontal Approach

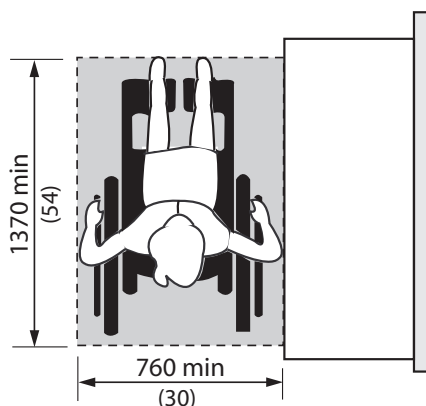


Figure 4.3.7.3 Parallel Approach

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)

4.3 OTHER AMENITIES

4.3.8 INFORMATION, RECEPTION AND SERVICE COUNTERS

RATIONALE

Information, reception and service counters should be *accessible* to the full range of visitors. A choice of counter heights is recommended to provide a range of options for a variety of persons. Lowered sections will serve children, persons of short stature and persons using mobility devices such as a wheelchair or scooter. The choice of heights should also extend to speaking ports and writing surfaces.

The provision of knee space under the counter facilitates use by a person using a wheelchair or a scooter.

The use of colour contrast, tactile difference or audio landmarks (e.g., receptionist voice or music source) can assist individuals with a visual *impairment* to more precisely locate service counters or speaking ports.

APPLICATION

Counters for information or service shall have at least one section *accessible* to persons who use a wheelchair or scooter.

DESIGN REQUIREMENTS

Information, reception and service counters shall be located on an *accessible route* complying with [4.1.4](#).

Counters for information, reception or service shall incorporate at least one *accessible* section that

- has a counter height located between 685 mm (27 in.) and 865 mm (34 in.) above the finished floor or ground;
- has a counter surface width of at least 920 mm (36 in.); and
- has *knee space* on both sides of the counter, below the counter surface, of at least 685 mm (27 in.) high by 480 mm (18-7/8 in.) deep by 760 mm (30 in.) wide.

Wheelchair seating *spaces* at *accessible* sections of information, reception and service counters shall incorporate a clear floor space not less than 760 mm (30 in.) by 1370 mm (54 in.).

Where a forward approach is used to access a wheelchair seating space, a *clear knee space* of at least 760 mm (30 in.) wide, 480 mm (18-7/8 in.) deep and 685 mm (27 in.) high shall be provided. It may overlap the *clear floor space* by a maximum of 480 mm (18-7/8 in.).

Where speaking ports are provided at information, reception or service counters, at least one such position shall have a speaking port no higher than 1060 mm (42 in.) above the finished floor or ground.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.4.6 Assistive Listening Systems](#)
- [4.4.7 Signage](#)
- [4.4.10 Information Systems](#)
- [4.4.12 Glare and Light Sources](#)
- [4.4.13 Lighting](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)
- [4.4.16 Acoustics](#)

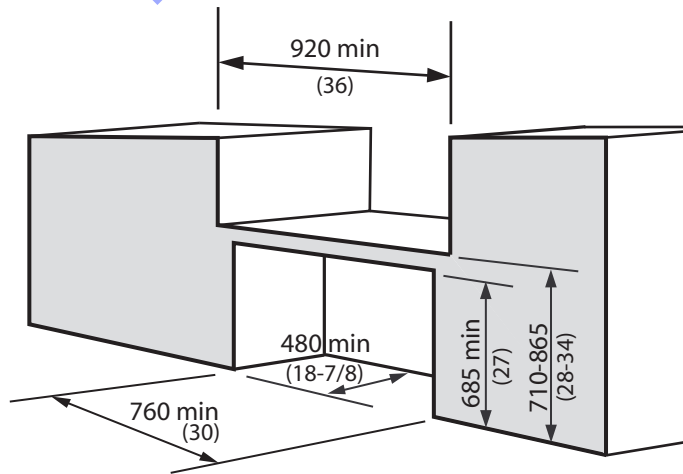


Figure 4.3.8.1
Service Counter

4.3.9 STORAGE, SHELVING AND DISPLAY UNITS

4.3 OTHER AMENITIES

RATIONALE

The heights of storage, shelving and display units should address a full range of vantage points including the lower sightlines of children or a person using a wheelchair or scooter. The lower heights also serve the lower reach of these individuals. Displays that are too low can be problematic for individuals that have difficulty bending down. Appropriate lighting and colour contrast is particularly important for persons with a visual impairment.

APPLICATION

If fixed or built-in storage facilities, such as cabinets, closets, shelves and drawers, are provided in accessible spaces, at least one of each type provided shall contain storage space in compliance with this section.

Shelves or display units allowing self-service by customers in mercantile occupancies shall be located on an accessible route complying with [4.1.4](#).

DESIGN REQUIREMENTS

A clear floor space at least 760 mm (30 in.) by 1370 mm (54 in.) complying with [4.1.1](#) that allows either forward or parallel approach by a person using a wheelchair or a scooter shall be provided at accessible storage facilities.

Accessible storage spaces shall be within at least one of the reach ranges specified in [4.1.1](#). Clothes rods or shelves shall be a maximum of 1370 mm (54 in.) above the finished floor for a side approach. Where the distance from the wheelchair to the clothes rod or shelf is 255 – 535 mm (10-21 in.) (as in closets without accessible doors) the height of the rod or shelf shall be no more than 1200 mm (47 in.).

Where coat hooks are provided, they shall all be collapsible coat hooks, mounted no higher than 1200 mm (47 in.) above the floor. (Note: Coat hooks should NOT be located over benches)

Hardware for accessible storage facilities shall comply with [4.4.2](#). Touch latches and U-shaped pulls are acceptable.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.4.2 Controls and Operating Mechanisms](#)

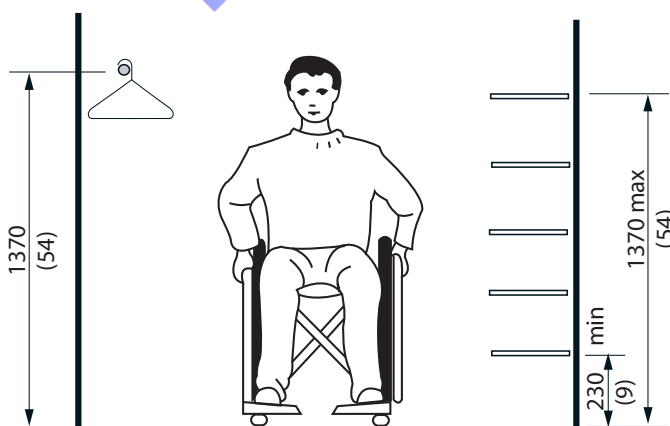


Figure 4.3.9.1
Reach Limits for Storage

4.3 OTHER AMENITIES

4.3.10 LOCKERS AND BAGGAGE STORAGE

RATIONALE

In schools, recreational facilities, transit facilities, etc., or wherever public or private storage lockers are provided, at least some of the storage units should be *accessible* by a person using a wheelchair or scooter.

The provision of lockers at lower heights serves the reach restrictions of children or a person using a wheelchair or scooter. The operating mechanisms should also be at an appropriate height and operable by individuals with restrictions in hand dexterity.

APPLICATION

If lockers or baggage storage units are provided in *accessible* public or *common use* areas, at least 10%, but not less than one, of the lockers or baggage storage units shall comply with this section.

DESIGN REQUIREMENTS

Accessible lockers and baggage storage units shall be located on an *accessible route* complying with [4.1.4](#).

Lockers and baggage storage units shall have their bottom shelf no lower than 400 mm (15-3/4 in.) and their top shelf no higher than 1200 mm (47 in.) above the floor or ground.

Locks for *accessible* lockers and baggage storage units shall be mounted no higher than 1060 mm (42 in.) from the floor or ground and shall comply with [4.4.2](#).

Numbers or names on lockers and baggage storage units should be in clearly legible lettering, raised or recessed and of a highly contrasting colour or tone (in compliance with the relevant parts of [4.4.7](#)).

Baggage racks or carousels for suitcases, etc. shall have the platform surface no higher than 460 mm (18 in.) from the floor and shall incorporate a continuous colour-contrasting strip at the edge of the platform surface.

Aisle *spaces* in front of lockers, baggage compartments and carousels should be a minimum of 1370 mm (54 in.) deep, to permit forward and lateral approach by a person using a wheelchair or scooter.

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.4 Accessible Routes, Paths and Corridors](#)

[4.4.2 Controls and Operating Mechanisms](#)

[4.4.7 Signage](#)

[4.4.13 Lighting](#)

[4.4.15 Texture and Colour](#)

4.3.11 BALCONIES, PORCHES, TERRACES AND PATIOS

4.3 OTHER AMENITIES

RATIONALE

Where a number of balconies, porches, patios or terraces are provided, it is desirable to consider options for different levels of sun and wind protection. This is of benefit to individuals with varying tolerances for sun or heat. Doors to these spaces typically incorporate large expanses of glazing. These should be appropriately marked to increase their visibility. Thresholds at balcony doors should be avoided.

APPLICATION

Balconies, porches, terraces and patios provided for use by the general public, clients, customers or employees shall comply with this section.

DESIGN REQUIREMENTS

Balconies, porches, terraces and patios shall

- be located on an *accessible route* complying with [4.1.4](#); and
- have a minimum depth of 2440 (96 in.). In retrofit situations where providing a depth of 2440 mm (96 in.) is *technically infeasible*, the minimum depth may be reduced to 1525 mm (60 in.).

Exterior balconies, porches, terraces and patios, where directly *accessible* from the interior *spaces*, shall incorporate a threshold in compliance with [4.1.2](#).

Balcony, porch, terrace and patio surfaces shall

- comply with [4.1.2](#);
- be sloped to ensure removal of water; and
- be sloped no more than 2%.

Railings and *guards* at balconies, porches, terraces and patios shall

- comply with the requirements of the National Building Code; and
- be designed to allow *clear* vision below the rail for persons seated in a wheelchair or scooter; and
- incorporate pronounced colour contrast between the railings and *guards* and the surrounding environment.

Doors opening out onto balconies shall be located to open against a side wall or rail.

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.2 Ground and Floor Surfaces](#)

[4.1.4 Accessible Routes, Paths and Corridors](#)

[4.4.14 Materials and Finishes](#)

[4.4.15 Texture and Colour](#)

4.3 OTHER AMENITIES

4.3.12 PARKING

RATIONALE

The provision of parking spaces near the entrance to a facility is important to accommodate persons with a varying range of abilities as well as persons with limited mobility and those caring for small children. Medical conditions, such as arthritis or heart conditions, using crutches, pregnancy or the physical act of pushing a wheelchair, all make it difficult to travel long distances. Minimizing travel distances is particularly important outdoors, where weather conditions and ground surfaces can make travel both difficult and hazardous. The accessible route of travel connecting the parking area to the entrance of a facility should be well marked and free of steps and curbs.

In addition to the proximity to entrances, the spatial requirements of accessible parking spaces is important. A person using a mobility aid such as a wheelchair requires a wider parking stall to accommodate the manoeuvring of the wheelchair beside the car or van. A van may also require additional space to deploy a lift or ramp through the side or back door. An individual would then require space for the deployment of the lift itself as well as additional space to manoeuvre on/off the lift.

A designated access aisle adjacent to a designated parking space is not required by all persons who would benefit from close proximity parking. Persons with limited mobility, expectant mothers, caregivers and persons who use a walker, cane, crutches or stroller can be accommodated by wider courtesy parking spaces near the entrance to a facility - identified in this section as a Limited Mobility/ Caregivers Only.

Heights along the routes to accessible parking is a factor. Accessible vans may have a raised roof resulting in the need for additional overhead clearance. Alternatively, the floor of the van may be lowered, resulting in lower tolerances for speed bumps and pavement slope transitions.

The number of accessible parking spaces required by this section may not be sufficient in some facilities (such as seniors' centres) where increased numbers of persons with disabilities may be expected.

Wherever possible locate parking signs away from pedestrian routes, as they may constitute an overhead and/or protruding hazard.

APPLICATION

This standard is applicable to all new parking structures and surface parking lots. For existing structures and surface parking lots undergoing renovations/alterations, standards should be employed to the greatest extent possible.

Designated parking spaces shall include Accessible parking spaces and Limited Mobility & Caregivers Only parking spaces. Limited Mobility & Caregivers Only parking spaces are recommended for all facilities and required for all assembly buildings.

The number of designated parking spaces shall be in accordance with Table 4.3.12. and shall be located on the shortest possible circulation route, with minimal traffic flow

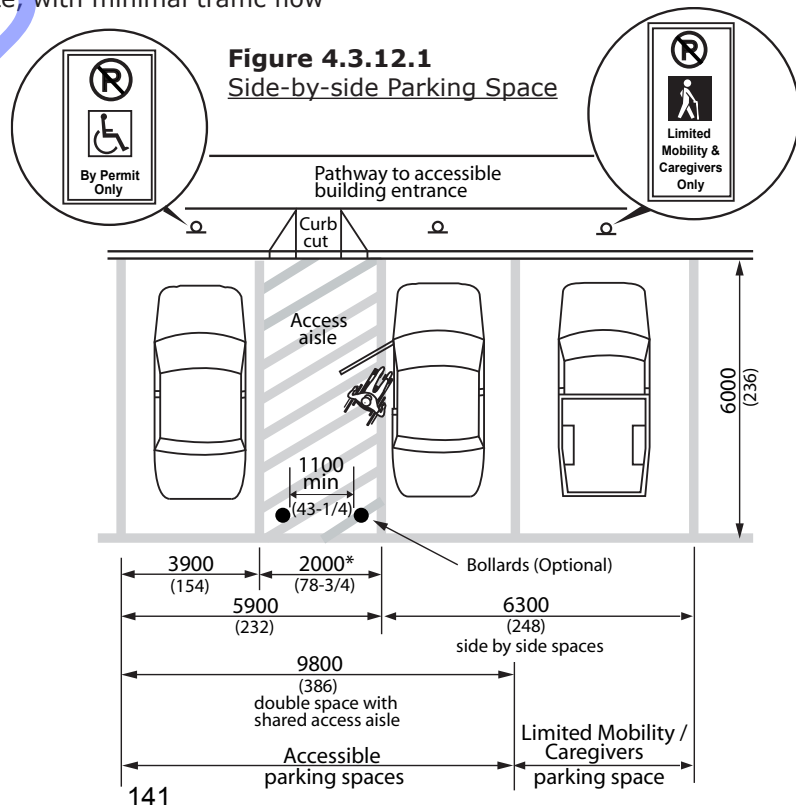
crossing, to an accessible facility entrance (e.g., in lots serving a particular facility) or to an accessible pedestrian entrance of the parking facility (e.g., in lots not serving a particular facility).

In facilities with multiple accessible entrances with adjacent parking, designated parking spaces shall be dispersed and located closest to the accessible entrances.

DESIGN REQUIREMENTS

An accessible route shall be provided from each designated parking space to an accessible entrance into the facility.

- Designated parking spaces shall
- be located on an accessible route complying with 4.1.4;
 - have a firm, level surface with a maximum of 1.5% running slope for drainage;
 - have a maximum cross slope of 1%;
 - have a height clearance of at least 2750 mm (9 ft.) at the parking space and along the vehicle access and egress routes; and
 - incorporate signage as outlined in this section.



4.3.12 PARKING

4.3 OTHER AMENITIES

Accessible parking spaces shall

- be at least 3900 mm (154 in.) wide;
- incorporate pavement markings containing the International Symbol of Access in accordance with Figure 4.4.7.4. Markings to include a 1525 x 1525 (5 ft. x 5 ft.) white border and symbol with a blue background field colour;
- have an adjacent *access aisle* at least 2000 mm (78-3/4 in.) wide clearly indicated by markings (Refer to Figures 4.3.12.1 and 4.3.12.2). In a retrofit situation where it is *technically infeasible* to provide a 2000 mm (78-3/4 in.) *access aisle*, the *access aisle* may be reduced to 1220 mm (48 in.); and
- have a height clearance at the parking space and along the vehicle access and egress routes,
 - of at least 2750 mm (108 in.) at outdoor parking; and
 - of at least 2590 mm (98 in.) at indoor parking parking, including vehicular entrances.

Indoor parking facilities shall incorporate a sign at the vehicle entrance indicating the minimum overhead clearance at the parking space and along the vehicle access and egress routes.

Where provided, and for all parking areas serving assembly buildings, Limited Mobility & Caregivers

Only parking spaces shall be a minimum 3900 (154 in.) wide and incorporate signage in accordance with Figure 4.3.12.1.

Signage of accessible parking spaces shall incorporate an official designated disabled parking space sign developed by the Ministry of Transportation (1991).

Each *accessible* parking space shall be designated with *signage* that is

- mounted vertically on a post that is colour contrasted with the background environment;
- at least 300 mm (11-3/4 in.) wide x 450 mm (17-3/4 in.) high;
- installed at a height of 1500 mm (47 in.) to 2500 mm (98 in.) from the ground/floor surface to the centre line of the sign;
- for perpendicular parking, centred on the parking space; and
- for parallel parking, located toward the end of the parking space, on the opposite side from the access aisle.

Signs shall not be mounted on fences or building faces.

Where the location of designated parking spaces is not obvious or is distant from the approach viewpoints, directional signage shall be placed along the route leading to the designated parking spaces. Such directional *signage* shall incorporate the symbol of access

and the appropriate directional arrows.

Where the location of the nearest *accessible entrance* is not obvious or is distant from the approach viewpoints, directional signs shall be placed along the route leading to the nearest *accessible entrance* to the *facility*. Such directional *signage* will incorporate the symbol of access and the appropriate directional arrows.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.3 Protruding and Overhead Objects](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.1.10 Curb Ramps](#)
- [4.4.7 Signage](#)
- [4.4.8 Detectable Warning Surfaces](#)
- [4.4.13 Lighting](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

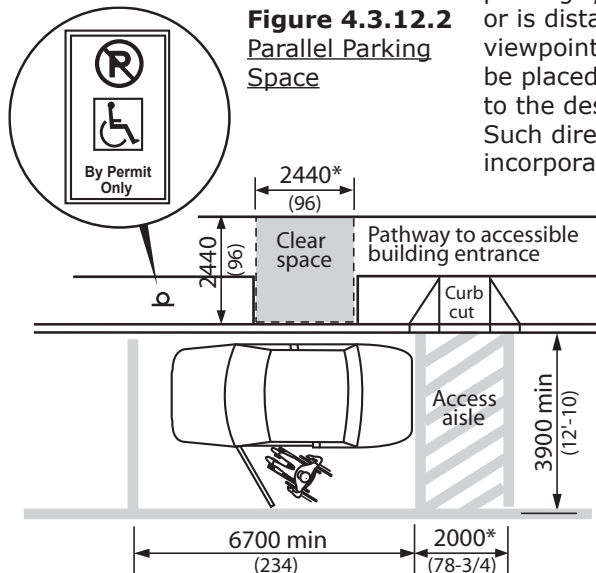


Figure 4.3.12.2
Parallel Parking Space

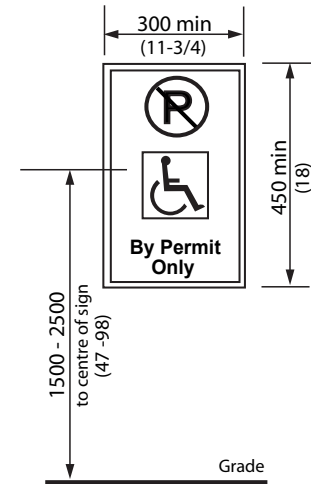


Figure 4.3.12.3
Designated Parking Signage

Number of Automobile Parking Spaces	Number of Accessible Parking Spaces	Number of Limited Mobility Parking Spaces
1 - 50	1	1
51 - 100	1	2
101 - 200	1% of total required parking	2
201 - 300		3
301 - 400		4
401 and over	4 plus 0.5% of total required parking	4 plus 1 for each 100 over 500

Table 4.3.12
Designated Parking Spaces Requirements

* NOTE: In a retrofit situation where it is *technically infeasible* to provide the required *access aisle* width, the aisle width may be reduced to 1220 mm (48 in.).

4.3 OTHER AMENITIES

4.3.13 PASSENGER-LOADING ZONES

RATIONALE

Passenger-loading zones are important features for individuals who may have difficulty in walking distances or those who use parallel transit systems. Accessible transit vehicles typically require space for the deployment of lifts or ramps and overhead clearances. Protection from the elements will be beneficial to all users and particularly those that may have difficulty with mobility.

APPLICATION

Where passenger-loading zones are provided, at least one shall comply with this section.

Accessible passenger-loading zones shall be identified with signage complying with applicable provisions of 4.4.7.

If the passenger-loading zone is a designated mobility transit stop zone, it shall comply with all relevant municipal bylaws.

DESIGN REQUIREMENTS

- be on an accessible route complying with 4.1.4;
- provide an access aisle at least 2440 mm (96 in.) wide and 7000 mm (23 ft.) long, adjacent and parallel to the vehicle pull-up space. (In a retrofit situation where providing a 2440 mm

(96 in.) wide access aisle is technically infeasible, the access aisle width may be reduced to 2000 mm (78-3/4 in.);

- have a curb ramp complying with 4.1.10 where there are curbs between the access aisle and the vehicle pull-up space; and
- have a minimum vertical clearance of 3350 mm (11 ft.) at the loading zone and along the vehicle access route to such areas to and from the site entrances.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.3 Protruding and Overhead Objects](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.1.10 Curb Ramps](#)
- [4.4.7 Signage](#)
- [4.4.8 Detectable Warning Surfaces](#)
- [4.4.13 Lighting](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

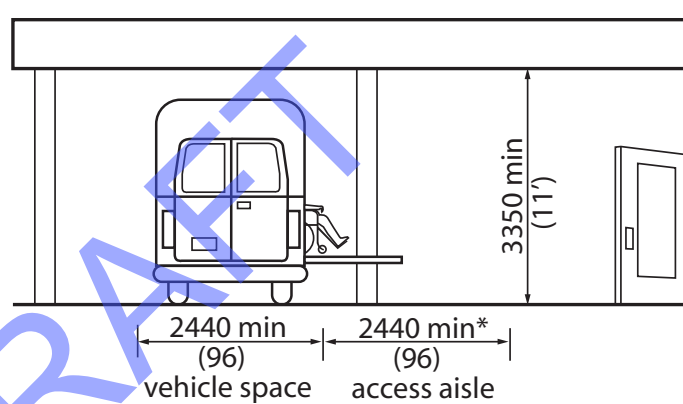


Figure 4.3.13.1
Clearances at
Passenger Loading Zone

* NOTE: In a retrofit situation where it is technically infeasible to provide the required access aisle width, the aisle width may be reduced to 2000 mm (78-3/4 in.)

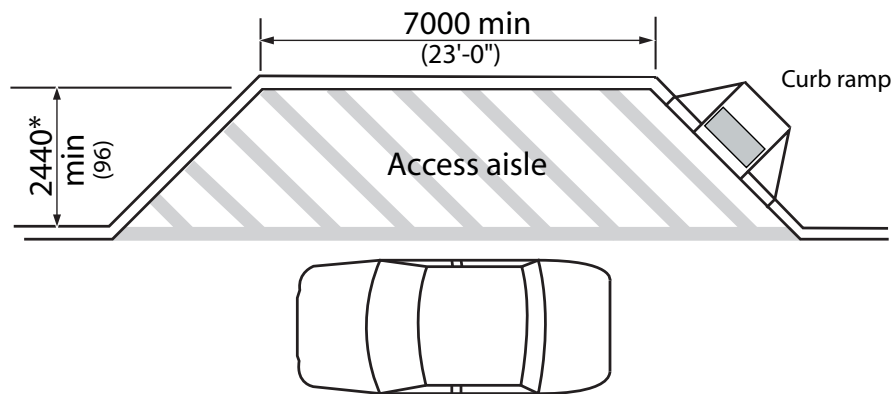


Figure 4.3.13.2
Passenger Loading Zone

4.3.14 LANDSCAPING MATERIALS AND PLANTINGS

4.3 OTHER AMENITIES

RATIONALE

Landscape materials, trees, shrubs and plants should be selected and located with a wide variety of users in mind. For instance, plants and shrubs with a variety of fragrances can provide an interesting orientation cue for persons with a visual *impairment*. Using contrasting flowers near walkways can also be helpful as a guide. Plants with thorns may constitute a walking hazard. Plants that drop large seed pods can present slipping hazards, as well as difficulties for pushing a wheelchair. Plantings and tree limbs that overhang pathways can impede all users and be a particular hazard to an individual with a visual *impairment*.

Raised beds can better accommodate persons who use a mobility device or those that have difficulty in bending to enjoy or tend to plantings however may create loitering problems with skateboarders.

The use of unit pavers as a walking/wheeling surface is not recommended, unless they are laid in a location that is not subject to the effects of settlement and frost heave, such as over a structural slab or indoors.

APPLICATION

Landscaping materials and plantings contained within the site shall comply with this section.

Where plant beds are provided for gardening use of the general public, clients, customers or employees, 10% of the area of the plant beds, but not less than one, shall comply with this section. It is preferable to have all plant beds comply with this section.

DESIGN REQUIREMENTS

Accessible plant beds shall be

- raised 460 mm (18 inches) above the adjacent floor or ground surface; and
- located on an *accessible route* complying with [4.1.4](#).

The edges of planting beds located immediately adjacent to pedestrian *walks* shall incorporate clearly defined, cane-detectable curbs at least 75 mm (3 in.) high.

Where variations in grading immediately adjacent to pedestrian *walks* are potentially hazardous (particularly to persons who are visually impaired), the hazardous edges of the *walk* shall incorporate clearly defined, cane-detectable curbs at least 75 mm (3 in.) high.

Shrubs with thorns and sharp edges shall be planted at least 920 mm (36 in.) away from *accessible* pathways and seating areas.

Plants that drop large seed pods shall not overhang or be positioned near *accessible* paths or walkways.

Permanent guide wires shall not be used in any area which is intended for use by the general public, clients, customers or employees. Temporary guide wires, such as those used when planting new trees, shall be clearly identified using strong colour contrast.

Tree *guards* shall conform to [4.1.3](#).

Overhanging branches of trees or shrubs over walkways or paths shall not reduce the available headroom at any part of the *walkway* or path to less than 2100 mm (82-3/4 in.).

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.2 Ground and Floor Surfaces](#)

[4.1.3 Protruding and Overhead Objects](#)

[4.1.4 Accessible Routes, Paths and Corridors](#)

[4.4.8 Detectable Warning Surfaces](#)

[4.4.14 Materials and Finishes](#)

[4.4.15 Texture and Colour](#)

4.3 OTHER AMENITIES

4.3.15 BENCHES

RATIONALE

Benches provide convenient resting places for all individuals and are especially important for those who may have difficulty with standing or walking for extended periods. Benches should be placed adjacent to pedestrian walkways to provide convenient rest places without becoming potential obstructions. Appropriate seat heights can facilitate sitting and rising for individuals such as senior citizens. Armrests may also provide assistance in sitting and rising. A person with a visual *impairment* may find it easier to locate benches if they are located adjacent to a landmark, such as a large tree, a bend in a pathway, or a sound source.

APPLICATION

All benches, except those located in unpaved areas of *parks*, wilderness, beach or unpaved picnic areas, shall be *accessible* to persons using wheelchairs or other mobility devices.

DESIGN REQUIREMENTS

Benches shall

- be adjacent to an *accessible route* complying with 4.1.4;
- be stable;
- have a seat height between 450 mm (17-3/4 in.) and 500 mm (19-5/8 in.) from the ground;
- have arm and back rests;
- be of contrasting colour to their background; and
- have an adjacent level, firm ground surface at least 920 mm (36 in.) x 1370 mm (54 in.).

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.3 Protruding and Overhead Objects](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.4.8 Detectable Warning Surfaces](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

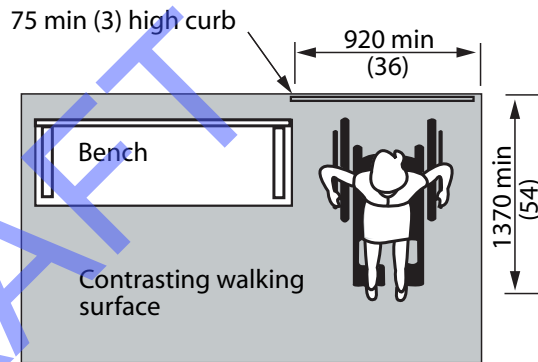


Figure 4.3.15.1
Rest Area

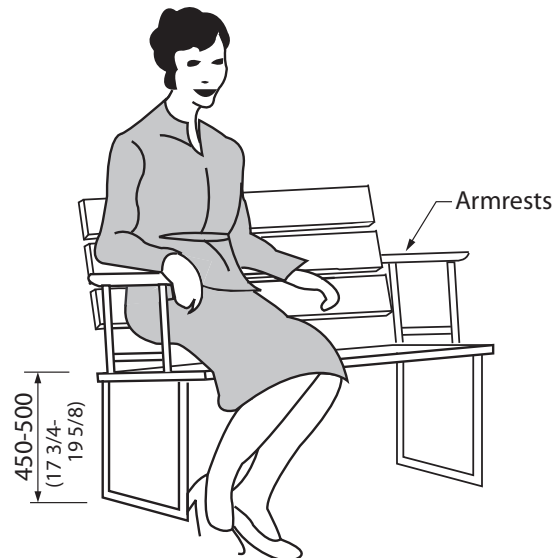


Figure 4.3.15.2
Bench Seating

4.3.16 PICNIC TABLES

4.3 OTHER AMENITIES

RATIONALE

Picnic tables with an extension of the table surface make them *accessible* to a person using a wheelchair. A firm, level surface around the table, with an *accessible* path leading to the table, is required for wheelchair accessibility. A change in texture from a pathway to the picnic table area is an important cue for a person with a visual impairment.

APPLICATION

If picnic tables are provided in an *accessible* public or *common use* area, at least 10%, but not less than one, for each cluster of picnic tables shall comply with this section. It is preferable to have all picnic tables comply with this section.

DESIGN REQUIREMENTS

Picnic tables shall

- be adjacent to an *accessible route* complying with 4.1.4;
- have knee *space* under the table at least 760 mm (30 in.) wide by 480 mm (19 in.) deep and 685 mm (27 in.) high;
- have its top surface located between 710 mm (28 in.) to 865 mm (34 in.) above the finished floor or ground surface;
- be of contrasting colour to their background; and
- have a level, firm ground surface extending min. 2000 mm (78-3/4 in.) where *accessible space* is provided at a picnic table for persons who use wheelchairs or scooters and min. 1220 mm (48 in.) on all the other sides.

In a retrofit situation where it is *technically infeasible* to provide the required level surface, the dimensions may be reduced to min. 1220 mm (48 in.) on all sides.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.3 Protruding and Overhead Objects](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.4.8 Detectable Warning Surfaces](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

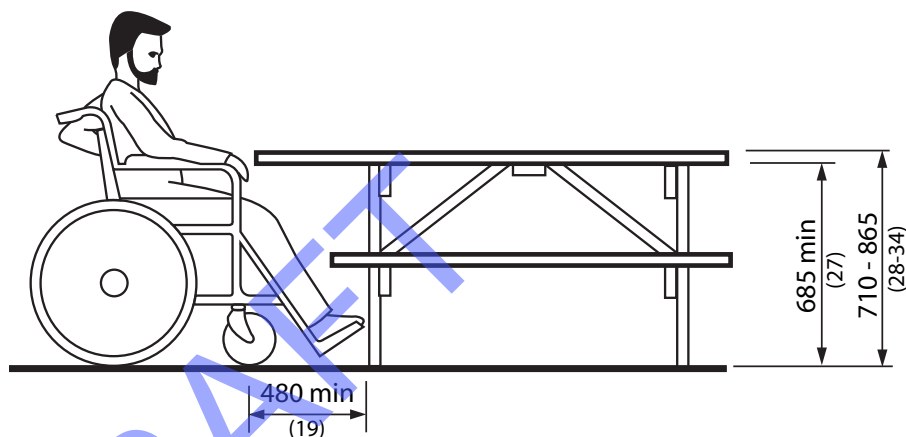


Figure 4.3.16.1
Picnic Table

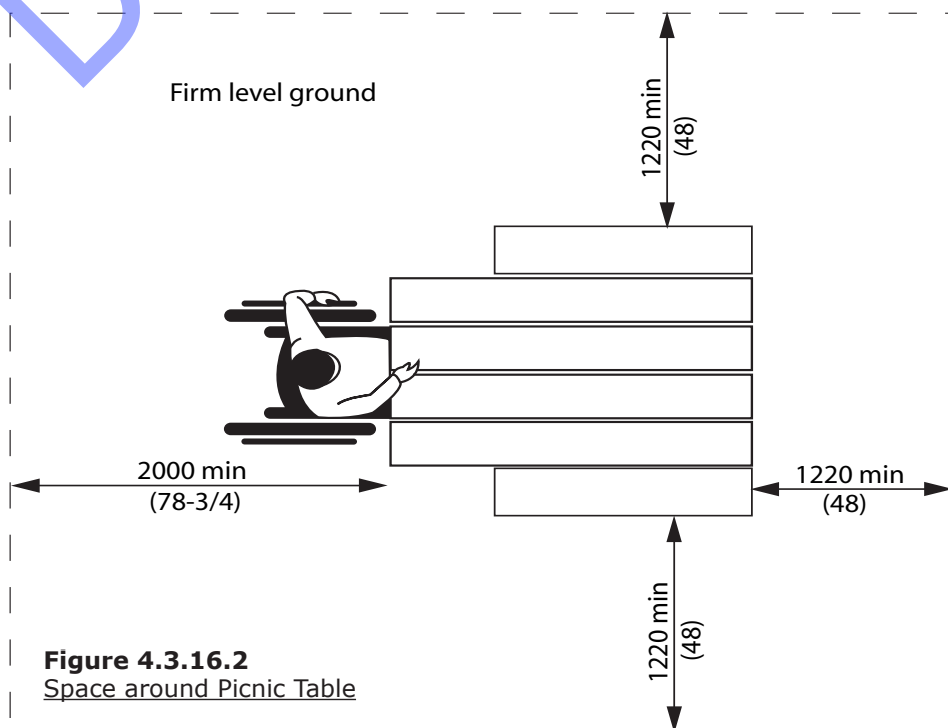


Figure 4.3.16.2
Space around Picnic Table

4.3 OTHER AMENITIES

4.3.17 STREET FURNITURE

RATIONALE

Street furniture can provide a resting place for any individual with difficulty walking distances. Such furniture should incorporate strong colour contrasts and be located off pathways, to minimize its potential as an obstruction to pedestrians.

APPLICATION

Street furniture, including but not limited to, waste receptacles, light standards, signs, planters, mail boxes and vending machines contained within the *site*, shall comply with this section, including furniture that is located inside or outside of *facilities*.

All waste receptacles, except those located in unpaved areas of *parks*, wilderness, beach or unpaved picnic areas or large industrial containers, shall be *accessible* to persons using wheelchairs or other mobility devices.

DESIGN REQUIREMENTS

Street furniture shall

- not reduce the required width of an access route as specified in [4.1.4](#);
- be cane-detectable, in compliance with [4.1.3](#);
- be located to one side of the normal path of pedestrian travel, as illustrated in 4.3.15.1; and
- be securely mounted.

Waste receptacles shall be large enough to contain the anticipated amount of waste, so that overflows do not cause a tripping hazard.

Waste receptacles in *accessible* open areas, such as *parks*, wilderness areas, beaches or picnic areas, shall be mounted on firm, level pads.

Waste receptacles shall be clearly identified by suitable lettering, in compliance with the relevant parts of [4.4.7](#).

Where lids or openings are provided on waste receptacles, they shall be mounted no higher than 1060 mm (42 in.) above the adjacent floor or ground surface. Opening mechanisms shall comply with [4.4.2](#).

An exterior waste receptacle shall be provided close to each *accessible* public *entrance*.

Street furniture shall incorporate pronounced colour contrast to differentiate it from the surrounding environment.

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.2 Ground and Floor Surfaces](#)

[4.1.3 Protruding and Overhead Objects](#)

[4.1.4 Accessible Routes, Paths and Corridors](#)

[4.3.15 Benches](#)

[4.4.8 Detectable Warning Surfaces](#)

[4.4.14 Materials and Finishes](#)

[4.4.15 Texture and Colour](#)

4.3.18 KITCHENS AND KITCHENETTES

4.3 OTHER AMENITIES

RATIONALE

Kitchens, kitchenettes and coffee stations require an appropriate level of access to be useable by persons with disabilities. Adequate manoeuvring space is required for users of mobility equipment to approach and use work surfaces, storage elements and appliances. A frontal approach to work surfaces and appliances is generally preferred, except at refrigerators where a side approach is preferred. Where a frontal approach is used, knee space and toe space are required.

The use of colour contrast between kitchen elements will assist persons with low vision locate surfaces, appliances and controls. Darker coloured work surfaces are preferable as they make it easier to identify objects located on them.

APPLICATION

Kitchens and kitchenettes intended for use by staff or the public shall comply with this section. Exception: Commercial kitchens.

At least 50% of shelf space in storage facilities shall comply with this section.

DESIGN REQUIREMENTS

- Pass-through kitchens shall have
- where counters, appliances or cabinets are on two opposing sides, or when counters, appliances or cabinets are opposite a parallel wall, clearance between all opposing base cabinets, counter tops, appliances, or walls within a kitchen work area of 1500 mm (59 in.) minimum; and
 - two entries.

U-shaped kitchens enclosed on three continuous sides shall have a minimum clearance of 2440 mm (96 in.) between all opposing base cabinets, counter tops, appliances,

or walls within kitchen work areas. In a retrofit situation where providing a 2440 mm (96 in.) space is *technically infeasible*, this space may be reduced to 2130 mm (84 in.).

Storage elements shall

- be located on an accessible route with adjacent *clear floor space* in compliance with [4.1.1](#);
- comply with at least one of the reach ranges specified in [4.1.1](#); and
- incorporate *operable portions* in compliance with [4.4.2](#).

Kitchen sinks shall

- be located on an accessible route with adjacent *clear floor space* for a forward approach. Exceptions: A parallel approach is permitted to a kitchen sink where a cook top or conventional range is not provided and to wet bars;
- where a forward approach is provided, incorporate knee space below at least 760 mm (30 in.) wide, 480 mm (18-7/8 in.) deep, and 685 mm (27 in.) high;
- have the height of the rim or the counter top (whichever is higher) 710–856 mm (28-34 in.);
- incorporate faucets and other controls in compliance with [4.4.2](#);

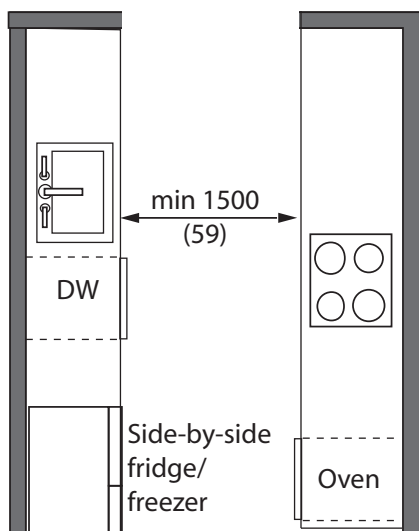
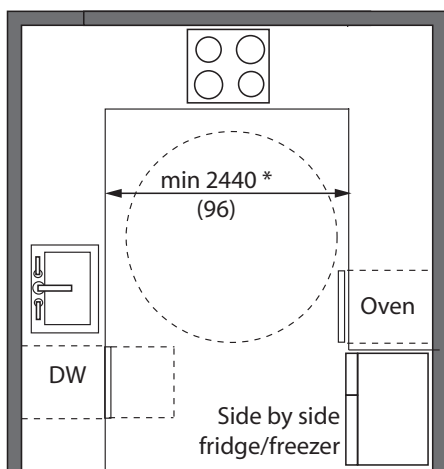


Figure 4.3.18.1
Pass-Through Kitchen



* In a retrofit situation where it is *technically infeasible* to provide 2440 mm (96), this dimension may be reduced to 2130 (84 in.)

Figure 4.3.18.2
U-Shaped Kitchen

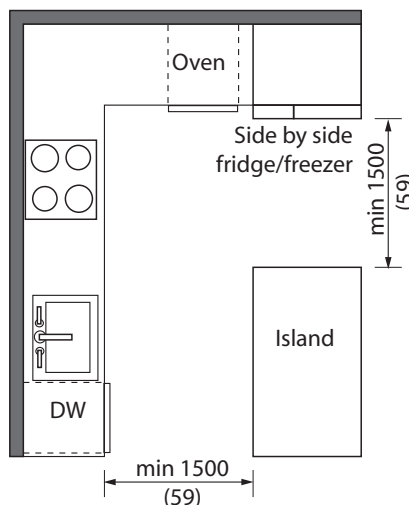


Figure 4.3.18.3
L-Shaped Kitchen with Island

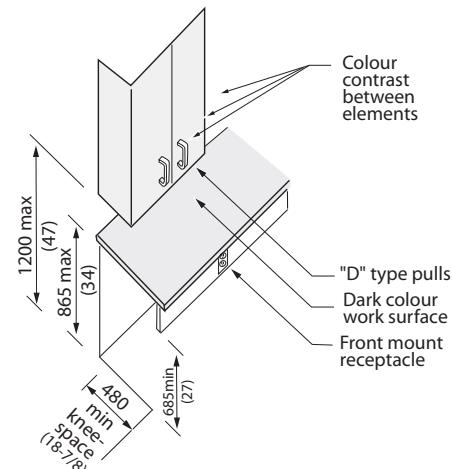


Figure 4.3.18.4
Storage Elements

4.3 OTHER AMENITIES

4.3.18 KITCHENS AND KITCHENETTES

DESIGN REQUIREMENTS
(Continued)

- have water supply and drain pipes under the sink insulated or otherwise configured to protect against contact; and
- incorporate no sharp or abrasive surfaces under the sink.

Kitchen appliances shall

- be located on an accessible route with adjacent *clear floor space* in compliance with 4.1.1; and
- incorporate controls and *operable portions* in compliance with 4.4.2. Exceptions: Appliance doors and door latching devices.

Dishwashers shall incorporate *clear floor space* adjacent to the dishwasher door. The dishwasher door, in the open position, shall not obstruct the *clear floor space* for the dishwasher or the sink.

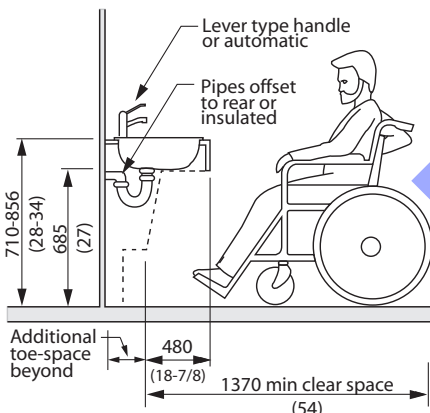


Figure 4.3.18.5
Kitchen Sink

Ranges and cooktops shall

- incorporate controls that are located to avoid reaching across the burners; and
- where a forward approach is provided
 - incorporate *knee space* below at least 760 mm (30 in.) wide, 480 mm (18-7/8 in.) deep, and 685 mm (27 in.) high; and
 - insulate or otherwise configure the appliance to prevent burns, abrasions, or electrical shock.

Ovens shall

- have controls located on the front panels, mounted no higher than 1400 mm (55-1/8 in.);
- where side-hinged doors are used, be located
 - with an adjacent work surface positioned adjacent to the latch side of the door; and
 - incorporate a pull-out shelf below the oven; and
- where bottom-hinged doors are used, be located with an adjacent work surface positioned adjacent to one side of the door.

In facilities with children's programs, ranges, cooktops and ovens shall be equipped with a safety switch to de-activate appliance controls.

Refrigerators/freezers shall

- be configured with at least 50% of the freezer *space* maximum 1370 mm (54 in.) above the floor; and
- incorporate *clear floor space* in front, positioned for a parallel approach immediately adjacent to the refrigerator/freezer, with the centre-line of the *clear floor space* offset 610 mm (24 in.) maximum from the front face of the refrigerator/freezer.

Kitchen elements shall incorporate colour contrast to visually differentiate the cabinets and appliances from adjacent wall and floor surfaces, the countertop from the cabinets and adjacent walls, and operable hardware on cabinets.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.3 Protruding and Overhead Objects](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.4.12 Glare and Light Sources](#)
- [4.4.13 Lighting](#)
- [4.4.14 Materials and Finishes](#)
- [4.4.15 Texture and Colour](#)

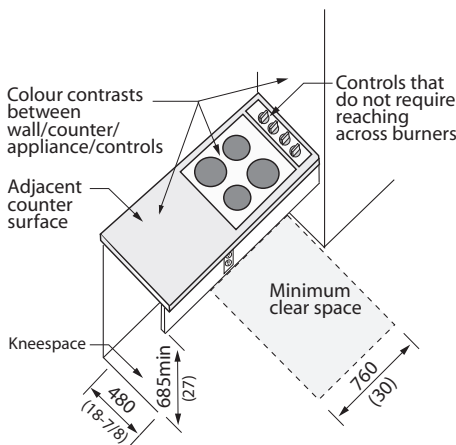


Figure 4.3.18.6
Cook Top

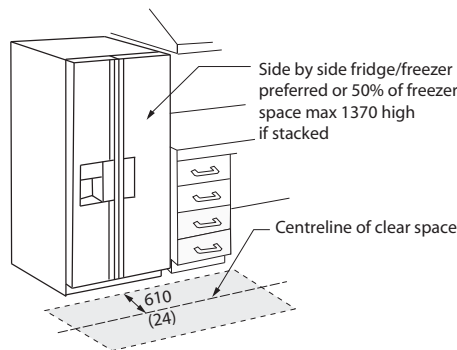


Figure 4.3.18.7
Fridge/Freezer

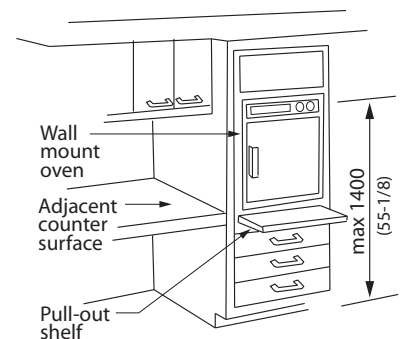


Figure 4.3.18.8
Wall-Mounted Oven

4.4.1 EMERGENCY EXITS, FIRE EVACUATION AND AREAS OF RESCUE ASSISTANCE

4.4 SYSTEMS AND CONTROLS

RATIONALE

In order to be *accessible* to all individuals, emergency exits must include the same accessibility features as other doors specified in 4.1.6. The doors and routes must also be marked in a way that is *accessible* to all individuals, including those who may have difficulty with literacy, such as children or persons speaking a different language. Persons with a visual *impairment* will need a means of quickly locating exits – audio or talking signs could assist. In the event of fire when elevators cannot be used, areas of rescue assistance are an asset to anyone who would have difficulty traversing sets of stairs.

APPLICATION

In *facilities*, or portions of *facilities*, required to be *accessible*, *accessible means of egress* shall be provided in the same number as required for exits by the National Building Code.

Where required exits from a floor level are not *accessible*, *areas of rescue assistance* shall be provided on the floor level in a number equal to that of the required exits.

Every *occupiable* level in non-residential occupancies above or below the first *storey* (as defined by the National Building Code) that is *accessible*, shall

- be served by an elevator that has protection features, as specified in the National Building Code; or
- be divided into at least two zones by fire separations, as specified in the National Building Code.

In *occupiable* levels above or below the first *storey* in residential occupancies, the requirements for a protected elevator or two fire zones may be waived, if an appropriate balcony (as specified in the National Building Code) is provided for each suite.

Areas of rescue assistance shall comply with this section.

A horizontal exit meeting the requirements of the National Building Code shall satisfy the requirements for an *area of rescue assistance*.

DESIGN REQUIREMENTS

Where emergency warning systems are provided, they shall include both audible alarms and visible alarms. Visual alarms shall comply with 4.4.4.

Accessible means of egress shall comply with 4.1.4.

Accessible means of egress shall be identified with *signage* in compliance with the applicable provisions of 4.4.7.

Areas of rescue assistance shall

- be located on an *accessible route* complying with 4.1.4;
- incorporate the number of *rescue spaces* in accordance with Table 4.4.1;
- be of a size that allows a minimum floor *space* of 850 mm (33-1/2 in.) x 1370 mm (54 in.) per non-ambulatory occupant;
- be separated from the floor area by a fire separation having a fire-resistance rating at least equal to that required for an exit;
- be served by an exit or firefighters' elevator;
- be designated as an *area of rescue assistance* for persons with disabilities on the *facility* plans and in the *facility*;
- be smoke protected in *facilities* of more than three *storeys*;
- incorporate a 2-way voice communication system for use

- between each *area of rescue assistance* and the central alarm and control *facility*; and
- be identified with *signage* in compliance with the applicable provisions of 4.4.7, stating AREA OF RESCUE ASSISTANCE and incorporating the international symbol for accessibility for disabled persons.

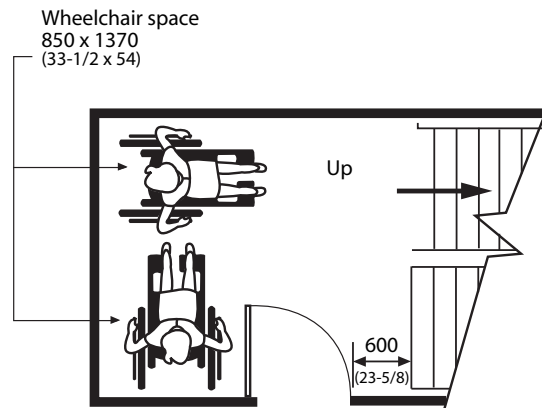
RELATED SECTIONS

- 4.1.1 [Space and Reach Requirements](#)
- 4.1.2 [Ground and Floor Surfaces](#)
- 4.1.3 [Protruding and Overhead Objects](#)
- 4.1.4 [Accessible Routes, Paths and Corridors](#)
- 4.1.6 [Doors](#)
- 4.4.2 [Controls and Operating Mechanisms](#)
- 4.4.4 [Visual Alarms](#)
- 4.4.7 [Signage](#)
- 4.4.8 [Detectable Warning Surfaces](#)
- 4.4.9 [Public Address Systems](#)
- 4.4.14 [Materials and Finishes](#)
- 4.4.15 [Texture and Colour](#)

Occupant load of the floor area served by the area of rescue assistance	Minimum number of rescue spaces
1 to 400	2
Over 400	3 plus 1 for each additional increment of 200 persons in excess of 400 persons

Table 4.4.1
Number of Rescue Spaces

Figure 4.4.1.1
Area of Rescue Assistance



4.4 SYSTEMS AND CONTROLS

4.4.2 CONTROLS AND OPERATING MECHANISMS

RATIONALE

Operating mechanisms that require a high degree of dexterity or strength will be difficult for many people to use. They can also be obstacles for children, individuals with arthritis or even someone wearing gloves. Controls that require two hands to operate can also be difficult for some people, particularly those with reach or balance limitations, or those who must use their hands to hold canes or crutches.

The placement of controls is integral to their accessibility. For the individual using a wheelchair, the height of the controls and the space to position the wheelchair in front of the controls are important. Controls placed high on a wall are also difficult for children or persons of short stature.

Individuals with a visual *impairment* may have difficulty with flush-mounted buttons, touch screens or controls without tactile markings. Controls that contrast in colour from their background, including colour-contrasted raised letters, may be easier to find by an individual with a visual *impairment*. Persons with cognitive challenges may find counterintuitive controls or graphics difficult.

APPLICATION

Controls and operating mechanisms generally used by staff or public (e.g., light switches and dispenser controls) shall comply with this section. Exception: Restricted-access controls.

DESIGN REQUIREMENTS

A *clear*, level floor area at least 760 mm x 1370 mm (30 in. x 54 in.) shall be provided at controls and operating mechanisms, such as dispensers and receptacles.

The *operable portions* of controls and operating mechanisms such as electrical switches, thermostats and intercom switches, shall be located between 900 mm (35 in.) and 1200 mm (47 in.) from the floor. Exception: Elevators and power door operator controls - Refer to [4.1.6](#) and [4.1.14](#).

Electrical outlets and other types of devices shall be located no lower than 400 mm (15-3/4 in.). Exception: Where electrical outlets are provided as components of systems furniture, these devices need not comply with this section provided they are installed in addition to electrical outlets required by the Authority having Jurisdiction.

Faucets and other controls shall be hand-operated or electronically controlled.

Hand-operated controls and mechanisms shall be operable

- with one hand;
- without tight grasping, pinching, or twisting of the wrist; and
- with a force of less than 22N (5 lb.).

Controls and operating mechanisms shall be capable of being illuminated to at least a level of 100 lux (9.2 ft-candles).

Controls and operating mechanisms shall incorporate a pronounced colour contrast, to differentiate them from the surrounding environment.

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.3 Protruding Objects and Overhead](#)

[4.1.4 Accessible Routes, Paths and Corridors](#)

[4.1.6 Doors](#)

[4.1.7 Gates, Turnstiles and Openings](#)

[4.1.8 Windows, Glazed Screens and Sidelights](#)

[4.1.14 Elevators](#)

[4.1.15 Platform Lifts](#)

[4.2.2 Toilet Stalls](#)

[4.2.3 Toilets](#)

[4.2.4 Lavatories](#)

[4.2.5 Urinals](#)

[4.2.6 Washroom Accessories](#)

[4.2.7 Individual Washrooms](#)

[4.2.8 Bathtubs](#)

[4.2.9 Shower Stalls](#)

[4.3.1 Drinking Fountains](#)

[4.3.4 Dressing Rooms](#)

[4.3.5 Offices, Work Areas and Meeting Rooms](#)

[4.3.9 Storage, Shelving and Display Units](#)

[4.3.10 Lockers and Baggage Storage](#)

[4.3.17 Street Furniture](#)

[4.4.3 Vending and Ticketing Machines](#)

[4.4.5 Public Telephones](#)

[4.4.10 Information Systems](#)

[4.4.11 Card Access, Safety and Security Systems](#)

[4.4.13 Lighting](#)

[4.4.15 Texture and Colour](#)

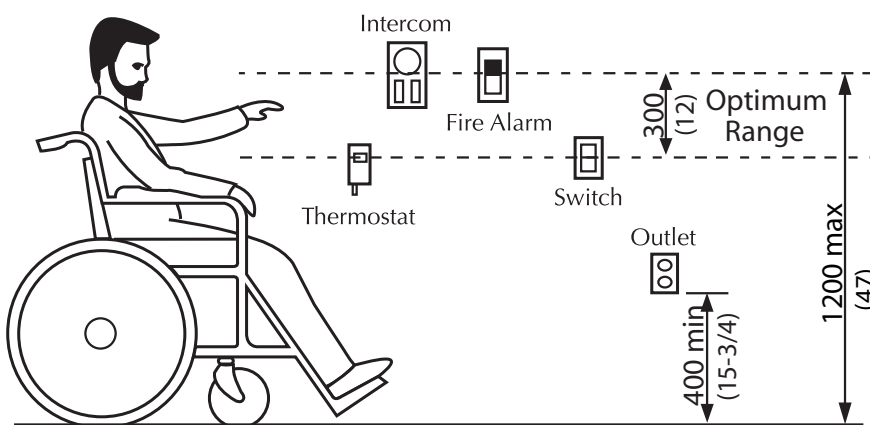


Figure 4.4.2.1
Reach Range for Accessible Controls

4.4.3 VENDING AND TICKETING MACHINES

4.4 SYSTEMS AND CONTROLS

RATIONALE

Space in front of vending machines allows for manoeuvrability of mobility aids. Seating areas and tables adjacent to vending machines offer convenience and should accommodate the spatial requirements of a wheelchair or scooter. The selection of the machines should include a number of factors. Operating mechanisms should be within reach of children and individuals in wheelchairs. The mechanisms should be operable with one hand and minimal strength, to accommodate a host of disabilities including arthritis, or the need to stabilize oneself with a cane or a handful of bags. Lighting levels and colour contrasts make the machine more *accessible* to those with a visual *impairment*.

APPLICATION

Vending and ticketing machines shall comply with this section.

DESIGN REQUIREMENTS

Vending and ticketing machines shall be located on an *accessible route* in compliance with [4.1.4](#).

Clear floor space in front of vending and ticketing machines shall conform to [4.1.1](#).

The controls and operating mechanisms on vending and ticketing machines shall comply with [4.4.2](#).

Signage on vending and ticketing machines shall be in highly contrasting lettering, at least 13 mm (1/2 in.) high. Ideally, lettering and *signage* shall comply with relevant parts of [4.4.7](#).

RELATED SECTIONS

[4.1.1 Space and Reach Requirements](#)

[4.1.4 Accessible Routes, Paths and Corridors](#)

[4.4.2 Controls and Operating Mechanisms](#)

[4.4.15 Texture and Colour](#)

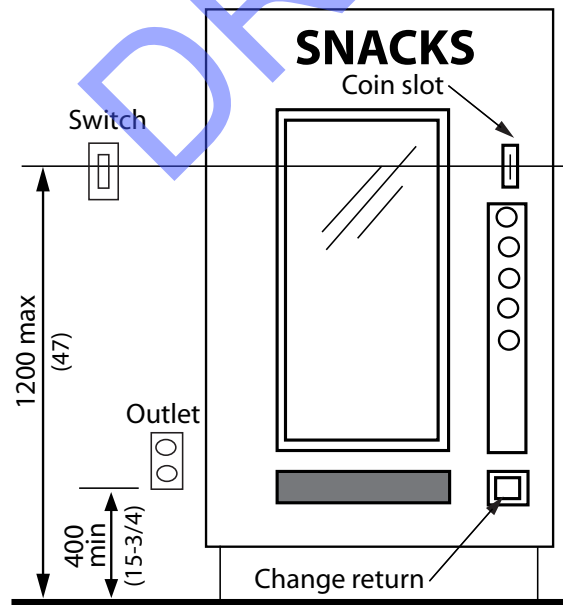


Figure 4.4.3.1
Vending Machine

4.4 SYSTEMS AND CONTROLS

4.4.4 VISUAL ALARMS

RATIONALE

Visual alarms are essential safety features for individuals who are deaf, deafened or hard of hearing such that they would not hear an audible alarm.

APPLICATION

Visual alarms shall comply with this section.

At a minimum, visual alarm appliances shall be provided in *facilities* in each of the following areas: restrooms and any other general usage areas (e.g., *meeting rooms*), hallways, lobbies and any other areas for *common use*.

Visual alarm signal appliances shall be integrated into the *facility* alarm system. If single-station audible alarms are provided, then single-station visual alarms shall be provided.

A signal intended for the public to indicate the operation of a building security system that controls access to a building shall consist of an audible and visual signal.

DESIGN REQUIREMENTS

Visual alarm signals shall have the following minimum photometric and location features:

- the lamp shall be a Xenon strobe type or equivalent;
- the colour shall be *clear* or nominal white (i.e. unfiltered or clear filtered white light);
- the maximum pulse duration shall be two-tenths of one second (0.2 sec) with a maximum duty cycle of 40 percent. The pulse duration is defined as the time interval between initial and final points of 10% of maximum signal;
- the intensity shall be a minimum of 75 candela;
- the flash rate shall be a minimum of 1 Hz and a maximum of 3 Hz;
- the appliance shall be placed 2100 mm (82-3/4 in.) above the floor level within the *space* or 150 mm (5-7/8 in.) below the ceiling, whichever is lower;
- in general, no place in any room or *space* required to have a visual signal appliance, shall be more than 15 meters (50 ft.) from the signal (in the horizontal plane). In large rooms and *spaces* exceeding 30 meters (100 ft.) across, without obstructions 2000 mm (78-3/4 in.) above the finished floor, such as auditoriums, devices may be placed around the perimeter, spaced a maximum of 30 meters (100 ft.) apart, in lieu of suspending appliances from the ceiling; and
- no place in common corridors or hallways in which visual alarm signalling appliances are required shall be more than 15 m (50 ft.) from the signal.

RELATED SECTIONS

[4.4.1 Emergency Exits, Fire Evacuation and Areas of Rescue Assistance](#)

4.4.5 PUBLIC TELEPHONES

4.4 SYSTEMS AND CONTROLS

RATIONALE

The placement of telephones should address the limited reach of children or persons in a seated position. Longer cords facilitate the use of the phone for someone unable to get close to the phone due to a mobility device. Adjustable volume controls are important for persons who are hard of hearing, as are shelves that could support a TDD device. A fold-down seat is an asset to someone having difficulty standing for extended periods. Telephones projecting from a wall may present a hazard, particularly to persons with a visual impairment, if the sides are not configured to be cane-detectable.

APPLICATION

Where public pay phones, public closed-circuit phones, or other public telephones are provided, they shall comply with this section to the extent required by Table 4.4.5.

All telephones required to be *accessible* shall be equipped with a volume control. In addition, 25%, but never less than one, of all other public telephones provided shall be equipped with a volume control and shall be dispersed among all types of public telephones, including *closed-circuit telephones*, throughout the *facility*.

Signage complying with applicable provisions of 4.4.7 shall be provided.

Where an interior public pay telephone is provided, then at least one interior public *text telephone* (TTY) shall be provided in the *facility* in a *public use area*.

Where an interior public pay telephone is provided in the secured area of a detention or correctional *facility* subject to 4.5.8, then at least one public *text telephone* shall also be provided in at least one secured area. Secured areas are those areas used only by detainees or inmates and security personnel.

DESIGN REQUIREMENTS

Accessible telephones shall be on an *accessible route* complying with 4.1.4.

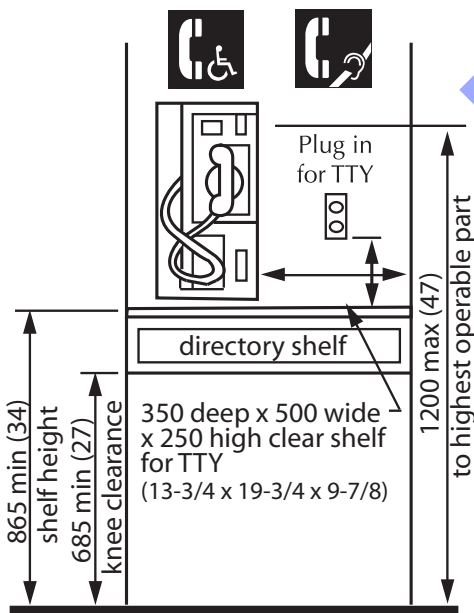
Telephones, enclosures and related equipment shall comply with 4.1.3.

Telephones shall have push-button controls where service for such equipment is available. The characters on the push buttons shall contrast with their background, which should be non-glare (matte finish), and the buttons themselves should contrast with their background.

The minimum handset cord length of *accessible* telephones shall be 1000 mm (39-3/8 in.).

The minimum illumination level at operating mechanisms, the directory, and shelf of *accessible* telephones shall be 200 lux (18.4 ft-candles).

- Accessible* telephones shall
- comply with CSA Standard T515;
 - have *operable portions* within the reach ranges specified in 4.1.1 and the coin slot, located maximum 1200 mm (47 in.) above the floor;
 - have a shelf of at least 350 mm (13-3/4 in.) deep by 500 mm (19-3/4 in.) wide with a minimum 250 mm (9-7/8 in.) *clear space* above the shelf, to accommodate the use of a portable *text telephone*;
 - have a separate telephone directory shelf;
 - be equipped with an electrical outlet, within or adjacent to the telephone enclosure;
 - be equipped with a handset capable of being placed flush on the surface of the shelf; and



Number of telephones provided on each floor	Number of accessible telephones required
1 or more single units	1 per floor
1 bank	1 per floor
2 or more banks	1 per bank

Notes:
 1) A bank of telephones consists of two or more adjacent public telephones, often installed as a unit.
 2) Accessible phones may be installed as single units in proximity to a bank of phones. If installed in proximity but not visible from the bank, signage in compliance with 4.4.7 shall be provided.
 3) At least one public telephone per floor level shall meet the requirements for a forward reach telephone.

Figure 4.4.5.1
 Accessible Telephone

Table 4.4.5
 Number of Accessible Telephones Required

4.4 SYSTEMS AND CONTROLS

4.4.5 PUBLIC TELEPHONES

- have a *clear floor space* of not less than 760 mm (30 in.) wide by 1370 mm (54 in.) deep in front of the telephone. NOTE: This *space* may extend maximum 480 mm (18-7/8 in.) beneath the telephone shelf where knee *space* clearance of minimum 685 mm (27 in.) is provided.

Text telephones (TTY's) used with a pay telephone shall be permanently affixed within, or adjacent to, the telephone enclosure. If an acoustic coupler is used, the telephone cord shall be sufficiently long to allow connection of the *text telephone (TTY)* and the telephone receiver.

Accessible telephones shall be identified by the appropriate symbol of accessibility for mobility impaired persons and/or persons who are deaf or hard of hearing.

When directional signs for telephones are installed, they shall include the appropriate access symbols.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.3 Protruding and Overhead Objects](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.4.2 Controls and Operating Mechanisms](#)
- [4.4.7 Signage](#)
- [4.4.13 Lighting](#)
- [4.4.15 Texture and Colour](#)

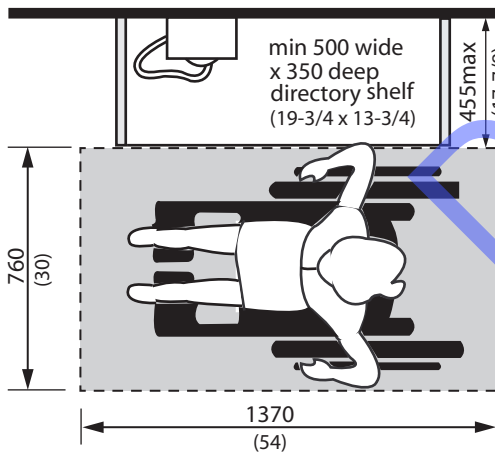


Figure 4.4.5.3
Parallel Approach to a Public Telephone

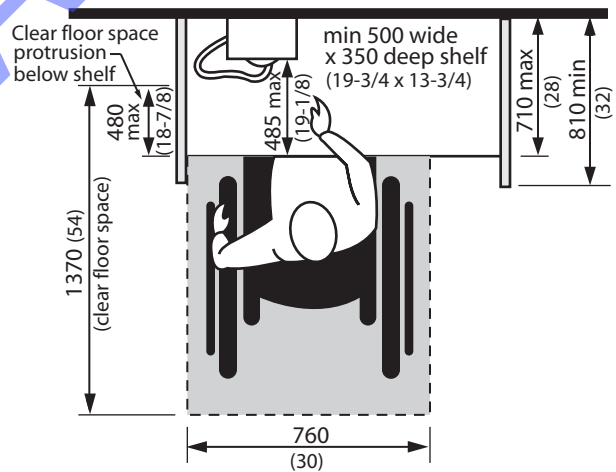


Figure 4.4.5.4
Forward Approach to a Public Telephone

4.4.6 ASSISTIVE LISTENING SYSTEMS

4.4 SYSTEMS AND CONTROLS

RATIONALE

The provision of assistive listening devices is important for the range of individuals who may have difficulty hearing.

Adequate and controllable lighting is required for persons who lip-read, or those who require increased task lighting, due to a visual *impairment*.

APPLICATION

Assistive listening systems shall comply with this section.

This section applies to *assembly areas* where audible communication is integral to the use of the *space* (e.g., concert theatres, *meeting rooms*, classrooms, auditoria, etc.). Such *assembly areas* shall have a permanently installed listening system in compliance with this section where:

- (1) they accommodate at least 50 persons or where they have audio amplification systems or where greater than 100 sq.m. (1080 sq.ft.) in floor area; and
- (2) they have fixed seating.

For other *assembly areas*, a permanently installed listening system or an adequate number of electrical outlets or other supplementary wiring necessary to support a portable assistive listening system shall be provided. The minimum number of receivers to be provided shall be equal to 4% of the total number of seats, but no less than two.

DESIGN REQUIREMENTS

Signage complying with applicable provisions of [4.4.7](#) shall be installed to notify patrons of the availability of a listening system.

Induction loops, infrared systems and FM radio frequency systems shall be considered acceptable types of assistive listening systems for persons who are hard of hearing.

Where an induction loop system is installed, dimmer switches and other controls that incorporate transformer coils shall be located so as not to interfere with the audio induction loop.

Where infrared assistive listening devices are used, overhead incandescent lights shall be located so as not to cancel out the infrared signal at the receiver.

Where an FM loop system or other assistive listening devices are available in public *facilities* or meeting areas, portable headsets that are compatible with personal hearing aids shall be made available.

Where an induction loop system is utilized, at least half the seating area shall be encompassed.

Where the listening system provided serves individual fixed seats, such seats shall be located within a 15 m (50-ft.) viewing distance of the stage or playing area and shall have a complete view of the stage or playing area.

RELATED SECTIONS

[4.4.7 Signage](#)
[4.4.13 Lighting](#)
[4.4.16 Acoustics](#)

4.4 SYSTEMS AND CONTROLS

4.4.7 SIGNAGE

RATIONALE

Signage should be simple, uncluttered and incorporate plain language. The use of graphic symbols is helpful for individuals such as children; those with a limited literacy level; or those who speak a different language.

Sharp contrasts in colour make signage easier for anyone to read, particularly someone with a visual impairment. The intent of the symbol must be evident, culturally universal and not counterintuitive. To enhance readability, raised *tactile* lettering should incorporate edges that are slightly smoothed.

APPLICATION

Signage shall comply with this section.

Signs that designate permanent rooms or spaces shall be wall-mounted and include *tactile* characters and numbers. Tactile markings shall also supplement the text of

1. regulatory signs, such as prohibition and mandatory signs;
2. warning signs, such as caution and danger signs; and
3. identification signs, such as rooms, titles, names or numbers.

Signs that provide direction to, or information about, functional spaces, shall comply with this section. Exception: *Facility* directories, menus and all other signs that are temporary are not required to comply.

Elements and spaces of accessible facilities that shall be identified by the International Symbol of Accessibility are

- parking spaces, designated as reserved for individuals with disabilities;
- accessible passenger loading zones;
- accessible ramps located in a barrier-free path of travel serving a building entrance;
- accessible entrances when not all are accessible (inaccessible entrances shall have directional

signage to indicate the route to the nearest accessible entrance);

- accessible toilet and bathing facilities, including single-use portable units, when not all are accessible;
- accessible telephones;
- accessible elevators and other elevating devices;
- accessible means of egress; and
- areas of rescue assistance.

Audible signs (infrared and digital) that are readable by persons with a visual impairment using a receiving device may be the sole orientation aid across open spaces. Consideration should be given to including wire drops for future installation.

DESIGN REQUIREMENTS

Letters and numbers on signs shall

- be sans serif;*
- have Arabic numbers;
- have a width-to-height ratio between 3:5 and 1:1; and
- have a stroke-width-to-height ratio between 1:5 and 1:10.

Character height dimensions for viewing distance shall comply with Table 4.4.7.

Characters, symbols and backgrounds of signs shall have an eggshell, matte or other glare-free finish.

Characters and symbols shall contrast with their background; either light characters on a dark background or dark characters on a light background.



Figure 4.4.7.1
Colour Contrast on Signs

This is a **serif** font face

* This is a **sans serif** font face

Minimum character height, mm	Maximum viewing distance, mm
200 (7-7/8 in.)	6000 (19 ft. 8 in.)
150 (5-7/8 in.)	4600 (15 ft. 0 in.)
100 (3-15/16 in.)	2500 (8 ft. 2-1/2 in.)
75 (2-15/16 in.)	2300 (7 ft. 6-1/2 in.)
50 (2 in.)	1500 (4 ft. 11 in.)
25 (1 in.)	750 (2 ft. 5-1/2 in.)

Table 4.4.7
Character Height on Signs

4.4.7 SIGNAGE

4.4 SYSTEMS AND CONTROLS

Where signs are required to be *tactile*, letters and numerals shall be

- raised at least 0.8 mm (1/32 in.), not sharply edged;
- be between 16 mm (5/8 in.) and 50 mm (2 in.) high; and
- be sans serif*, accompanied by Grade 2 Braille.

Pictograms shall be accompanied by an equivalent visual and *tactile* verbal description, placed directly below the pictogram. The border dimension of the pictogram shall be 150 mm (6 in.) minimum in height.

Where permanent identification is provided for rooms and *spaces*, signs shall be installed on the wall adjacent to the latch side of the door, located minimum 1400 mm (55 in.) and maximum 1500 mm (59 in.) above the finished floor. Where there is no wall *space* to the latch side of the door, including at double-leaf doors, signs shall be placed on the nearest adjacent wall.

The minimum level of illumination on signs shall be 200 lux (18.4 ft-candles).

RELATED SECTIONS

- [4.1.3 Protruding and Overhead Objects](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.1.5 Entrances](#)
- [4.1.6 Doors](#)
- [4.1.7 Gates, Turnstiles and Openings](#)
- [4.1.9 Ramps](#)
- [4.1.14 Elevators](#)
- [4.1.15 Platform Lifts](#)
- [4.2.1 Toilet Facilities](#)
- [4.2.7 Individual Washrooms](#)
- [4.3.2 Viewing Positions](#)
- [4.3.4 Dressing Rooms](#)
- [4.3.12 Parking](#)
- [4.3.13 Passenger-Loading Zones](#)
- [4.4.1 Emergency Exits, Fire Evacuation and Areas of Rescue Assistance](#)
- [4.4.5 Public Telephones](#)
- [4.4.13 Lighting](#)
- [4.4.15 Texture and Colour](#)



Figure 4.4.7.2
Pictograms

(Note: Must incorporate equivalent verbal description)

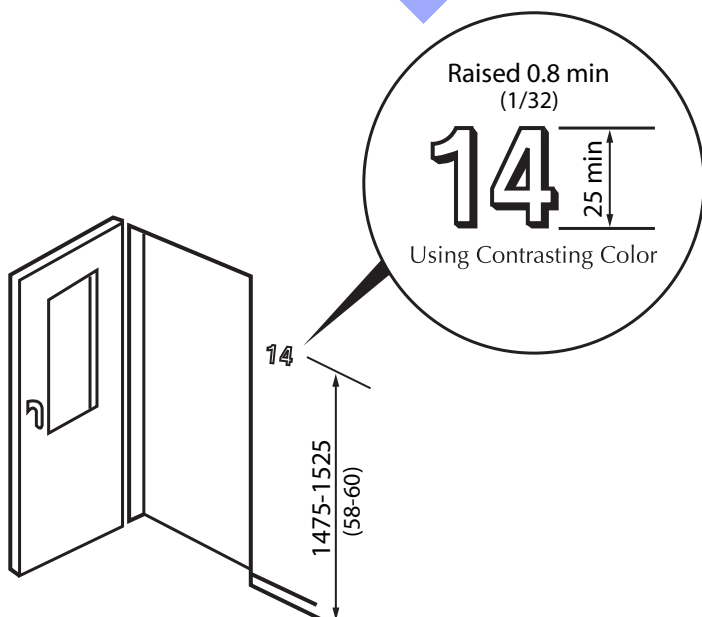
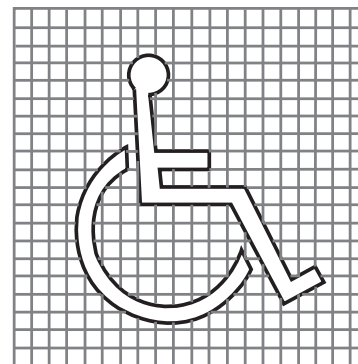


Figure 4.4.7.3
Tactile Lettering



Grid for reference only

Figure 4.4.7.4
International Symbol of Access



Figure 4.4.7.5
Pictogram for Limited Mobility & Caregiver Parking Space

4.4 SYSTEMS AND CONTROLS

4.4.8 DETECTABLE WARNING SURFACES

RATIONALE

Detectable warning surfaces provide important navigational cues for persons with a visual impairment. These surfaces alert all pedestrians to potential hazards, such as crosswalks or stairs. Suitable surfaces include a change in texture and high colour contrast but should not present a tripping hazard.

Detectable warning surfaces should be used consistently throughout a facility.

APPLICATION

Detectable warning surfaces at walkways, curb ramps, stairs and raised platforms shall comply with this section.

DESIGN REQUIREMENTS

All textured surfaces used as detectable warning surfaces shall be clearly detectable by walking upon as being different from the surrounding surface. (Refer also to 4.4.15). Note: Applying a paint finish to a concrete surface does not provide appropriate detectability.

Detectable warning surfaces shall contrast visually with adjoining surfaces, being either light on dark or dark on light.

Detectable warning surfaces at stairs shall

- be provided at the top of the stairs and at landings;
- extend the full width of the stair for a depth of at least 920 mm (36 in.) commencing one tread depth back from the stair; and
- not be more than 3 mm (1/8 in.) above or below the surrounding surface.

Detectable warning surfaces at curb ramps and elevated platforms shall

- be composed of truncated domes
 - with a height of 4.5 - 5.5 mm (0.18 to 0.22 in.);
 - with a base diameter of 21-25 mm (0.83 to 0.98 in.); and
 - be organized in a regular pattern with spacing of 55-65 mm (2-3/16 to 2-9/16 in.) on centre;
- be slip-resistant, and
- contrast visually with adjoining surfaces

If a walk crosses or joins a vehicular way and the walking surfaces are not separated by curbs, railings or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning surfaces, which is minimum 920 mm (36 in.) wide.

RELATED SECTIONS

- [4.1.3 Protruding and Overhead Objects](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.1.9 Ramps](#)
- [4.1.10 Curb Ramps](#)
- [4.1.11 Stairs](#)
- [4.1.12 Escalators](#)
- [4.3.1 Drinking Fountains](#)
- [4.3.3 Elevated Platforms](#)
- [4.3.12 Parking](#)
- [4.3.13 Passenger-Loading Zones](#)
- [4.4.15 Texture and Colour](#)

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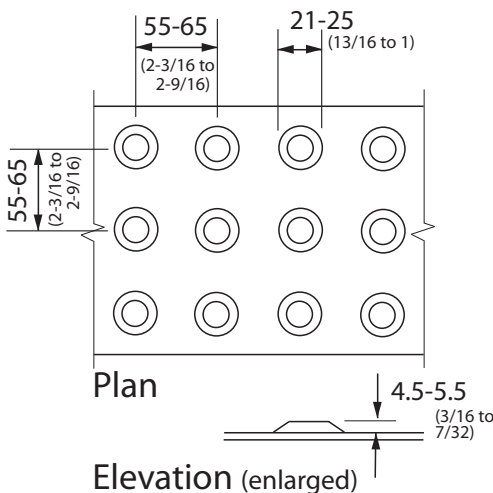


Figure 4.4.8.2
Truncated Dome
Detectable Warning Surface

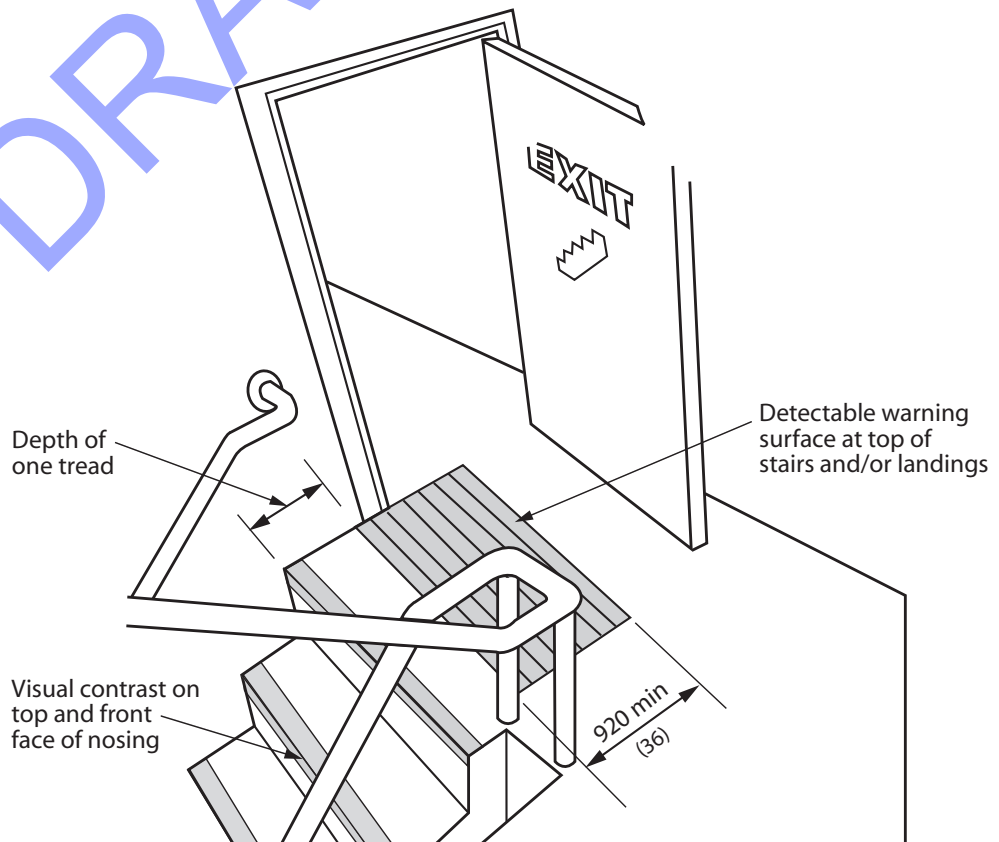


Figure 4.4.8.1
Detectable Warning Surfaces at Stairs

4.4.9 PUBLIC ADDRESS SYSTEMS

4.4 SYSTEMS AND CONTROLS

RATIONALE

Public address systems should be designed to best accommodate all users, especially those that may be hard of hearing. They should be easy to hear above the ambient background noise of the environment and there should be no distortion or feedback. Background noise should be minimized.

Visual equivalents should be made available for individuals with a hearing *impairment* who may not hear an audible public address system.

APPLICATION

Public address systems shall comply with this section.

DESIGN REQUIREMENTS

Public address speakers shall be mounted above head level, and provide effective sound coverage in required areas, such as corridors, assembly and *meeting room* areas, recreational and entertainment *facilities*, educational *facilities*, and *common use* areas in institutional settings.

Public address systems shall be zoned so that information can be directed to key locations only, minimizing background noise in other areas.

Where public address systems are used to broadcast background music, the music shall not be broadcast continuously or throughout the entire *facility*.

All-point call systems shall only be utilized for fire and emergency information.

Paging systems for staff and other key persons shall be discreet and low volume, and sound only at those *devices* or *locations* where such persons might expect to be located.

RELATED SECTIONS

[4.4.1 Emergency Exits, Fire Evacuation and Areas of Rescue Assistance](#)
[4.4.16 Acoustics](#)

4.4 SYSTEMS AND CONTROLS

4.4.10 INFORMATION SYSTEMS

RATIONALE

Information should be *accessible* to all facility users. Where universally *accessible* formats are not possible, alternate formats should be available. Video display terminals may present difficulties for persons with a visual *impairment*. Alternate technology or audio interfaces can be beneficial.

To ensure that a person using a wheelchair or scooter can access an information terminal, consideration should be given to the lower vantage point and reach ranges of all information systems provided.

APPLICATION

Information systems, such as display kiosks and video display terminals, shall comply with this section.

DESIGN REQUIREMENTS

Where information is provided by video display terminals to the general public, clients or customers, the same information shall be provided in an alternative format, such as audio, Braille and large-text print. The minimum font size for large-text print shall be 16 point.

Information systems designed for direct access by the public, such as touch-screen video display, keyboard or keypad access, shall be mounted at a height suitable for use by a person using a wheelchair or scooter (Refer to [4.4.2](#)).

Essential print information shall be printed in large text on a highly contrasting background colour, and should also be available in other formats, such as audiotape and large-text print.

Push buttons or other controls for accessing public information systems should be clearly identifiable by colour and/or tone from the background colour, and should include raised numbers, numerals or symbols for easy identification by persons with a visual *impairment*.

Tactile identification shall comply with [4.4.15](#).

RELATED SECTIONS

[4.4.2 Controls and Operating Mechanisms](#)

[4.4.15 Texture and Colour](#)

4.4.11 CARD ACCESS, SAFETY AND SECURITY SYSTEMS

4.4 SYSTEMS AND CONTROLS

RATIONALE

In many cases, persons such as seniors and persons with *disabilities* may be considered to have a higher degree of vulnerability and therefore seek more reassurance and inherent security. Items such as adequate lighting and *accessible* signalling devices promote this security.

Emergency signalling devices are important in individual washrooms where the potential for a fall is increased and an individual may be alone.

Where card-access systems are selected as a means of entry to particular *facilities* or *spaces*, the systems and components selected should be suitable for use by persons with varying abilities, including persons with reduced manual dexterity, poor vision or difficulty with reaching. The use of heat-sensing activation buttons should be avoided, as they are indiscernible to a person who is blind.

APPLICATION

Card-access, safety and security systems shall comply with this section.

Where signals intended for the public to indicate the operation of a building security system are provided, they shall consist of both audible alarms and visual signals.

DESIGN REQUIREMENTS

Adequate lighting shall be provided continuously along public walkways, steps and *ramps* that are actively used at all times of year and/or where staff and public parking is provided.

Where public telephones are installed, an *accessible* public telephone complying with [4.4.5](#) shall be located at, or close to an *accessible entrance*, for the use of persons requiring assistance.

Where *accessible* individual washrooms in compliance with [4.2.7](#) are provided in larger public *facilities*, such as recreation *facilities*, the washroom shall incorporate an emergency call system linked to a central location (e.g., office or switchboard).

Card-entry systems shall

- be wall-mounted, no higher than 1060 mm (42 in.) above the floor or ground, adjacent to the door and free of the door swing;
- be colour-contrasted from the surface on which they are mounted;
- incorporate a card slot that is illuminated or colour contrasted from the mounting plate; and
- use cards that incorporate a distinctive colour, texture or raised graphic/lettering on one side.

Encoded-entry/exit systems, such as keypads, shall

- be wall-mounted, no higher than 1060 mm (42 in.) above the floor or ground, adjacent to the door and free of the door swing; and
- incorporate buttons that
 - are raised;
 - are mounted on a clearly differentiated coloured background; and
 - include raised numerals or letters in a constant array.

RELATED SECTIONS

- [4.1.1 Space and Reach Requirements](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.1.5 Entrances](#)
- [4.1.6 Doors](#)
- [4.1.14 Elevators](#)
- [4.1.15 Platform Lifts](#)
- [4.2.7 Individual Washrooms](#)
- [4.3.5 Offices, Work Areas and Meeting Rooms](#)
- [4.4.2 Controls and Operating Mechanisms](#)
- [4.4.13 Lighting](#)
- [4.4.15 Texture and Colour](#)

4.4 SYSTEMS AND CONTROLS

4.4.12 GLARE AND LIGHT SOURCES

RATIONALE

Direct or reflected glare from floors, walls or work surfaces is uncomfortable for all users and a barrier to persons with reduced vision. Therefore, every attempt should be made to select light sources, materials and finishes which do not add to the problem, and to ensure that natural daylight is controllable.

The strategic use of lighting is valuable to all individuals, and especially important for individuals with some form of visual *impairment*. In addition, offering a variety of task lighting at work areas is beneficial to all.

APPLICATION

Systems used to control glare and excessive reflected light shall comply with this section.

DESIGN REQUIREMENTS

Extensive high gloss floor and wall finishes are not acceptable, but high-gloss materials may be incorporated into floor and wall finish details, as long as they do not result in large reflective surfaces.

Monolithic floor surfaces, such as stone, granite, marble or terrazzo, shall have a matte or honed finish, to minimize reflected glare.

Finishes such as vinyl, other composition materials, quarry tile, glazed tile or mosaics, used on horizontal surfaces, such as floors and work surfaces, shall be in matte or satin finishes.

Finishes such as paint, vinyl wall coverings, stone, marble, wood, metals, plastic laminate, etc., used on vertical surfaces, such as walls and columns, shall have matte or satin finishes.

Curtains, blinds or other sun-screening systems shall be provided at windows and other places where direct sunlight can adversely affect the level of lighting and/or reflected glare.

Light fixtures shall be selected with diffusers, lenses or recessed light sources, so that no glare is created.

Where surface-mounted fluorescent ceiling fixtures are mounted below 2440 mm (96 in.), they shall have darkened sides (i.e., not wrap-around lenses) and be positioned perpendicular to the dominant direction of travel, or used in valance-type lighting along the perimeter of a *space*, resulting in indirect lighting.

The location of special features and key orientation *elements* shall be enhanced through the use of supplementary lighting. Such lighting shall have upward or downward components only.

RELATED SECTIONS

[4.1.2 Ground and Floor Surfaces](#)
[4.1.4 Accessible Routes, Paths and Corridors](#)
[4.1.5 Entrances](#)
[4.1.8 Windows, Glazed Screens and Sidelights](#)
[4.1.9 Ramps](#)
[4.1.10 Curb Ramps](#)
[4.1.11 Stairs](#)
[4.1.13 Escalators](#)
[4.1.14 Elevators](#)
[4.1.15 Platform Lifts](#)
[4.2.1 Toilet Facilities](#)
[4.3.8 Information, Reception and Service Counters](#)
[4.4.13 Lighting](#)

4.4.13 LIGHTING

4.4 SYSTEMS AND CONTROLS

RATIONALE

Artificial lighting and natural light sources should provide comfortable, evenly distributed light at all working areas, in all circulation routes and in all areas of potential hazard. Also, outdoor lighting should be provided at *entrances*, along frequently used access routes and at frequently used outdoor amenities.

APPLICATION

Exterior and interior lighting systems shall comply with this section.

DESIGN REQUIREMENTS

EXTERIOR LIGHTING

Exterior lighting shall be in compliance with Illuminating Engineering Society of North America Standards in all public thoroughfares, and at all pedestrian routes, to provide safe access for persons with disabilities from sidewalks, bus stops and parking areas to nearby *facilities* and *site* amenities.

At pedestrian *entrances*, lighting levels should be minimum 100 lux (9.4 ft-candles) consistently over the *entrance* area, measured at the ground.

Over frequently used pedestrian routes, including walkways, paths, stairs and *ramps*, lighting levels shall be minimum 30 lux (3 ft-candles) consistently over the route, measured at the ground.

At designated parking *spaces* including *accessible spaces* and limited mobility/caregivers *spaces*, lighting levels shall be minimum 30 lux (3 ft-candles) consistently over each of these parking *spaces*, measured at the ground.

Lighting levels at passenger drop-off areas shall be minimum 30 lux (3 ft-candles) consistently over the drop-off area, measured at the ground.

At frequently used steps and stairs, lighting shall be located at or beside the steps or stairs, to clearly define the treads, risers and nosings.

All lighting shall

- provide a good colour spectrum; and
- be evenly distributed to minimize cast shadows.

Supplementary lighting shall be provided to highlight key *signage* and orientation landmarks.

Low-level lighting shall be high enough to clear normal snow accumulation.

Lighting fixtures shall comply with the relevant parts of [4.1.3](#) and [4.3.17](#).

INTERIOR LIGHTING

Light sources and fixtures shall be selected to minimize direct glare or indirect glare on nearby reflective surfaces.

Light sources shall provide as full a spectrum of light as possible, as an aid to edge and colour definition.

Lighting shall be configured to create an even distribution at floor level and to minimize pools of light and areas of shadow.

The leading edge of stairs, steps, *ramps* or escalators shall be evenly lit to minimize tripping hazards.

Lighting levels in elevator lobbies shall be similar to the lighting levels in elevator cabs, to minimize tripping hazards, and in no case shall be less than 200 lux (20 ft-candles).

Lighting levels in washrooms and dressing rooms shall be evenly distributed and no less than 200 lux (20 ft-candles).

Lighting levels in office areas shall be evenly distributed and no less than 300 lux (30 ft-candles).

Emergency lighting over stairs and *ramps*, in an exit or path of travel, shall be at least 100 lux (10 ft-candles), generally at the walking surface, and in no place less than 50 lux (5 ft-candles).

Lighting over directional or informational *signage*, or highlighting other orientation features, at public telephones, information or service counters, and card or keypad security systems, shall be no less than 200 lux (20 ft-candles) measured at the working surface.

Lighting in *meeting rooms* and *assembly areas* shall be evenly distributed, and shall be capable of being adjusted (e.g., dimmers).

Lighting at lecterns, podiums/ platforms or other speaker locations shall be capable of being enhanced, even when other lighting is dimmed, to permit ease of lip-reading and/or viewing of the hand actions of a nearby signer for persons who are deaf.

RELATED SECTIONS

- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.1.5 Entrances](#)
- [4.1.9 Ramps](#)
- [4.1.10 Curb Ramps](#)
- [4.1.11 Stairs](#)
- [4.1.12 Escalators](#)
- [4.1.14 Elevators](#)
- [4.1.15 Platform Lifts](#)
- [4.2.1 Toilet Facilities](#)
- [4.3.1 Drinking Fountains](#)
- [4.3.3 Elevated Platforms](#)
- [4.3.4 Dressing Rooms](#)
- [4.3.5 Office, Work Areas and Meeting Rooms](#)
- [4.3.8 Information, Reception and Service Counters](#)
- [4.4.2 Controls and Operating Mechanisms](#)
- [4.4.5 Public Telephones](#)
- [4.4.7 Signage](#)
- [4.4.12 Glare and Light Sources](#)

4.4 SYSTEMS AND CONTROLS

4.4.14 MATERIALS AND FINISHES

RATIONALE

The selection of flooring materials can be critical to the safe and easy movement of persons using all kinds of mobility aids, as well as persons with low vision.

Floor finishes, such as carpet, should be selected and installed so that persons using wheelchairs and walkers or other mobility aids can easily travel over them without using undue energy or tripping.

Finishes that are slip-resistant and not highly reflective promote safe travel.

APPLICATION

Exterior and interior materials and finishes shall comply with this section.

DESIGN REQUIREMENTSEXTERIOR FINISH MATERIALS

Suitable walkway paving surfaces include macadam, concrete, compacted gravel screenings, interlocking brick and patio stones. Such materials used as walkways shall

- have joints that are no greater than 6 mm (1/4 in.) wide, with variations in level of no more than 3 mm (1/8 in.); and
- be laid to drain.

Where possible, gratings and grills shall be located to one side of the pedestrian walkways, so as not to impede the *accessible route*. Where this is not possible, the bars of the grating or grill shall be located perpendicular to the dominant path of travel, with openings of no greater than 13 mm (1/2 in.).

Steps shall be finished with a non-slip material and incorporate highly contrasted nosings.

Ramp surfaces shall be firm and non-slip.

Handrails and *guards* shall be continuous, smooth and well maintained.

INTERIOR MATERIALS AND FINISHES

Carpet shall be of low-level loop construction, 10 or 12-gauge non-static fibre, directly glued to the subfloor.

Where hard, monolithic materials are selected, they shall be non-slip and non-glare, complying with [4.4.12](#).

Where floor tiles, bricks or pavers are used, joints should be no wider than 6 mm (1/4 in.) and should be flush.

Wall surfaces in corridors shall be non-abrasive from the floor level to a minimum of 2000 mm (78-3/4 in.) above the finished floor.

RELATED SECTIONS

- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.1.5 Entrances](#)
- [4.1.9 Ramps](#)
- [4.1.10 Curb Ramps](#)
- [4.1.11 Stairs](#)
- [4.1.13 Escalators](#)
- [4.1.14 Elevators](#)
- [4.1.15 Platform Lifts](#)
- [4.2.1 Toilet Facilities](#)
- [4.3.4 Dressing Rooms](#)
- [4.3.5 Office, Work Areas and Meeting Rooms](#)
- [4.4.12 Glare and Light Sources](#)

4.4.15 TEXTURE AND COLOUR

4.4 SYSTEMS AND CONTROLS

RATIONALE

The ability of an individual with a visual *impairment* to navigate an environment can be enhanced through the strategic use of colour and texture.

Caution is recommended in the selection of heavy or distinct patterns on walls or floors, since these can add visual confusion to settings for persons with low vision. Simple, repetitive, non-directional patterns that feature monochromatic or low-colour contrast are preferred. Changes in material or texture should not necessitate a threshold.

APPLICATION

Textural and colour systems shall be used to enhance accessibility and shall comply with this section.

DESIGN REQUIREMENTS

Exterior colour schemes shall incorporate a pronounced colour contrast, to differentiate boundaries of objects, distinguish objects from their background, and to generally enhance spatial orientation. Generally, for seniors and persons with low vision, colours in the warm end of the spectrum (yellow, orange, bright red, etc.) are easier to recognize than those at the cool end of the spectrum.

Signs shall incorporate pronounced glare-free colour contrast. A minimum contrast of 70% light reflectance is required. For signs, the most visible colours are white or yellow on a black, charcoal or other dark background, such as brown, dark blue, dark green or purple. Black lettering on white is also acceptable, although less readable than the reverse. Unacceptable background colours are light grey and pastel colours. Red lettering on a black background is also unacceptable.

Colour contrast shall be used as a safety measure to define edges or boundaries of objects (e.g., stair nosings, doors, *handrails*, etc.). Colour or tone shall be used

to visually define the boundaries of a room (i.e., where the wall meets the floor). Baseboards in monochromatic environments shall be highly contrasting with the wall and floor colours, to provide boundary definition.

Colour shall be used consistently to visually identify distinctive objects (e.g., exit doors).

Bright colours and/or a highly contrasting tone shall be used to assist with wayfinding. (e.g. If used as part of a *signage* band located on walls at eye level, this band is easier to follow than monolithic wall colouring, and can be the visual cue for other essential signs.)

End walls or return walls in long corridors shall be visually defined using highly contrasting colours or tone, to enhance a change of direction or the end of the *space*.

Detectable warning surfaces shall be used to define potential hazards. (Refer to 4.4.8.). All textured surfaces used as *detectable warning surfaces* shall be clearly detectable by walking upon as being different from the surrounding surface. Suitable textures include

- 10 mm (3/8 in.) deep saw-cut concrete with regular grooves, positioned no more than 100 mm (4 in.) apart, commencing no closer than 100 mm (4 in.) from the curb; grooves should be at right angles to the path of travel for exterior textures; and
- raised domes, dots or squares, deeply grooved concrete, terrazzo or other stone-like materials, with closely centred grooves at right angles to the path of travel, or applied carborundum or other non-slip strips for interior textures.

Supplementary textural cues shall also be provided (e.g., by using different floor textures or materials, in major and minor routes).

Clearly defined boundaries of materials like carpeting or floor tiles shall enhance wayfinding by defining such as the junction

between walls and floors, doorway recesses and corridor intersections.

The same texture shall be used consistently throughout any one *site* to identify the same type of hazard.

RELATED SECTIONS

- [4.1.2 Ground and Floor Surfaces](#)
- [4.1.4 Accessible Routes, Paths and Corridors](#)
- [4.1.6 Doors](#)
- [4.1.7 Gates, Turnstiles and Openings](#)
- [4.1.8 Windows, Glazed Screens and Sidelights](#)
- [4.1.9 Ramps](#)
- [4.1.10 Curb Ramps](#)
- [4.1.11 Stairs](#)
- [4.1.12 Handrails](#)
- [4.1.13 Escalators](#)
- [4.1.14 Elevators](#)
- [4.1.15 Platform Lifts](#)
- [4.2.2 Toilet Stalls](#)
- [4.2.3 Toilets](#)
- [4.2.4 Lavatories](#)
- [4.2.5 Urinals](#)
- [4.2.6 Washroom Accessories](#)
- [4.2.7 Individual Washrooms](#)
- [4.2.8 Bathtubs](#)
- [4.2.9 Shower Stalls](#)
- [4.2.10 Grab Bars](#)
- [4.3.1 Drinking Fountains](#)
- [4.3.3 Elevated Platforms](#)
- [4.3.4 Dressing Rooms](#)
- [4.3.5 Office, Work Areas and Meeting Rooms](#)
- [4.3.6 Waiting and Queuing Areas](#)
- [4.3.8 Information, Reception and Service Counters](#)
- [4.3.9 Storage, Shelving and Display Units](#)
- [4.3.10 Lockers and Baggage Storage](#)
- [4.3.11 Balconies, Porches, Terraces and Patios](#)
- [4.3.14 Landscaping Materials and Plantings](#)
- [4.3.15 Benches](#)
- [4.3.16 Picnic Tables](#)
- [4.3.17 Street Furniture](#)
- [4.4.1 Emergency Exits, Fire Evacuation and Areas of Rescue Assistance](#)
- [4.4.2 Controls and Operating Mechanisms](#)
- [4.4.5 Public Telephones](#)
- [4.4.7 Signage](#)
- [4.4.8 Detectable Warning Surfaces](#)
- [4.4.11 Card Access, Safety and Security Systems](#)

4.4 SYSTEMS AND CONTROLS

4.4.16 ACOUSTICS

RATIONALE

The acoustic environment of public buildings and *spaces* should accommodate the unique needs of persons who are hard of hearing and who need to differentiate essential sounds from general background noise. The sound transmissions of different areas can be used as an orientation cue and help to navigate a *space*. A well designed acoustical environment is to everyone's advantage.

APPLICATION

The acoustical environment of *facilities* used by the general public, clients, customers and employees shall comply with this section.

DESIGN REQUIREMENTS

Floor finishes, wall surfaces and ceilings shall be selected so that occasional noise is not unduly amplified. (e.g., Hard surfaces such as marble or terrazzo will allow each foot step to be heard by persons who are visually impaired, but add another level of confusion for persons who are hearing impaired.)

At *accessible routes* in large *facilities* where wayfinding is problematic, the sound transmission/reflection characteristics of finish materials shall aurally differentiate major and secondary paths of travel.

Ceiling shapes shall be designed so that echoes do not occur, unless an alternate acoustical treatment is incorporated. (Note: Domed shapes tend to distort sound.)

Public address and call systems shall be capable of being zoned to key areas, rather than blanketing all areas of a *facility* at all times. (Refer to [4.4.9.](#))

In *meeting rooms* and *assembly areas* where the spoken word is key to comprehending the proceedings, all unnecessary background noise (e.g., from fans or other mechanical equipment, air diffusers, etc.) shall be dampened and/or the room shall include adequate sound insulation.

RELATED SECTIONS

[4.3.5 Office, Work Areas and Meeting Rooms](#)

[4.3.8 Information, Reception and Service Counters](#)

[4.4.5 Public Telephones](#)

[4.4.6 Assitive Listening Systems](#)

[4.4.9 Public Address Systems](#)

4.5.1 ARENAS, HALLS AND OTHER INDOOR RECREATIONAL FACILITIES

4.5 FACILITY-SPECIFIC REQUIREMENTS

RATIONALE

Opportunities for recreation, leisure and active sport participation should be available to all members of the community. Access should be provided to halls, arenas, and other sports *facilities*, including access to the *site*, all activity *spaces*, gymnasias, fitness *facilities*, lockers, change rooms and showers. Persons with a *disability* may be active participants, as well as spectators, volunteers and members of staff.

APPLICATION

In addition to the design requirements specified in 4.1 to 4.4, arenas, halls and other indoor recreation *facilities* shall comply with this section.

Where dressing *facilities* are provided for use by the general public, clients, customers, performers or staff, at least 50%, but never less than one, for each type of use in each cluster of dressing *facilities* shall be *accessible* and in compliance with 4.3.4. It is preferable to have all dressing *facilities accessible*.

DESIGN REQUIREMENTS

Arenas, halls and other indoor recreation *facilities* shall

- where visitor, spectator and/or participant seating is provided,
 - have *accessible* seating options in compliance with [4.3.2](#); and
 - incorporate *detectable warning surfaces* in compliance with [4.4.8](#), where seating is accessed by stairs.
- provide an *accessible route* in compliance with [4.1.4](#) to the arena/*facility* floor and/or ice surface, including access panels or gates providing at least 950 mm (37-1/2 in.) *clear* width;
- where *facilities* are provided for performances and other events, have a direct *accessible route* in compliance with [4.1.4](#) from the lobby/*entrances* and viewing locations to all performing areas, including stages, dressing rooms, washrooms and all other *spaces* used by performers;
- where stairs are provided, have stairs that comply with [4.1.11](#), including appropriate tactile and colour-contrasting features;
- where dressing *facilities* are provided, have dressing *facilities* that comply with [4.3.4](#);
- where lockers or shelving is provided, have lockers and shelving that comply with [4.3.9](#) and [4.3.10](#);
- where coat hooks are provided, have at least 10%, but never less than one, within the reach ranges specified in [4.1.1](#);
- where toilets and bathing *facilities* are provided, have toilets and bathing *facilities* that comply with [4.2.1](#);
- where concessions or other service counters are provided, comply with [4.1.3](#) and [4.3.8](#);
- where swimming pool, hot pools or therapy pools are provided, comply with [4.5.3](#); and
- where staff accommodation and related support areas, offices or *meeting rooms* are provided, comply with all relevant sections of 4.1 to 4.4.

RELATED SECTIONS

[All relevant parts of Sections 4.1, 4.2, 4.3 and 4.4.](#)

4.5 FACILITY-SPECIFIC REQUIREMENTS

4.5.2 OUTDOOR RECREATIONAL FACILITIES

RATIONALE

Opportunities for recreation, leisure and active sport participation should be available to all members of the community. Access should be provided to playing fields and other sports *facilities*, including access to the *site*, all activity areas, outdoor trails, docks, swimming areas, play *spaces*, lockers, change rooms and showers. Persons with a *disability* may be active participants, as well as spectators, volunteers and members of staff.

APPLICATION

In addition to the design requirements specified in 4.1 to 4.4, the outdoor recreation *facilities* listed below shall comply with this section.

Where dressing *facilities* are provided to support the use of outdoor recreational *facilities* by the general public, clients, customers, performers or staff, at least 50%, but never less than one, for each type of use in each cluster of dressing *facilities* shall be *accessible* and in compliance with [4.3.4](#). It is preferable to have all dressing *facilities* *accessible*.

DESIGN REQUIREMENTS

GENERAL

Parks accessibility shall encompass the development of routes, auxiliary services, planting and an overall environment which is *accessible* and provides a fulfilling recreational experience for all persons with a varying level of ability.

BOARDWALKS

Where boardwalks are provided, they shall

- have a minimum width of 2000 mm (78-3/4 in.);
- incorporate surfaces constructed of firm, non-slip materials. (Where wooden planks are used, they shall be laid perpendicular to the path of travel and have joints no greater than 6 mm (1/4 in.) wide;

- incorporate a continuous curbed edge where the grade drop-off on any side of the boardwalk is greater than 200 mm (7-7/8 in.). The curbed edge shall be at least 75 mm (3 in.) high and of a contrasting colour to the surrounding terrain;
- *handrails*, *guards* or other suitable barriers on both sides where the grade drop-off is greater than 450 mm (17-3/4 in.);
- access points to boardwalks that allow easy wheelchair access; and
- benches, garbage cans, drinking fountains, etc., where provided, shall be located adjacent to the boardwalk on firm, level surfaces at the same elevation as the boardwalk. (Refer also to [4.3.17](#).)

DOCKS

Where docks for fishing, boating or swimming are provided they shall

- be located on an *accessible route* in compliance with [4.1.4](#);
- where changes in elevation are necessary, incorporate *ramps* or *curb ramps* in compliance with [4.1.8](#) and [4.1.9](#). *Ramps* with a slope no greater than 1:12 are acceptable;
- incorporate a continuous curbed edge, at least 75 mm (3 in.) high and of a contrasting colour where dock surfaces are greater than 200 mm (7-7/8 in.) above the surface of the water;
- incorporate a *guard* where dock surfaces are greater than 450 mm (17-3/4 in.) above the surface of the water; and
- where steps are provided to access the water for swimming, incorporate colour-contrasting *handrails* at the steps. Such *handrails* shall extend to a minimum of 600 mm (23-5/8 in.) above the dock surface and return down to the dock.

OUTDOOR POOLS

Outdoor swimming pools shall comply with [4.5.3](#).

TRAILS AND FOOTBRIDGES

Where significant changes in grade occur, trail routes shall ideally be sloped at no greater than 1:20, or have adjacent steps and *ramps*.

Where steps, footbridges or *ramps* are used, the surfacing shall be of non-slip materials and include suitable colour-contrasting *handrails* and/or *guards*.

The slope on bridges shall not exceed 1:20.

PATHWAYS

Accessible routes and walkways shall conform with [4.1.4](#).

Garbage cans, light standards, benches and other potential obstructions shall be located adjacent to pathways. (Refer also to [4.3.17](#).)

A different ground colour and/or texture shall be used to indicate the following (Refer also to [4.4.15](#)):

- risk areas, such as intersections, *ramps* or steps; and
- functional changes, such as seating areas, viewpoints or outlooks.

PLANTING AND TREES

Planting and trees along *accessible* pathways shall comply with [4.3.14](#).

REST AREAS

Rest areas shall

- be provided on trails, pathways and walkways;
- be positioned adjacent to the trail, pathway or walkway;
- have *accessible* ground surfaces in compliance with [4.1.2](#);
- use a contrasting ground finish material to identify functional change; and
- incorporate at least one bench, in compliance with [4.3.15](#).

4.5.2 OUTDOOR RECREATIONAL FACILITIES

4.5 FACILITY-SPECIFIC REQUIREMENTS

PARKS, PARKETTES AND PLAYGROUNDS – GENERAL

Entrance gates, paths and walkways throughout the park shall be *accessible* to a person using a wheelchair or scooter.

Picnic and play areas shall be provided in both sunny and shaded areas.

PLAYGROUNDS

Children's play areas and playground equipment, sandboxes or other amenities shall generally be designed to be *accessible* to and useable by children with varying levels of ability. Colour contrast is important.

Playground surfaces shall be firm, level, non-abrasive and drain rapidly. Surfaces below playground equipment, including swings, slides and climbing structures, shall be level, free-draining and provide a safe, resilient landing surface.

PICNIC TABLES

Accessible picnic tables shall comply with [4.3.16](#).

Where public parking is provided to serve picnic *facilities*, *accessible* picnic areas shall be within 30 m (100 ft.) of the *accessible* parking spaces.

DRINKING FOUNTAINS

Accessible drinking fountains shall comply with [4.3.1](#).

PUBLIC TELEPHONES

Accessible public telephones shall comply with [4.4.5](#).

ILLUMINATION (WHERE PROVIDED)

Illumination levels shall

- be a minimum of 10 lux (1 ft-candle);
- be maintained at 5 lux (0.5 ft-candles) in areas of heavy trees and shrubbery; and
- be maintained at 5 lux (0.5 ft-candles) in all other areas of park at ground level.

Light sources used shall be indirect, non-glare, non-flickering type and provide even levels of light distribution. (Refer also to [4.4.13](#).)

WASHROOMS

Where washrooms are provided to support the use of outdoor recreation *facilities* by the general public, clients, customers, performers or staff, they shall comply with all applicable sections of 4.2.

WATERFRONT AREAS

Where paths and/or lookout points are provided, they shall be *accessible* to all individuals.

Seating shall be provided along paths and at lookout points, in compliance with [4.3.15](#).

Where parking is provided, it shall be located as close as possible to waterfront area. An *accessible route* shall be provided from the parking area to paths and/or lookout points (where provided).

NATURAL AREAS

Accessible pathways, trails and footbridges shall be provided where environmental considerations will permit.

Paths and trails shall incorporate rest areas with appropriate seating.

Where special lookout locations or wildlife viewing areas are provided, they shall be identified with *clear signage*.

Trails shall feature a *tactile* map at the start of the trail and periodically along its length.

Information and interpretive *signage* shall incorporate Braille.

GRANDSTAND AND OTHER VIEWING AREAS

Where visitor, spectator and/or participant seating is provided, *accessible* seating options in compliance with [4.3.2](#) shall be provided.

PLAYING FIELDS

Controlled access points shall be designed to accommodate a person using a wheelchair or scooter. (e.g., Where turnstiles are used, an adjacent *accessible* gate shall be provided in compliance with [4.1.7](#).)

Level seating areas shall be provided beside sports fields for spectators or participants with *disabilities*.

Where provided, public viewing areas shall comply with [4.3.2](#).

Where provided, public washrooms shall comply with [4.2.1](#).

Where provided, public showers and change rooms shall comply with [4.2.1](#), [4.2.9](#) and [4.3.4](#).

RELATED SECTIONS

[All relevant parts of Sections 4.1, 4.2, 4.3 and 4.4.](#)

4.5 FACILITY-SPECIFIC REQUIREMENTS

4.5.3 SWIMMING POOLS

RATIONALE

Swimming is an important recreational and therapeutic activity for many persons with *disabilities*. The buoyancy and freedom offered by an immersive water environment can be enabling in themselves. Primary considerations for accommodating persons who have mobility *impairments* include *accessible* change facilities and a means of access into the water. Ramped access into the water is preferred over lift access, as it promotes integration (everyone will use the ramp) and independence. Many persons who are visually *impaired* will benefit from colour and textural cues along primary routes of travel and at potentially dangerous locations, such as the edge of the pool, at steps into the pool and at railings.

APPLICATION

In addition to the design requirements specified in 4.1 to 4.4, swimming pools, wading pools, hot pools, splash pads, spray pads and therapy pools shall comply with this section.

DESIGN REQUIREMENTS

Swimming pools, wading pools, hot pools and therapy pools shall have

- where the pool is indoors, a direct *accessible route* in compliance with [4.1.4](#) from the lobby/*entrance* to the change rooms;
- a direct *accessible route* in compliance with [4.1.4](#) from the change rooms to the pool deck;
- access from the pool deck into the water, provided by a *ramp* sloped no steeper than 1:12. In retrofit situations where it is *technically infeasible* to provide a *ramp*, a mechanical pool lift may be used;
- a shower chair available at each *facility* for use in transferring into the water and/or shower;

- where steps are provided into the pool,
 - steps shall be marked with a colour-contrasting strip of at least 50 mm (2 in.) wide, at both the riser and the tread; and
 - colour-contrasting *handrails* on both sides of the steps. Such *handrails* shall extend at least 300 mm (11-3/4 in.) beyond the pool edge;
- where a curbed edge is provided, it shall be a minimum of 200 mm (7-7/8 in.) and a maximum of 400 mm (15-3/4 in.) in height;
- pool boundaries clearly defined by both a textural change and a colour contrast to both the water surface and surrounding pavement;
- firm, slip-resistant materials and finishes used on the pool perimeter, deck or paved areas surrounding the pool;
- non-abrasive and easy-to-clean pool perimeter finishes;
- adequate drainage on the pool deck to drain water quickly;
- where pool-depth indicator marking is provided, depth-indicator markings, as well as 'SHALLOW END' and 'DEEP END' markings, of a highly contrasting colour and sufficient size to be easily visible;
- where diving boards or platforms are provided, they shall be clearly marked and protected. Overhead clearances should be a minimum of 2100 mm (82-3/4 in.) or shall be protected by suitable *guards*;
- where lanes, and/or lane markers are provided, they shall be of a highly contrasting colour. Tie-off devices for lane markers shall be positioned such that they do not create a tripping hazard;
- where starting blocks are provided, they shall be of a highly contrasting colour and capable of being securely fixed in place;
- safety equipment and other accessories shall be stored such that they do not present a tripping hazard; and
- lifeguard chairs, slides and other pool related structures shall be in highly contrasting colours.

Wading pool access shall be safe and gradual so that a child with a *disability* can be assisted into the water easily and/or use a wheelchair to enter.

Swimming pools shall be of 'level-deck' design.

RELATED SECTIONS

[All relevant parts of Sections 4.1, 4.2, 4.3 and 4.4.](#)

4.5.4 CAFETERIAS

4.5 FACILITY-SPECIFIC REQUIREMENTS

RATIONALE

Cafeteria serving lines and seating area designs need to reflect the lower sight lines, reduced reach, knee-space and manoeuvring requirements of a person using a wheelchair or scooter. Patrons using mobility devices may not be able to hold a tray or food items while supporting themselves on canes or while manoeuvring a wheelchair. Tray slides should be designed to move trays with minimal effort.

Features such as colour contrasts and large print menus may assist persons with a visual impairment.

APPLICATION

In addition to the design requirements specified in 4.1 to 4.4, cafeterias shall comply with this section.

Where fixed tables or counters are provided, at least 10%, but not less than one, shall be *accessible* and shall comply with 4.3.7. It is preferable to have all fixed tables *accessible*.

In new construction, and where practicable in *alterations*, the fixed tables (or counters) shall be distributed throughout the *space*.

At least one lane at each cashier area shall be *accessible* and comply with this section. It is preferable to have all lanes at all cashier areas *accessible*.

DESIGN REQUIREMENTS

Where food or drink is served at counters exceeding 865 mm (34 in.) in height and counters are for use by customers seated on stools or standing at the counter, a minimum of 1525 mm (60 in.) length of the counter shall be constructed in compliance with 4.3.8. Service may also be made available at *accessible* tables within the same area.

Access aisles at least 1100 mm (43-1/4 in.) shall be provided up to and around all *accessible* fixed tables. The *access aisle* shall be measured between parallel edges of tables or between a wall and the table edges.

Dining areas, including raised or sunken dining areas, and outdoor seating areas shall be *accessible*. In a retrofit situation where it is *technically infeasible* to provide access to all levels within a dining area, or to all parts of outdoor seating areas, at least one dining area shall be *accessible*. The *accessible* area must feature the same level of service and décor as the rest of the dining area and it must not be restricted to use by persons with *disabilities*.

Access to outdoor eating areas shall comply with 4.3.11.

Food service lines shall have a minimum *clear* width of 1100 mm (43-1/4 in.).

Tray slides shall be mounted no higher than 865 mm (34 in.).

If self-service shelves are provided, at least 50% must be within the reach ranges specified in 4.1.1. It is preferable to have all self-service shelves *accessible*.

Self-service shelves and dispensing devices for tableware, dishware, condiments, food and beverages shall be installed to comply with 4.1.1.

Cashier locations should feature at least one *access aisle*, which is a minimum of 1100 mm (43-1/4 in.) wide. It is preferable to have all aisles *accessible*.

In banquet rooms or *spaces* where a head table or speaker's lectern is located on a raised platform, the platform shall be *accessible* in compliance with 4.1.9 or 4.1.15, as well as 4.3.3.

Spaces for vending machines, beverage dispensers and other equipment shall comply with 4.1.1 and shall be located on an *accessible route* in compliance with 4.1.4.

Barriers and/or turnstiles, where provided to control access, shall comply with 4.1.7.

Queuing areas shall comply with 4.3.6.

RELATED SECTIONS

All relevant parts of Sections 4.1, 4.2, 4.3 and 4.4.

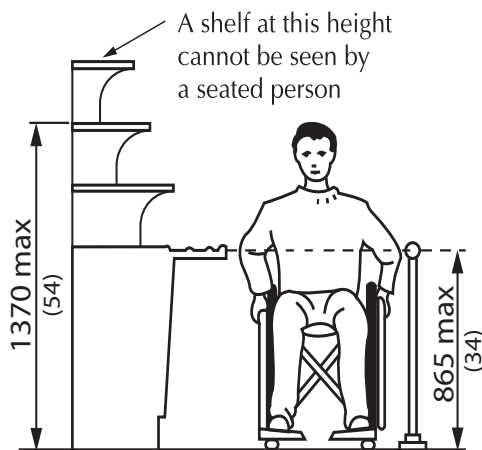


Figure 4.5.4.1
Self Serve Counter

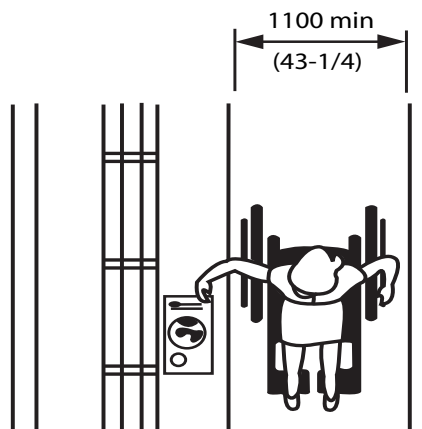


Figure 4.5.4.2
Aisle Width

4.5 FACILITY-SPECIFIC REQUIREMENTS

4.5.5 CHURCHES, CHAPELS AND OTHER PLACES OF WORSHIP

RATIONALE

Access to all areas of worship should be provided. Access assumes that persons with *disabilities* may be participants, leaders, staff or volunteers.

APPLICATION

In addition to the design requirements specified in 4.1 to 4.4, churches, chapels and other places of worship and/or reflection shall comply with this section.

DESIGN REQUIREMENTS

All areas in churches, chapels and other places of worship and/or reflection shall be *accessible* to persons with *disabilities*, including main areas of worship, *meeting rooms*, washrooms, coatrooms and offices.

Accessible seating shall be provided in compliance with [4.3.2](#).

Pulpits, altars, daises and choir areas shall comply with [4.3.3](#).

Public address systems shall comply with [4.4.9](#).

Assistive listening systems shall comply with [4.4.6](#).

RELATED SECTIONS

[All relevant parts of Sections 4.1, 4.2, 4.3 and 4.4.](#)

DRAFT

4.5.6 LIBRARIES

4.5 FACILITY-SPECIFIC REQUIREMENTS

RATIONALE

Traditional and automated systems should be available to all patrons and staff. Both the design of the *facility* and the provision of services should be considered. Service counters and study carrels should accommodate the knee-space and armrest requirements of a person using a wheelchair. Computer catalogues, carrels and workstations should be provided at a range of heights, to accommodate persons who are standing or sitting, as well as children of many ages and sizes.

The provision of workstations equipped with assistive technology such as large displays, screen readers, etc. will increase the accessibility of a library.

The provision of book drop-off slots at different heights for standing and seated use will enhance usability.

APPLICATION

In addition to the design requirements specified in 4.1 to 4.4, libraries shall comply with this section.

Where fixed seating, tables or study carrels are provided, at least 10% but no less than one shall be *accessible* and in compliance with this section. It is preferable to have all fixed seating, tables and study carrels *accessible*.

At least one lane at each checkout area shall be *accessible* and comply with this section. It is preferable to have all lanes at all checkout areas *accessible*.

Where computer catalogues or workstations are provided, at least 50% shall be *accessible* and shall comply with this section. It is preferable to have all computer catalogues and workstations *accessible*.

DESIGN REQUIREMENTS

Accessible fixed seating, tables and study carrels shall be located on an *accessible route* in compliance with [4.1.4](#).

Clearances between fixed seating, tables and study carrels shall comply with [4.1.4](#).

Where shelving is provided at fixed seating, tables or study carrels, the shelving shall be no higher than 1200 mm (47 in.).

Accessible fixed study carrels shall incorporate

- work surfaces and knee/toe clearance in compliance with [4.1.1](#);
- an electrical outlet; and
- lighting levels of at least 100 lux (9.3 ft-candles) at the work surface.

Where provided, traffic control or book security gates shall comply with [4.1.7](#).

Minimum *clear aisle space* at card catalogues and at stacks shall comply with [4.1.1](#).

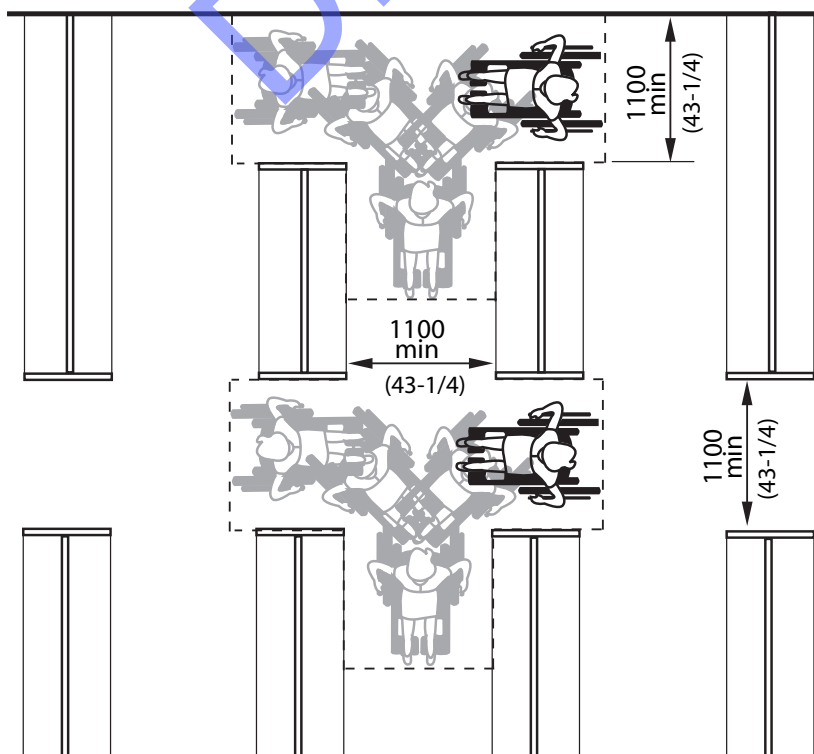


Figure 4.5.6.1
Aisle Width

4.5 FACILITY-SPECIFIC REQUIREMENTS

4.5.6 LIBRARIES

DESIGN REQUIREMENTS
(Continued)

Aisle configurations shall incorporate a *clear floor space* allowing a person in a wheelchair to make a 180-degree turn in compliance with [4.1.1](#).

Maximum reach heights at card catalogues shall comply with [4.1.1](#).

Shelf height in stack areas is unrestricted.

Circulation service counters and information service counters shall comply with [4.3.8](#).

Where provided, computer catalogues and computer workstations shall incorporate

- knee and toe *space* below the work surface in compliance with [4.1.1](#) and [4.3.7](#);
- a maximum work surface height of 865 mm (34 in.); and
- a maximum table depth of 915 mm (36 in.).

A minimum of one movable chair shall be provided at every information service counter, computer catalogue or computer workstation.

Book drop slots shall

- be located on an *accessible route* complying with [4.1.4](#);
- be located adjacent to a 2440 mm (96 by 96 in.) level *clear floor space*. In a retrofit situation where it is *technically infeasible* to create a 2440 x 2440 mm (96 by 96 in.) *clear floor space*, the *space* may be reduced to 1525 x 1525 mm (60 by 60 in.); and
- have a slot that is operable using one hand, located between 860 mm (34 in.) and 900 mm (35 in.) above the floor.

Lighting at book stacks shall be mounted directly over the aisle *space* and provide a minimum of 200 lux (20 ft-candles) at a nominal working height of 920 mm (36 in.).

The acoustic quality shall be free of unnecessary background noise and should permit comprehension by persons with limited hearing. (Refer also to [4.4.16](#).)

Where CDs, tapes, talking books, etc. are available as part of the library resource materials, or for loan purposes, a separate *space* shall be provided for auditing this material without disturbing other library users.

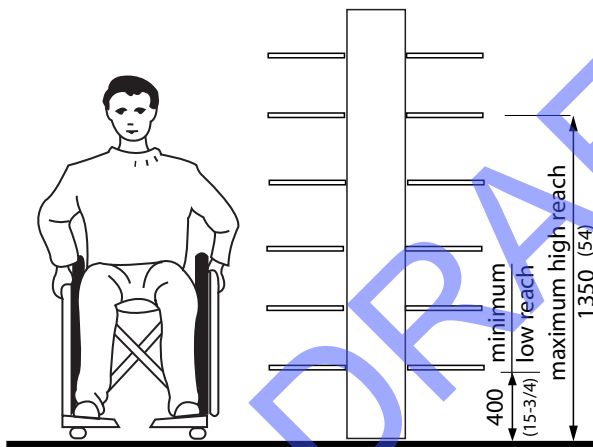


Figure 4.5.6.2
Reach Heights

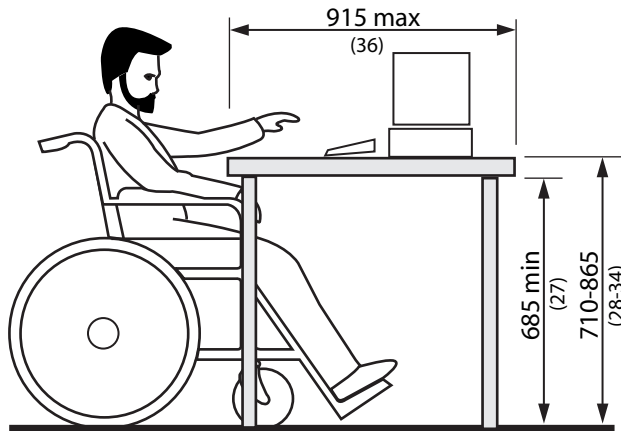


Figure 4.5.6.3
Work Surfaces

RELATED SECTIONS

[All relevant parts of Sections 4.1, 4.2, 4.3 and 4.4.](#)

4.5.7 BUSINESS, MERCANTILE AND CIVIC

4.5 FACILITY-SPECIFIC REQUIREMENTS

RATIONALE

The role of persons with *disabilities* should not be restricted or limited to that of the customer or consumer. Workspaces should be designed with a view to future adaptation or accommodation of individual equipment or assistive devices.

APPLICATION

In addition to the design requirements specified in 4.1 to 4.4, business, mercantile and civic *facilities* shall comply with this section.

In areas used for transactions where counters have cash registers and are provided for sales and distribution of goods or services to the public, at least one of each type shall have a portion of the counter *accessible* and in compliance with this section. Such counters shall include, but not be limited to, counters in retail stores and distribution centres.

Where counters are dispersed throughout the *facility*, the *accessible* counters must also be dispersed throughout the *facility*.

In public *facilities* where counters or teller windows have solid partitions or security glazing to separate personnel from the public, at least one of each type shall provide a method to facilitate voice communication. Such methods may include, but are not limited to, grills, slats, talk-through baffles, intercoms or telephone handset devices.

The number of *accessible* checkout aisles provided shall be in conformance with Table 4.5.7.

DESIGN REQUIREMENTS

All *accessible* sales and service counters shall be on an *accessible route* that complies with [4.1.4](#).

In areas used for transactions where counters have cash registers and are provided for sales and distribution of goods or services to the public, the counter shall have at least one portion that is at least 920 mm (36 in.) in length, with a maximum surface height of 865 mm (34 in.) above the finished floor and shall have adjacent *clear floor space* of at least 1370 mm x 760 mm (54 x 30 in.) to allow for parallel approach by a person using a wheelchair or scooter.

In areas used for transactions that may not have a cash register but at which goods and services are sold, including, but not limited to, ticketing counters, teller stations, registration counters, information counters, box office counters and library check-out areas either a portion of the main counter shall be a minimum of 865 mm (34 in.) in length, with a maximum height of 865 mm (34 in.) or an auxiliary counter with the required minimum dimensions shall be provided in close proximity to the main counter.

In public *facilities* where counters or teller windows have solid partitions or security glazing to

separate personnel from the public, the method of communication provided shall be *accessible* to both individuals who use a wheelchair or scooter and individuals who have difficulty bending.

The *clear* width of *accessible* checkout lines shall comply with [4.1.4](#), and the maximum adjoining counter height shall not exceed 965 mm (38 in.) above the finished floor. The top of any counter edge protection shall be no more than 50 mm (2 in.) above the top of the counter surface on the aisle side of the check-out counter.

Signage identifying *accessible* checkout aisles shall incorporate the International Symbol of Access and shall be mounted above the checkout aisle in the same location where the checkout number or type of checkout is displayed.

Any devices used to prevent the removal of shopping carts from store premises shall not prevent access or *egress* to persons who use a wheelchair or scooter. An alternate *entrance* that is equally convenient to that provided for ambulatory persons is acceptable.

RELATED SECTIONS

[All relevant parts of Sections 4.1, 4.2, 4.3 and 4.4.](#)

Total checkout aisles of each design	Minimum number of checkout aisles of each design
1-4	1
5-8	2
9-15	3
Over 15	3 plus 20% of additional aisles

Table 4.5.7

Required Number of *Accessible* Checkout Aisles

4.5 FACILITY-SPECIFIC REQUIREMENTS

4.5.8 POLICE STATIONS

RATIONALE

Police stations should accommodate persons with *disabilities* who may be members of the public, detainees, members of counsel or police staff. All areas of the police station that are used by the public, members of staff and counsel should be fully *accessible* to persons with *disabilities*. Secure areas, such as cells and common areas used by detainees, should have provisions to *accommodate* persons with *disabilities*.

APPLICATION

In addition to the design requirements specified in 4.1 to 4.4, holding cells in police stations shall comply with this section.

Except as specified in this section, all *common use areas* serving *accessible* cells or rooms and all *public use areas* shall be designed and constructed to comply with 4.1 to 4.4. Exceptions: Requirements for *areas of rescue assistance* in [4.4.1](#) do not apply. Compliance with requirements for elevators and stairs is not required in multi-storey housing *facilities* where *accessible* cells or rooms, all *common use areas* serving them and all *public use areas* are located on an *accessible* route.

Entrances used by the public, including those that are secured, shall be *accessible* and in compliance with [4.1.5](#). Exception: Secured entrances, doors and doorways operated only by security personnel shall not be required to have *accessible* door hardware.

Where security systems are provided at public or other *entrances* required to be *accessible* by this section, an *accessible* route complying with [4.1.4](#) shall be provided through fixed security barriers at required *accessible* *entrances*. Where security barriers incorporate equipment such as metal detectors, fluoroscopes, or other similar devices which cannot be made *accessible*, an *accessible* route shall be provided adjacent to

such security screening devices, to facilitate an equivalent circulation path for persons using a wheelchair or scooter.

In non-contact visiting areas where detainees are separated from visitors, the following *elements*, where provided, shall be *accessible* and located on an *accessible* route complying with [4.1.4](#).

- Cubicles and Counters: 5%, but not less than one, shall comply with [4.3.7](#) on both the visitor and detainee sides. Where counters are provided, they shall comply with [4.3.8](#) on both the visitor and detainee sides. Exception: Non-contact visiting areas not serving *accessible* cells or rooms.
- Partitions: Solid partitions or security glazing separating visitors from detainees through which communication is necessary shall incorporate communication systems which are *accessible* to both individuals who use a wheelchair or scooter and individuals who have difficulty bending. If such communication systems incorporate a telephone handset, at least one telephone handset shall be equipped with a volume control.

At least 2%, but not less than one, of the total number of cells shall comply with this section. Where special cells are provided (e.g., orientation, protective custody, disciplinary, segregation, detoxification or medical isolation), at least one of each purpose shall comply with this section.

In addition to the aforementioned cell requirements, at least 2%, but not less than one, of general cells shall be equipped with audible emergency warning systems or permanently installed telephones within the cell, in compliance with this section.

Medical care *facilities* providing physical or medical treatment or care shall be *accessible* to persons with *disabilities*.

DESIGN REQUIREMENTS

Accessible cells shall be located on an *accessible* route in compliance with [4.1.4](#).

Where provided to serve *accessible* cells, the following *elements* or *spaces* shall be *accessible* and connected by an *accessible* route.

- All doors and doorways on an *accessible* route shall comply with [4.1.6](#). Exception: Secured entrances, doors and doorways operated only by security personnel shall not be required to have *accessible* door hardware.
- At least one toilet and one bathing facility shall comply with [4.2.1](#).
- *Accessible* beds shall have manoeuvring space of at least 920 mm (36 in.) wide along one side.
- At least one drinking fountain and/or water cooler shall comply with [4.3.1](#).
- Fixed or built-in tables, counters or work surfaces shall comply with [4.3.7](#).
- At least one fixed bench shall comply with [4.3.15](#).
- Fixed or built-in storage shall comply with [4.3.9](#).
- All controls intended for operation by detainees shall comply with [4.4.2](#).

Where audible emergency warning systems are provided to serve occupants of cells, visual alarms complying with 4.4.4 shall also be provided. Exception: Visual alarms are not required where detainees are not allowed independent means of egress.

Where permanently installed telephones are provided within cells, they shall have volume controls.

RELATED SECTIONS

[All relevant parts of Sections 4.1, 4.2, 4.3 and 4.4.](#)

4.5.9 MUNICIPAL COURTS

4.5 FACILITY-SPECIFIC REQUIREMENTS

RATIONALE

Municipal court *facilities* should accommodate persons with *disabilities* who may be members of the judiciary, court clerks or other officials, defendants, members of counsel and members of the public.

Court *facilities* usually incorporate changes in level at the judge's dais and court officials' areas. While it is not required to make all of these areas fully *accessible*, it is a requirement that they be easy to adapt, should the need arise in the future to accommodate a person with a mobility *impairment*. Other areas of the court generally used by the public, defendants, witnesses and counsel should be *accessible* to all persons.

APPLICATION

In addition to the design requirements specified in 4.1 to 4.4, municipal courts shall comply with this section.

In addition to the *accessible entrances* used by staff or the public as required in [4.1.5](#), where provided, at least one restricted *entrance* and one secured *entrance* to the *facility* shall be *accessible*. Restricted *entrances* are those *entrances* used only by judges, public officials, *facility* personnel or other authorized parties on a controlled basis. Secured *entrances* are those *entrances* to judicial facilities used only by detainees and detention officers. Exception: Secured *entrances*, doors and doorways operated only by security personnel shall not be required to have *accessible* door hardware.

An *accessible* route complying with [4.1.4](#) shall be provided through fixed security barriers at required *accessible entrances*. Where security barriers incorporate equipment such as metal detectors, fluoroscopes, or other similar devices which cannot be made *accessible*, an *accessible* route

shall be provided adjacent to such security screening devices, to facilitate an equivalent circulation path.

Where a two-way communication system is provided to gain admittance to a *facility*, or to restricted areas within a *facility*, the system shall provide both visual and audible signals and shall comply with [4.4.2](#).

Where provided, the following *elements* and *spaces* shall be on an *accessible* route complying with [4.1.4](#).

- Spectator, Press and other *areas* with Fixed Seats: Each spectator, press and other *area* with fixed seats having a seating capacity of 25 or less, shall have within its defined area a *clear floor space* complying with [4.1.1](#). Where the seating capacity of a spectator, press and other *area* with fixed seats is greater than 25, seating provision shall be provided in compliance with [4.3.2](#).
- Jury Boxes and Witness Stands: Each jury box and witness stand shall have within its defined area *clear floor space* complying with [4.1.1](#).
- Judges' Benches and Courtroom Stations: Judges' benches, clerks' stations, bailiffs' stations, court reporters' stations, and litigants' and counsel stations shall comply with [4.3.7](#).

Exceptions:

- Vertical access to raised judges' benches or courtroom stations need not be installed, provided that the requisite areas and manoeuvring *spaces* are installed at the time of initial construction, to allow future installation of a means of vertical access complying with [4.1.9](#), [4.1.14](#) or [4.1.15](#) without requiring substantial reconstruction of the *space*.

- In alterations, *accessible clear floor spaces* are not required to be located within the defined area of jury boxes or witness stands and may be located outside these *spaces* where a *ramp* or lift access poses a hazard by restricting or projecting into a required means of egress.

Permanently installed assistive listening systems in compliance with [4.4.6](#) shall be provided in each courtroom. The minimum number of receivers shall be 4% of the room occupant load, but not less than two receivers. An informational sign indicating the availability of an assistive listening system shall be posted in a prominent place.

Where provided in areas for jury assembly or deliberation, the following *elements* or *spaces* shall be on an *accessible route* complying with [4.1.4](#) and shall comply with the following provisions

- refreshment areas, kitchenettes and fixed or built-in refreshment dispensers shall be *accessible* to persons with *disabilities*.
- where provided, drinking fountains shall comply with [4.3.1](#).

RELATED SECTIONS

[All relevant parts of Sections 4.1, 4.2, 4.3 and 4.4.](#)

4.5 FACILITY-SPECIFIC REQUIREMENTS

4.5.10 TRANSPORTATION FACILITIES

RATIONALE

Links to usable transportation should be *accessible* to all members of a community. Accessibility within terminals and use of systems should be addressed. This includes public and private bus, taxi, train, and airplane arrival and departure points. A variety of lift devices may need to be accommodated, and alternatives to audio and/or visual-only scheduling should be available.

APPLICATION

In addition to the design requirements specified in 4.1 to 4.4, transportation *facilities* located within a *site* shall comply with this section.

DESIGN REQUIREMENTS

BUS SHELTERS

Bus shelters shall

- be located on firm, level pads approximately at the same elevation as the sidewalk or walkway;
- have clearances around at least two sides of the shelter, including the landing pad side, of at least 1220 mm (48 in.);
- provide a *clear* view of oncoming traffic;
- incorporate sufficient clear floor space to accommodate a person using a wheelchair or scooter; and
- feature at least one seat with armrests and a seat height between 400 mm and 450 mm (15-3/4 in. and 17-3/4 in.);

All glazed panels surrounding bus shelters shall incorporate decals, and other safety features as specified in [4.1.8](#).

BUS STOPS

Bus stops shall

- incorporate a paved, firm, level surface, in compliance with local authority standards; and
- not be impeded by adjacent street furniture, such as dispensers, vending machines, waste boxes, planters, posts, signs and guide wires.

TRANSIT TERMINALS

Where bus platforms or other boarding platforms are provided, they shall allow safe access for persons who use a wheelchair or scooter, and where possible, provide level access into buses.

The edges of platforms shall incorporate a continuous *detectable warning surface* of at least 600 mm (23-5/8 in.) wide and in compliance with [4.4.8](#).

Lighting levels at all boarding platforms shall be at least 100 lux (10 ft-candles) at the platform or boarding-surface edge.

Boarding locations shall incorporate visible and audible warning signals to advise travellers of approaching vehicles.

Where special lifting devices are used, either on the vehicle or at the boarding point, appropriate manoeuvring *space* shall be provided around the boarding point for waiting passengers using wheelchairs.

Seating shall be provided in compliance with [4.3.15](#), at or close to boarding points.

RELATED SECTIONS

[All relevant parts of Sections 4.1, 4.2, 4.3 and 4.4.](#)

UNIVERSAL DESIGN PRINCIPLES AND GUIDELINES

APPENDIX A

Version 2.0 - 4/1/97

Compiled by advocates of universal design, listed in alphabetical order: Bettye Rose Connell, Mike Jones, Ron Mace, Jim Mueller, Abir Mullick, Elaine Ostroff, Jon Sanford, Ed Steinfeld, Molly Story, and Gregg Vanderheiden

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UNIVERSAL DESIGN:

The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

The authors, a working group of architects, product designers, engineers and environmental design researchers, collaborated to establish the following Principles of Universal Design to guide a wide range of design disciplines, including environments, products, and communications. These seven principles may be applied to evaluate existing designs, guide the design process and educate both designers and consumers about the characteristics of more usable products and environments.

The Principles of Universal Design are presented here, in the following format: name of the principle, intended to be a concise and easily remembered statement of the key concept embodied in the principle; definition of the principle, a brief description of the principle's primary directive for design; and guidelines, a list of the key elements that should be present in a design which adheres to the principle. (Note: all guidelines may not be relevant to all designs.)

PRINCIPLE ONE: Equitable Use

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

Guidelines:

- 1a. Provide the same means of use for all users: identical whenever possible; equivalent when not.
- 1b. Avoid segregating or stigmatizing any users.
- 1c. Provisions for privacy, security,

and safety should be equally available to all users.

- 1d. Make the design appealing to all users.

PRINCIPLE TWO: Flexibility in Use

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

Guidelines:

- 2a. Provide choice in methods of use.
- 2b. Accommodate right- or left-handed access and use.
- 2c. Facilitate the user's accuracy and precision.
- 2d. Provide adaptability to the user's pace.

PRINCIPLE THREE: 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.

Guidelines:

- 3a. Eliminate unnecessary complexity.
- 3b. Be consistent with user expectations and intuition.
- 3c. Accommodate a wide range of literacy and language skills.
- 3d. Arrange information consistent with its importance.
- 3e. Provide effective prompting and feedback during and after task completion.

PRINCIPLE FOUR: Perceptible Information

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

Guidelines:

- 4a. Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information.
- 4b. Provide adequate contrast between essential information and its surroundings.
- 4c. Maximize "legibility" of essential information.
- 4d. Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions).
- 4e. Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

PRINCIPLE FIVE: Tolerance for Error

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

Guidelines:

- 5a. Arrange elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded.
- 5b. Provide warnings of hazards and errors.
- 5c. Provide fail-safe features.
- 5d. Discourage unconscious action in tasks that require vigilance.

PRINCIPLE SIX: Low Physical Effort

The design can be used efficiently and comfortably and with a minimum of fatigue.

Guidelines:

- 6a. Allow user to maintain a neutral body position.
- 6b. Use reasonable operating forces.
- 6c. Minimize repetitive actions.
- 6d. Minimize sustained physical effort.

PRINCIPLE SEVEN: Size and Space for Approach and Use

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

Guidelines:

- 7a. Provide a clear line of sight to important elements for any seated or standing user.
- 7b. Make reach to all components comfortable for any seated or standing user.
- 7c. Accommodate variations in hand and grip size.
- 7d. Provide adequate space for the use of assistive devices or personal assistance.

Please note that the Principles of Universal Design address only universally usable design, while the practice of design involves more than consideration for usability. Designers must also incorporate other considerations, such as economic, engineering, cultural, gender, and environmental concerns, in their design processes. These principles offer designers guidance to better integrate features that meet the needs of as many users as possible.

DRAFT

FADS CHECKLIST

APPENDIX B

CITY OF SASKATOON
FACILITIES ACCESSIBILITY DESIGN STANDARDS

DESIGN DEVELOPMENT AND ASSESSMENT CHECKLIST

Date: _____	✓ Check One for Each Category Design Development <input type="checkbox"/> Facility Assessment <input type="checkbox"/> New Construction <input type="checkbox"/> Renovation <input type="checkbox"/>	Comments
Facility Name: _____		
Facility Address: _____		
Client Group: _____		
Client Contact: _____		
Project Description: _____		

The Facility Accessibility Design Standards (FADS) document is a mandatory design aid applicable to the design and construction of new facilities, as well as the retrofit, alteration or addition to existing facilities owned, leased or operated by the City of Saskatoon. The Design Development and Assessment Checklist has been created to assist staff, designers and contracted consultants with the application of FADS and ensure each element has been applied to each project and to document elements of a project which may have been *technically infeasible* to implement. In a retrofit situation where a design element has little likelihood of being accomplished due to structural conditions or other existing physical or site constraints prohibit modification, the TECHNICALLY INFEASIBLE ELEMENT form shall be completed and signed by the Project Manager and maintained in the project file.

This Checklist is a reference tool only and must be used in conjunction with the FADS document. It does NOT include all requirements or exceptions applicable to each design element. Staff, and the prime consultant where applicable, shall complete this checklist during the design phase of each project. Checklists are to be signed by the appropriate manager and maintained in the project file.

Section Reference	Design Requirement Description	Y	N	Comments or N/A
<u>SITE DESIGN CHARACTERISTICS</u>				
4.1.2	Table 4.1.2	Grade level change; 1/4" max, 1:2 slope or design as ramp		<input type="checkbox"/> <input type="checkbox"/>
4.1.2	Figure 4.1.2.2	Grills and Gratings; 1/2" max wide openings in direction of travel		<input type="checkbox"/> <input type="checkbox"/>
4.1.3	4.1.3.3	Protruding Overhead Objects; 82 3/4" headroom clearance		<input type="checkbox"/> <input type="checkbox"/>
4.1.4	DESIGN REQ.	Exterior Accessible Route; 48"min, slope, passing space, edge protection, lighting		<input type="checkbox"/> <input type="checkbox"/>
4.1.5	APPLICATION	Entrances used by staff and the public shall be accessible, signage required		<input type="checkbox"/> <input type="checkbox"/>
4.1.9	4.1.9.1	Ramps; 1:20 max. slope, 96"x96" landing top & bottom & 65 3/4" max. 29'-6" apart		<input type="checkbox"/> <input type="checkbox"/>
4.1.9	4.1.9.2, 4.1.9.3	Ramps; width 48" min., 37 1/2"-43 1/4" between handrails & 11 3/4" extensions		<input type="checkbox"/> <input type="checkbox"/>
4.1.9	4.1.9.4	Ramps; edge protection, guards		<input type="checkbox"/> <input type="checkbox"/>
4.1.10	DESIGN REQ.	Curb Ramps; running slope 1:50-1:20 (2 - 5%), cross fall at gutter/road surface 1:20		<input type="checkbox"/> <input type="checkbox"/>
4.1.10	DESIGN REQ.	Detectable warning surface; min. 23 3/4"D x width c/w truncated domes, gap at curb		<input type="checkbox"/> <input type="checkbox"/>
4.3.12	4.3.12.1	Accessible Parking Space; 8'-10"x18' + Aisle 78 3/4"x18',		<input type="checkbox"/> <input type="checkbox"/>
4.3.12	4.3.12.1	Limited Mobility / Caregiver Parking Space; 10'-6"x18',		<input type="checkbox"/> <input type="checkbox"/>
4.3.12	Table 4.3.12	# of BF & LM Spaces Required?	# of each Provided in Comments	<input type="checkbox"/> <input type="checkbox"/>
4.3.12	4.3.12.3	Enforceable Parking Signage, mounted 47"-98" above ground, edge protection		<input type="checkbox"/> <input type="checkbox"/>
4.3.12	DESIGN REQ.	Pavement markings, directional signage along route leading to designated spaces		<input type="checkbox"/> <input type="checkbox"/>
4.3.13	4.3.13.2	Passenger Loading Zone; Adjacent access aisle 23'x8'min.		<input type="checkbox"/> <input type="checkbox"/>
4.3.13	4.3.13.1	Passenger Loading Zone; Space 8'-10", Aisle 78 3/4", Vertical clearance min. 11'		<input type="checkbox"/> <input type="checkbox"/>
4.3.14	DESIGN REQ.	3"H Cane-detectable curbs at plantings & grade changes next to pedestrian walks		<input type="checkbox"/> <input type="checkbox"/>
4.3.14	DESIGN REQ.	36" clearance required from Shrubs with thorns to pathways & seating areas		<input type="checkbox"/> <input type="checkbox"/>
4.3.15	APPLICATION	Benches to be accessible (except those in unpaved picnic or park areas)		<input type="checkbox"/> <input type="checkbox"/>
4.3.15	DESIGN REQ.	Benches; seat 17 3/4"-19-5/8"H, arm/back rests, adjacent level area 36"x54"		<input type="checkbox"/> <input type="checkbox"/>
4.3.16	APPLICATION	Picnic Tables; 10% & 1min. to be accessible in each cluster		<input type="checkbox"/> <input type="checkbox"/>
4.3.16	4.3.16.1, 4.3.16.2	Picnic Tables; knee space 19"Dx30"W, top 28"-34"H, level surface 78 3/4" & 48"		<input type="checkbox"/> <input type="checkbox"/>
4.3.17	APPLICATION	Street Furniture; Waste receptacles, light standards, signs, planters, mail boxes		<input type="checkbox"/> <input type="checkbox"/>

APPENDIX B

FADS CHECKLIST

Section Reference	Design Requirement Description	Y	N	Comments or N/A
4.3.17	DESIGN REQ. Street Furniture shall: not to reduce required width of routes, be cane-detectable	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.8	APPLICATION Detectable Warning Surfaces; Exterior walkways, curb ramps, stairs, platforms	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.13	DESIGN REQ. Exterior Lighting; entrances 100lux, walkways, parking, passenger drop-off 30lux	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.14	DESIGN REQ. Ext. Material & Finishes; suitable paving surface, joints 1/4"mx, level change 1/8"mx	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.14	DESIGN REQ. Exterior Stairs; steps non-slip finish, highly contrasting nosing (also see 4.1.11)	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.15	DESIGN REQ. Texture & Colour; detectable warning surfaces cane-detectable and differentiated	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.15	DESIGN REQ. Texture & Colour; consistent use throughout the site to identify same hazards	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.2	DESIGN REQ. Outdoor Rec. Facilities; Boardwalks, Docks, Pathways, Rest Areas, Water Fronts	<input type="checkbox"/>	<input type="checkbox"/>	
<u>BUILDING DESIGN CHARACTERISTICS</u>				
Access and Circulation				
4.1.3	4.1.3.1 Protruding Wall Objects; >26.5" above floor = 4"max protrusion	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.3	4.1.3.2 Protruding Wall Objects; at or below 26.5"above floor = 4"max protrusion	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.4	4.1.4.2 Interior Accessible Route; 43 1/4" except at doors, main corridors 72" preferred	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.4	4.1.4.3, 4.1.4.4. Interior Accessible Route; U-Turns around obstacles > 48" = 43 1/4" & < 48" = 48"	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.6	APPLICATION All doors used by staff and the public (Exception: Closets 20"min clear opening)	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.6	APPLICATION Power Operators at entrances, public washrooms, doors crossing primary routes	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.6	DESIGN REQ. Power Operators; 23 5/8" from inside corner and beyond door swing	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.6	DESIGN REQ. Power Operators; controls 5 7/8" diameter & mounted 39 3/8"-43 1/4"AFF	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.6	4.1.6.8 Power Doors; exterior doors swinging into pedestrian area to have safety guards	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.6	DESIGN REQ. Doors; clear opening 37 1/2"min. (equals 40" door min.; 42" door is stock item)	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.6	4.1.6.7 Door Hardware; single hand use, no twisting of wrist, mounted 32"-47"AFF	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.6	APP&Table 4.1.6 No frameless glass doors or sidelights. Manoeuvring Space / Latch Side Clearances	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.6	4.1.6.5, 4.1.6.6 Space between doors min. 54" + door width swinging into the space	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.6	DESIGN REQ. Thresholds; 1/2"max., bevelled where >1/4", max. slope 1:2	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.6	DESIGN&4.1.6.9 Contrasting colour; door edge if no closer, doors/frames contrast with walls	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.7	4.1.7.1 If turnstiles utilized, accessible gate required with 37 1/2" clear opening & symbol	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.8	4.1.8.1 Windows or Vision Panels; sill height 30"AFF max., no transoms 42"-48"AFF	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.8	4.1.8.2 Glazed Screens & Sidelights; horiz. markings required 58"-60" & 46"-48"AFF	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.8	DESIGN REQ. Operable Windows; hardware 15 3/4"-47"AFF, simple & single hand operation	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.11	4.1.11.1 Stairs; 36" detectable warning surface at top & landings (also see figure 4.4.8.1)	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.11	4.1.11.1 Handrails both sides 34"-36" above nosing, extend 12" top & bottom, safe return	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.11	4.1.11.2 Stairs; uniform rise 7"max./run 11"min., no open risers, illumination 100 lux	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.11	4.1.11.3 Stairs; nosings 1"max sloped 60° to riser, colour contrasting vert & horz edges	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.12	DESIGN REQ. Handrails; 1 3/16"-1 9/16" diameter, 2" clearance from wall (2 3/8" rough surface)	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.13	DESIGN REQ. Escalators; colour contrast tread edges & nosings, detectable warnings, lighting	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.14	4.1.14.1 Elevator; cab 68"x60"min., high-use 80"x60"min., call buttons 35"-37"AFF	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.14	4.1.14.2 Elevator; controls 3/4"min., 5/8" letters, alarm 35"min, top button 47"max to centre	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.14	DESIGN REQ. Elevator; voice-annunciation indicating current floor and direction of travel	<input type="checkbox"/>	<input type="checkbox"/>	
4.1.15	DESIGN REQ. Platform Lifts; only permitted per 4.1.14, platform size 48"x60"min., emergency call	<input type="checkbox"/>	<input type="checkbox"/>	
4.2.1	APPLICATION Toilet Facilities; public and common use washrooms to comply, private = adaptable	<input type="checkbox"/>	<input type="checkbox"/>	
4.2.1	APPLICATION Individual Washroom required where public/common use facilities contain 4+ toilets	<input type="checkbox"/>	<input type="checkbox"/>	
4.2.1	4.1.6 Power door operator required at entrance if no individual washroom on same floor	<input type="checkbox"/>	<input type="checkbox"/>	
4.2.1	APPLICATION Portable Toilets; 5% but no less than one shall be accessible	<input type="checkbox"/>	<input type="checkbox"/>	
4.2.1	DESIGN REQ. Toilet Facilities; identified by accessible signage, illumination min. 100 lux	<input type="checkbox"/>	<input type="checkbox"/>	
4.2.1	4.2.1.1 Toilet Facilities; 67" clearance from face of in-swinging door to adjacent stalls	<input type="checkbox"/>	<input type="checkbox"/>	
4.2.1	4.2.1.1 Toilet Facilities; 60" clearance from face of accessible stall to wall-mounted objects	<input type="checkbox"/>	<input type="checkbox"/>	

FADS CHECKLIST

APPENDIX B

Section Reference	Design Requirement Description	Y	N	Comments or N/A
<i>BUILDING DESIGN CHARACTERISTICS continued</i>				
Washroom Facilities				
4.2.1	4.2.1.1			Clear Space; 54"x30" at sink, 63"x54" at entrance to accessible stall, 36" transfer
4.2.1	4.2.1.1, 4.1.1.2			Toilet Facilities; 180° turning space
4.2.2	4.2.1.1, 4.2.2.1			Toilet Stalls; accessible stall 72"x72", door 35" clear opening, regular stalls 36"x60"
4.2.2	4.2.2.1, 4.2.3			Accessible Toilet Stall; 36" clear transfer space, flush valve on transfer side
4.2.2	4.2.2.1, 4.2.3.1			Grab Bars; horizontal bar min 17-3/4" extending in both directions, 33" -36" AFF
4.2.2	4.2.2.1, 4.2.3.1			Grab Bars; 24" horizontal bar behind toilet mounted 33"-36" AFF or 6" above tank
4.2.3	4.2.3.1			Toilet Paper Dispenser; 11 3/4" max from bowl, 23 5/8" AFF, 2 2/8" clearance from bar
4.2.4	4.2.4.1			Lavatories; clearances, lever-style faucet or electronic controls, dispenser locations
4.2.5	4.2.5.1, 4.2.5.2			Urinals; rim 19-1/2" - 20-3/16" & valve max 44 AFF, 24" vert. grab bars, 31" x 54" clear space
4.2.6	4.2.6.1			Washroom Accessories; controls mounted 35 1/4" - 47" max AFF, mirror 39 3/8" AFF
4.2.7	4.2.7.1, 4.1.1.1			Individual Washroom; 360° turning space, 30"x72" change table, clearances at lav.
4.2.8	4.2.8.1			Bathtubs; 48" vert. & 36" L-shaped grab bars, faucet 17 3/4" max. above rim
4.2.9	4.2.9.1			Shower Stalls; grab bars 30" vert. @ 27 1/2"-31 1/2" AFF & 36" horiz. @ 27-1/2" - 31-1/2" AFF
4.2.9	4.2.9.1			Shower Stalls; fold-down seat 17 3/4" AFF, controls 36" from wall & 39 3/8" AFF
4.2.9	4.2.9.1			Shower Stalls; shower head useable in fixed position or hand-held with 60" of hose
Other Amenities				
4.3.1	APPLICATION			Drinking Fountains (and Water Coolers); 50% & min. one/floor level shall comply
4.3.1	4.3.1.1, .2 & .3			Drinking Fountains; angled alcoves, 30"x54" clear space, 7 7/8"D x 27"H knee space
4.3.2	APPLICATION			Viewing Positions; 1% / min.1 fixed seat @ aisle with NO/removeable or folding arms
4.3.2	4.3.2.2			Accessible viewing locations dispersed, 2 side-by-side, adjacent companion space
4.3.3	4.3.3.1			Elevated Platforms; illumination 100lux, detectable warning surface at open edges
4.3.4	DESIGN REQ.			Dressing Rooms; turning space/entry, 30"x72" bench, collapsible coat hooks
4.3.5	APPLICATION			Offices, Work Areas, Mtg Rms; all areas used by staff, public, clients & customers
4.3.5	DESIGN REQ.			180° turning space, knee space, assistive listening system, natural-coloured lighting
4.3.6	DESIGN REQ.			Waiting & Queuing Areas; barriers laid out parallel - 43 1/4" apart, colour contrasted
4.3.7	APPLICATION			Tables, Counters & Work Surfaces; 10% /min.1 fixed table or work surface to comply
4.3.7	4.3.7.1, .2 & .3			19"Dx27"H knee space, obstructions, surface height 28"-34", approach clearance
4.3.8	DESIGN REQ.			Information, Reception & Service Counters; min. 36"W section w/clearances above
4.3.9	4.3.9.1			Storage, Shelving & Display Units; clothes rods & shelves max.54" AFF, 47" in closets
4.3.10	APPL/DESIGN			Lockers & Baggage Storage; 10% /min.1 to comply, shelves 15 3/4"-47" AFF
4.3.11	DESIGN REQ.			Balconies, Porches, Terraces & Patios; 96" depth, colour contrasting guards
4.3.17	DESIGN REQ.			Kitchens & Kitchenettes; configuration, appliance clearances, sink knee space
Systems and Controls				
4.4.1	APPLICATION			Emergency Exits, Fire Evac. & Areas of Rescue Assist.; audible & visual alarms
4.4.2	4.4.2.1			Controls & Operating Systems; operable portions 35"-47" AFF, elect. outlets 15 3/4"
4.4.4	APPLICATION			Visual Alarms; washrooms, lobbies, and common areas; integrated into alarm system
4.4.5	APPLICATION			Access. Public Telephones; volume controls, 25% /min.1, plug for TTY, closed-circuit
4.4.7	DESIGN REQ.			Signage; colour-contrast, tactile, Grade 2 Braille, pictograms, 58"-60" AFF, latch-side
4.4.8	4.4.8.1			Detectable Warning Surface; one tread back & 36" min. @ top of stairs, full landings
4.4.9	RATIONALE			Public Address Systems; visual equivalents for persons with a hearing impairment
4.4.9	DESIGN REQ.			Speakers above head level; corridors, assembly/meeting areas, rec. facilities, zoned
4.4.10	DESIGN REQ.			Information Systems; kiosks & video displays provided in alternate formats

APPENDIX B

FADS CHECKLIST

Section Reference	Design Requirement Description	Y	N	Comments or N/A
<u>BUILDING DESIGN CHARACTERISTICS</u>				
Systems and Controls, continued				
4.4.6	APPLICATION Assistive Listening Systems; permanent system if >50 persons, >100m ² , fixed seats	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.7	APPLICATION Signage; International Symbol of Accessibility @ elements & spaces	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.11	DESIGN REQ. Card Access, Safety & Security Systems; max.42"AFF adjacent door / clear of swing	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.12	DESIGN REQ. Glare & Light Sources; floor & wall surface material selection to minimize glare	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.12	DESIGN REQ. Glare & Light Sources; window coverings, diffusers/recessed lenses to minimize glare	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.13	DESIGN REQ. Interior Lighting; elevator lobby/cab, washrooms, controls 200lux, office areas 300lux	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.14	DESIGN REQ. Int. Materials & Finishes; low-level loop/non-static carpet, non-slip/non-glare surfaces	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.15	DESIGN REQ. Texture & Colour; defined boundaries ie: nosings, wall vs.floor, end wall vs.return wall	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.15	DESIGN REQ. Texture & Colour used to enhance wayfinding, used consistently throughout the site	<input type="checkbox"/>	<input type="checkbox"/>	
4.4.16	DESIGN REQ. Acoustics; sound transmission/reflection of finish materials, acoustical treatments	<input type="checkbox"/>	<input type="checkbox"/>	
Facility Specific Requirements				
4.5.1	APPLICATION Arenas, Halls & Indoor Rec. Facilities; accessible seating options, direct routes	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.2	DESIGN REQ. Outdoor Rec. Facilities; boardwalk 78 3/4"W, curbed edges, guards where >17 3/4"	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.2	DESIGN REQ. Rest areas w/benches on trails, pathways, walkways; waterfront lookouts accessible	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.2	DESIGN REQ. Playgrounds generally accessible & useable by children with varying abilities	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.3	APPLICATION Swimming Pools; includes wading pools, hot pools, spray pads & therapy pools	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.3	DESIGN REQ. Direct accessible route - change rooms to entrance & pool deck, shower chair avail.	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.4	APPLICATION Cafeterias; 10%/min.1 fixed table or counter distributed, min. 1 cashier lane 43 1/4"	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.4	DESIGN REQ. Cafeterias; if serving counters > 34"AFF one counter to be min.60"L & 28"-34"AFF	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.5	APPL/DESIGN Churches, Chappels, places of worship and/or reflection including assoc. spaces	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.6	APPLICATION Libraries; 10%/min.1 fixed seats/tables/carrels, min.1 checkout lane, 50% computers	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.6	4.5.6.1, .2 & .3 Libraries; 43 1/4" routes, 180° turning space, shelving max.47"AFF, tables max.36"D	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.6	DESIGN REQ. Libraries; book drops adjacent 96"x96" level clear floor space, slot 34"-35"AFF	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.6	DESIGN REQ. Libraries; lighting min.200lux directly book stacks, acoustics free of background noise	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.7	APPLICATION Business, Mercantile & Civic; areas used for transactions/sale of goods or services	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.7	DESIGN REQ. Above areas with cash registers to be min.36"Lx34"H with min.30"x54" clear space	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.7	DESIGN REQ. Above areas w/o cash registers to be min.34"Lx34"H or auxillary space in proximity	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.7	DESIGN REQ. Accessible communications if solid partitions or glazing separates personnel & public	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.8	APPLICATION Police Stations; holding cells, common use areas, public entrances, visiting areas	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.8	DESIGN REQ. 36" space beside cell beds, min.1 access. toilet/bathing area, visual/audible warnings	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.9	APPLICATION Municipal Courts; min.1 secured & 1 restricted entrance must comply	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.9	DESIGN REQ. Visual/audible warnings, permanent assistive listening system, accessible jury rooms	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.10	DESIGN REQ. Transportation Facilities; 48" clearance 2 sides of bus shelters, clear space in shelter	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.10	DESIGN REQ. Bus Shelters; bench seat 16"-18"AFF with armrests, safety stripes on glazed panels	<input type="checkbox"/>	<input type="checkbox"/>	
4.5.10	DESIGN REQ. Transit Terminals; detectable warnings @ platforms, 100lux @ boarding areas	<input type="checkbox"/>	<input type="checkbox"/>	

I have utilized this Checklist as a design aid in conjunction with the FADS document throughout the design phase of this project.

Project: _____ Consultant/Firm: _____ Date: _____

I have utilized this Checklist as a design aid in conjunction with the FADS document throughout the design phase of this project OR I have reviewed the design submissions of the Consultant and acknowledge FADS compliance throughout the project Scope of Work.

Project: _____ Technologist: _____ Date: _____

Manager: _____ Date: _____

CHANGE ORDER FORM

APPENDIX C

**PROPOSED CHANGES TO
CITY OF SASKATOON
FACILITY ACCESSIBILITY DESIGN STANDARDS**

Mail to: Infrastructure Services Department, Attention: Branch Manager, Facilities Branch
City of Saskatoon
1101 Avenue P North
Saskatoon, SK.
S7L7K6

Name: _____

Phone: () _____

Address: _____

Company or Organization: _____

E-mail Address: _____

Proposed Change:

(including proposed new or revised wording, or identification of wording to be deleted)

Reason for Change:

(Attach additional information if required)

DRAFT

Saskatoon Accessibility Advisory Committee

Matters for Follow-up

Snow Removal

Accessibility and Criteria for Snow Removal on Sidewalks and Accessibility of Saskatoon Streets

February 10, 2017

Director of Roadways and Operations Harris was in attendance to provide an update on the snow clearing status. Mr. Harris advised the Committee of the formal level of service and the main areas of concern for the Division related to accessibility. The Committee was informed that a pilot project related to the logistics around snow removal, which will include a detailed engagement exercise, will help assist in resolving common problems and issues. The Committee will be notified once project is underway.

January 13, 2016

Committee Assistant to request Administration attendance for update on snow clearing on roadways and sidewalks.

October 15, 2015

Director of Community Standards, Hildebrandt gave a brief update on the snow removal clearing bylaw. Mr. Hildebrandt stated that it was Community Standards main goal to keep the sidewalks clear and putting the responsibility on the homeowner rather than the City.

June 12, 2015

Dir. of Community Standards Hildebrandt gave a brief update on the snow clearing bylaw similar to what was presented to the Committee in Feb. 2015.

May 8, 2015

Email from M. Simmonds was discussed. No further updates were provided.

March 13, 2015

Dir. of Community Services Lacroix informed the Committee that awareness campaigns continue to be worked on in order to help make the city more accessible for everyone. The City also understands that they have to be role models by ensuring snow is being removed from City-owned property.

February 13, 2015

Dir. of Community Standards Hildebrandt gave an update on sidewalk snow clearing enforcement report being presented to City Council at their Feb. 23/15 mtg.

Saskatoon Accessibility Advisory Committee

Matters for Follow-up

January 9, 2015

Dir. of Transportation Gardiner and Dir. of Community Standards Hildebrandt gave an update on snow removal bylaw enforcement report.

Saskatoon Accessibility Advisory Committee

Matters for Follow-up

Accessible Audible Pedestrian Signals (APS)

The matter has been put back on the follow-up list after Sept. 11/15 meeting to further determine course of action.

October 9, 2015

80/275 signalized intersections in Saskatoon are equipped with audible pedestrian signal devices. There is work being done to retrofit existing high pedestrian traffic intersections with APS. New development areas will have APS installed.

February 12, 2016

Planning and Development, Senior Planner Lau spoke and answered questions of the Committee regarding pedestrian signals in the Downtown area.

October 9, 2015

Traffic Operations Engineer, Transportations Lazic gave an update on the downtown audible pedestrian signals. Mr. Lazic reported that since the last Committee meeting held on September 11, 2015 that all audible pedestrian signals have been replaced, or fixed.

September 11, 2015

G. Lazic and J. Magus both with COS Transportation Division presented a letter written by the Transportation & Utilities Department to the AEBC, Saskatoon Chapter addressing this matter. Mr. Lazic will update the Committee in Oct. on the 25th St. & Idylwyld Dr. intersection.

Saskatoon Accessibility Advisory Committee

Matters for Follow-up

Persons with Disabilities Parking

The matter has been put back on the follow-up list after Sept. 11/15 meeting to further determine course of action.

April 21, 2017

In the absence of the Chair, the Committee Assistant reported that the Standing Policy Committee on Transportation, at its meeting held on April 4, 2017, resolved that the matter of a term-limit and tracking of loading zones in residential areas be referred to the Administration for a report.

March 10, 2017

Special Projects Manager, Permitting and Policy Services Russell and Transportation Engineer Marvoux were present to speak to the loading zone placards and disabled parking signage.

Special Projects Manager, Permitting and Policy Services Russell spoke to the parking programs available to disabled persons. The Committee was informed of the City of Saskatoon Disabled Parking Permit and that it can be obtained at a low cost. The Committee raised concerns regarding the lack of information available to the public regarding the additional option of the City of Saskatoon Disabled Parking Permit. The additional permit would provide more parking options for those in need.

Transportation Engineer Marvoux spoke to the issuing of signs and disabled parking zones. The residential parking zones and loading zones are self-regulated based on requests submitted and approved based on the criteria required. Enforcement on these zones are on a call-in basis. The use of these zones are not monitored and typically are requested for removal as a ticket is issued if reported.

Access Transit Manager Howe advised that the Access Transit bus drivers will be requested to provide locations where additional loading zones are required.

Discussion followed and the Committee agreed that there is a need of a term-limit on loading zones in residential areas including follow-up tracking regarding the removal of the signs. A term-limit would assist in removing the unnecessary residential loading zones if the resident moves or passes away thus minimizing the misuse of the zone.

ACTION: Letter to the Standing Policy of Transportation recommending that the Administration explore options for placing a term-limit on loading zones in residential areas and options for follow-up regarding tracking of these signs when no longer required; and update the Committee at the appropriate time.

February 10, 2017

Follow up to discussion the Committee requested to have the Director of Community Standards to attend the next meeting to address loading zone placards loading zone signage in residential areas and disabled parking signage.

Saskatoon Accessibility Advisory Committee

Matters for Follow-up

Sept. 9/16 – Y. Li, Transportation & Utilities, reviewed the submitted report regarding proposed loading zones policy & disabled parking zones policy. The Committee resolved that the Admin look into options for placing a term-limit on residential loading zones and look into options for follow-up regarding tracking the removal of these signs & update the Committee at a later date. L. Saar, Community Services updated the Committee regarding loading zone placards and loading zone sticker issuance along with the installation of loading zones.

Feb. 12/16 – Community Standards, Director Hildebrandt spoke and answered questions of the Committee regarding the disability placards and stickers for parking.

Nov. 13/15 – The Committee discussed the availability of Handicapped Parking Stalls in front of businesses in Saskatoon. The Committee suggested that the Director of Community Standards Hildebrandt attend the January 8, 2016 meeting.

Oct. 9/15 – Director of Community Standards, Hildebrandt provided an update on the intent of future work to more accessible parking spots and their size; loading zones; and asked the Committee their views on the permit parking policy and what they believe is needed. The Committee agreed that the City should continue to use both the stickers and vehicles tags, as well as, moving to more defined impaired parking spots.

Sept. 11/15 – It was determined to invite Dir. of Community Standards Hildebrandt to the Oct. mtg. to provide an update.

Jun 12/15 – Dir. of Community Standards Hildebrandt provided an update on the intent of future to accessibility spots and their size, loading zones, and a review of the permit parking policy. Administration welcomes feedback from the public on any parking services project.

May 8/15 – G. Kozlow circulated a Star Phoenix article on the shortage of downtown disabled parking. It was suggested to invite parking services administration for an update.

Mar 13/15 – There are a few glitches with the new system that are being rectified. Max. time currently allowed to park is 90 mins., meters work by inputting the vehicle license, payment at the meters can be cash, credit card or PayPal, parking ambassadors are patrolling the streets to assist the public with the operation of the new meters.

Jan 9/15 – Parking issues/concerns are to be addressed to Community Standards Division. Parking policies are being reviewed through the 2015 Parking Study.

Saskatoon Accessibility Advisory Committee

Matters for Follow-up

Public Transit and Access Transit

Follow up as appropriate

April 21, 2017

Access Transit Manager Howe reported that the new automated reminder system for Access Transit is active and provides reminder phone calls. This system will assist in the late cancellations and no shows.

January 13, 2016

Approximately 30 Access transit buses in the current fleet. All buses have automated voice announcements.

October 9, 2015 – Access Transit Manager, Bob Howe was in attendance and provided an update to the Committee on the Access Transit Annual Report. Mr. Howe updated the Committee on the following:

- Seeking information from the public regarding their personal limitations with Transit and Access Transit buses.
- The future idea is to have all buses be more accessible for those with mobility issues, including turning radius, announcements over the speakers, and digital destination boards.

Operations Managers, Michael Moellenbeck and Harold Matthies spoke and answered questions of the Committee on Transit updates. Mr. Matthies and Mr. Moellenbeck updated the Committee on the following:

- Transit is looking at developing a mobile app based system for the public to use regarding public transit.
 - Training bus drivers to become more of a 'tour guide bus driver' to aid those impaired when taking the bus to aid the public that take the bus.
-

September 11, 2015 – Committee members shared experiences from Aug. 26/15 regarding their participation with Saskatoon Transit Voice Announcement System (ITS). On-going issues remain with bus drivers not calling out bus stops.

May 8, 2015 – Access Transit Manager Howe was updated on staff inconsistencies with calling out bus stops.

March 13, 2015 – All buses are now part of the new tracking system implemented due to the new City website. Some staff continues to not call out bus stops.

Saskatoon Accessibility Advisory Committee Matters for Follow-up

Sidewalks and Access Ramps

Action Plan for Accessibility and Safety Sidewalks and Access Ramps Accessibility of Saskatoon

January 12, 2016

Curb ramps are being installed in new neighbourhood designs. The city developed a 10 year plan to address priority locations for curb ramps.

February 12, 2016

Major Projects, Traffic Management Engineer Frank spoke on the city-wide sidewalk assessment study that took place and answered questions for the Committee and answered questions of the Committee regarding the city-wide sidewalk assessment study. Discussion ensued regarding sidewalk safety and access ramps in the Downtown area. The Committee shared their appreciation toward the improvements made so far on the sidewalks.

Planning and Development, Senior Planner Lau spoke and answered questions of the Committee regarding plans for 2016 sidewalk improvements. Mr. Lau shared Urban Design's upgrade to the tree grates on the sidewalks and the improvements they have made to them and future plans pertaining to tree grates.

Transportation, Traffic Management Engineer Matt spoke and answered questions of the Committee regarding access ramps throughout the city. Discussion ensued regarding the condition of access ramps and funding for improvements.

Saskatoon Accessibility Advisory Committee

Matters for Follow-up

Establishing Accessible Design Standards for New Buildings, Renovated Buildings and New Areas of Saskatoon.

Ensuring an enhanced accessibility level

April 21, 2017

Director of Building Standards, Kara Fagnou provided a presentation highlighting changes to the National Building Code with respect to barrier free accessibility.

Ms. Fagnou addressed questions related to the implementation of the new National Building Code. The Committee was advised that home owners and building owners can become barrier free at any time. It was noted that older properties would be exempt to the new Building Code standards however, renovations or a change in use could require modifications as set out in the Code.

January 13, 2017

Committee discussed the sidewalk accessibility at the new hotel site adjacent to the Saskatoon Fieldhouse. Director of Recreation and Community Development Lacroix to provide an update regarding the site plan related to accessibility. Accessibility at linear parks was another subject of discussion.

01-5576-103 - ACCESSIBILITY ADVISORY COMMITTEE - 2017 BUDGET - \$3,000

DATE	NUMBER	DESCRIPTION	DEBIT	CREDIT	BALANCE	GL	TOTAL SPENT	BUDGET REMAINING
		Beginning Balance			0			\$3,000
		Remaining Balance						\$3,000