A Roadmap to Accessibility
Part I: The Built Environment

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on behalf of
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Illustrations adapted from Canadian Standards Association B651-12: Accessible Design for the Built Environment and Parks Canada: Design Guidelines for Accessible Outdoor Recreation Facilities.
INTRODUCTION

In the summer of 2014 through Spring of 2015 four member agencies from the Ontario Land Trust Alliance (OLTA) participated in a review of accessible features they offer staff, volunteers and visitors in relation to meeting the requirements of the Accessibility for Ontarians with Disabilities Act (AODA). The review was conducted by an independent accessibility consulting firm, Sterling Frazer Associates (SFA), who worked with OLTA representatives and management from each of the participating agencies. Findings from the review was intended to serve as “A Roadmap to Accessibility” for other OLTA members to follow when assessing their own accessible features and compliance with the provincial legislation.

At the conclusion of the four member agencies completing the assessment, three additional documents were produced: (1) Built Environment; (2) Public Spaces; and, (3) Communication. Each highlights relevant information that was learned from the experience of the project. The reports also provide supplemental information that can be used to help other Ontario Land Trust Alliance member agencies evaluate their properties/programs as they relate to standards for increasing access for people with disabilities.

Part I highlights the built environment and focuses on interior spaces. The majority of information in this report reflects the design criteria listed in the Canadian Standards Association B-651 – Accessible Design for the Built Environment and should be considered minimum standards for meeting the needs of people with disabilities. Where examples are given that reference other standards they are identified individually.

SFA uses the Canadian Standards Association document when auditing existing properties, however, when modifications are made to create new accessible spaces the requirements of the Ontario Building Code and the Design of Public Spaces accessibility standard need be met. In addition, SFA recommends referencing the Facility Accessibility Design Standards (FADS), produced by the City of London, Ontario. The FADS are more in keeping with the technologies that are being used by people with disabilities today; for example, the FADS provide greater recognition of the advancements of mobility devices such as all-terrain scooters or advanced powered wheelchairs which are considerably larger than manual wheelchairs.
LEGISLATION:

ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES ACT (AODA)

In June 2005 the Province of Ontario passed into legislation the Accessibility for Ontarians with Disabilities Act, 2005 (AODA). The intent of the Act is to create a province that is inclusive and respectful to people with disabilities by identifying and removing barriers. The expected deadline to reach this goal is 2025. While discrimination based on disability is covered under both the Ontario Human Rights Code and the Canadian Human Rights Act, they only serve to provide an avenue of recourse when discrimination has occurred; whereas, the AODA is an attempt to create an accessible province for people to live, work and play.

The AODA has five standards. They are: (1) Customer Service; (2) Employment; (3) Information & Communication; (4) Transportation; and, (5) Design of Public Spaces (originally referred to as the Built Environment). Each Standard has various deadlines and requirements for compliance, depending on the number of staff employed by the organization. Four of the standards are grouped together under one regulation — the Integrated Accessibility Standards Regulation (IASR), which includes: Employment, Information and Communications, Transportation and Design of Public Spaces.

The AODA applies to every organization in Ontario with one or more employees. Some exemptions exist where organizations are under federal government jurisdiction; for example transportation services that also operate outside the province of Ontario, Federal Government departments, and/or banks, to name a few. In addition, portions of the Act makes provision to exempt smaller organizations with employees that range from 1 to 49. Each organization is responsible for knowing which portions of the Act apply to them and in knowing the deadlines that have been established by the Province of Ontario.

The Ontario Building Code affects new construction and renovations and requires a permit to perform the work. The Design of Public Spaces accessibility standard, however refers to the redevelopment of elements in public spaces that are planned events, for example, changing the tables in a public eating area, such as a food court, requires the new tables to include design criteria that are accessible and in compliance with the Design of Public Spaces standard.

Complying with the AODA is the responsibility of all public, private and not-for-profit organizations
that have one or more employees in Ontario. It is the responsibility of the organization that undertakes any new construction or redevelopment of public spaces, and not the contracted services who are involved. For example, architects, engineers, and general contractors are not responsible for ensuring the accessibility requirements are met by the property owner. In situations where space is leased, if it is the responsibility of the tenant to develop the space, it is the responsibility of the tenant to comply with the legislation.

**ONTARIO HUMAN RIGHTS CODE**

Under the Ontario Human Rights Code organizations are required to accommodate persons with disabilities to the point of undue hardship.

The AODA does not replace the obligation of an organization to accommodate a person with a disability. Where there are two or more laws that relate to accommodating a person with a disability, the law that provides for the greatest benefit to the person with a disability shall take precedence.

**PROJECT RESOURCE MATERIALS**

The Ontario Building Code and the *Design of Public Spaces* standard are the only documents that have legal jurisdiction over creating accessible spaces.
within the built environment and therefore should be referenced through all new construction, renovation or redevelopment. However, there is no legislation that requires existing environments be modified as a proactive measure to increase accessibility for people with disabilities.

For the purposes of this project a number of published documents were used to evaluate the accessibility of the four partner agencies. The challenge in using multiple sources is they do not always agree with one another. For example, the accessible width of a door varies depending on the source. According to the updated Ontario Building Code (OBC) an accessible doorway has a clear opening of 850mm; Canadian Standards Association - B651-12 Accessible Design for the Built Environment (CSA B-651) recommends a clear opening of 810mm; the Facility Accessibility Design Standards (FADS) recommends a clear opening of 950mm and the Americans with Disabilities Act (ADA) recommends a clear opening of 915mm.

In a recent report to its members the International Association of Accessibility Professionals has stated that future development of new criteria for accessible design should be done with caution as it is becoming increasingly challenging for suppliers of products and services to meet the individual or unique requirements across various provinces, states, or countries.

Under the AODA, any municipality with 10,000 residents or more must have an accessibility advisory committee made up of representatives of the community; this may be a valuable resource when seeking advice from the disability community.

**Recommended Resources:**

Ontario Building Code (Building Code Act, 1992 – Ontario Regulation 332/12): Came into effect on January 1, 2015. Pay particular attention to Section 3.8 Barrier-Free Design. OBC is required for all new construction or renovations that require a building permit.

Design of Public Spaces – AODA: Integrated Accessibility Standards Regulation (IASR): Came into effect on January 1, 2013. There are varying timelines for compliance depending on the size of the organization. Smaller organizations, with 1-49 employees, are exempt from certain sections of the legislation. Each organization must become knowledgeable on which sections apply and the dates that are required for compliance.

Accessible Design for the Built Environment - B651-12 – Canadian Standards Association (CSA).* Published in 2012, this document provides a good overview of accessible design features that
generally exceed those required under the Ontario Building Code and Design of Public Spaces standard. The authors of this report use this document to evaluate the accessibility of existing buildings and public spaces.

Facility Accessibility Design Standards – City of London, Ontario.* Published in 2007. The City of London has created an accessibility standard that has quickly become one of the leading resources for accessible design across Canada. The publication (often referred to as the FADS) is free of charge and has been adopted by many municipalities across the country. This document is intended for renovations and new construction.

As stated previously (see section on Ontario Human Rights), where conflicting legislation exists, the choice should be the option that provides the highest level of accessibility to a person with a disability. In the built environment, the authors of this report primarily used the Canadian Standards Association document to evaluate existing buildings, using its criteria as the minimum acceptable range. However, for renovations and new construction, the new Ontario Building Code and Design for Public Spaces standard should provide the minimum level of accessible design features. Plus, we recommend using the FADS from the City of London Ontario as their design criteria is better suited to the assistive technologies used by persons with disabilities.

Please note, it is not possible to make a physical space that is accessible to everyone. There will always be examples where a person faces a barrier even when the most current and relevant accessible design features are included. The difference will be in the way that staff and volunteers interact with the person in order to accommodate their individual needs.

*Resources recommended by Sterling Frazer Associates to supplement the OBC and the AODA Design of Public Spaces.

Visit OLTA’s website (www.olta.ca) for a copy of their Naturally Accessible Resource Guide.
THE BUILT ENVIRONMENT

Please note, this is not a comprehensive list of accessible design requirements for the built environment. Its purpose is to create accessibility awareness of people with disabilities within public spaces. If an organization is planning renovations, new construction or redevelopment of its property, please refer to the provincial requirements stated by the Ontario Building Code and the AODA Design of Public Spaces.

FLOORING

Smooth surfaces provide the ability for a person using a mobility device (cane, crutches, walker, wheelchair, scooter) to travel easily. It also benefits a person with a lower limb disability or who uses a prosthetic or who may be blind or have low vision as it reduces the chance of tripping. Be cautious of any extra items such as electrical cables or transitions between floor surfaces as these can be a trip hazard. An item as small as 6mm can create a trip hazard or become a barrier to a person using a mobility device.

Creating a path defined by color can be useful to guide a person who has low vision. Similarly, creating strong contrast between horizontal (e.g. floors, tables, desks) and vertical surfaces (e.g. walls, partitions, floor mounted signs) helps to define the space. Color is also useful in wayfinding and may benefit a person who is unable to read signage. For example, “follow the red tiles to the washroom” provides clear direction for a person with low vision, or someone with an intellectual disability.

Avoid busy patterns, they create visual confusion for a person with low vision.

Texture can be used in the same way to assist a person who is blind. Some examples include: grooved flooring surface, tiles surrounded by carpet, or carpet surrounded (edged) by tiles. These provide tactile cues and direction.
for a person walking within a large space.

Low pile, wall to wall carpet is appropriate for indoor use. While people who use manual wheelchairs or walkers may find it more difficult to travel across than tile or hardwood it does eliminate glare and slippery surfaces. The thicker the carpet, or the under pad beneath the carpet, the more difficult it is for a person with a mobility related disability to move across.

According to CSA B651-12, transitions along floor surfaces shall not exceed 6mm without modifications being made to accommodate the change in elevation. An elevation change of 7mm to 13mm shall have a bevelled edge to soften the transition. Anything greater than 13mm requires a ramp that is constructed with running slope more than 1:12. In comparison, the Design of Public Spaces standard suggests a more gradual slope of 1:15 – which creates less stress as a person with a disability ascends the ramp and provides more control when the slope is moving downward.

Surfaces that provide a high shine (glare) from either a direct or indirect source can cause confusion for a person with low vision. The added light is perceived as an opening which could be interpreted as a hole or change in elevation. Avoid using wax or other products that create a gloss finish on floor surfaces, they add to the glare and increase potential of slipping.

Be aware that openings along walkways or paths can create a barrier for a person who uses a cane or crutch or other assistive device. For example, air vents in the floor can cause a person who uses a white cane (which has a narrow tip) to get caught in the openings of the floor grates. To avoid this, the openings that are elongated should be placed so they run perpendicular to the natural direction that a person travels and the openings shall be no larger than 20mm.
**PATH OF TRAVEL**

In addition to flat, non-slip surfaces, the width of a walkway or hallway shall have a minimum width of 920mm (interior) or 1100mm (exterior).

A person who uses a pair of crutches to walk needs 920mm, while a person using a walker only needs approximately 635mm. A person who walks with a service animal requires at least 1200mm clearance. Two people passing one another along a hallway, when one person uses a manual wheelchair, requires a minimum width of 1500mm.

Avoid placing items such as shelves, signs, water fountains, fire extinguishers, etc. along areas considered to be a natural path of travel.

Where it is necessary to have items mounted along a path of travel, such as overhead signage, the item should be installed at a height with the lowest portion mounted no less than 2030mm from the floor. This provides sufficient space for a person to walk under it without the item becoming a physical hazard.

If an item has to be mounted on the wall, it should not extend more than 100mm from the wall, however, if it does, the lower edge of the item shall not be higher than 680mm from the floor – this provides the ability for a person with a vision disability to detect the item using his/her cane.

Moisture and dirt tracked in from the outdoors has the potential to create a slippery surface on floor tiles. Area rugs and/or mats can reduce this danger. However, they also have a tendency to shift which in themselves can become trip hazards if they do not lay flat. Mats that are made of a heavy material and have rubber backing are less likely to move from normal traffic.
STAIRS

The surface of stairs should be enclosed. Stairs with open risers create visual confusion for a person with vision related disabilities. For example, a person with low vision may be distracted by images that are beyond the surface of the stairs, or the extra light can give the sense of an unprotected opening in the floor. Additionally, movement of another person that is detected through the stairs causes added confusion and can create a sense of dizziness.

Open risers create a potential hazard for a person using a mobility device. A cane or crutch can slide through the opening and potentially damage the assistive device or injure the person using it.

Riser should transition smoothly to each tread. Square bull nosing with an abrupt underside creates a potential trip hazard.

Stairs shall be constructed with consistent height between each of the risers (distance between steps). Unexpected changes in height may cause a person to trip when his/her foot does not land where it is anticipated based on their experience with previous steps in the flight. A rise of 180mm is comfortable and can be achieved by a wide range of people regardless of age, physical ability or size if the individual.

The surface of the step (tread) shall be deep enough for safe/secure foot placement. A depth of 280mm meets the requirements for the majority of the population.

Looking down from the second floor the carpet change is obvious from the landings compared to the stairs which helps to identify the difference between vertical and horizontal travel, however the stair edges are not easily identified.

Handrails are required on both sides of stairs to accommodate travel in either direction and to assist a person who only has use of one hand.
A tactile indicator shall be placed at the top of a flight of stairs. The indicator is to assist a person with low vision or who is blind to identify the change in elevation. The indicator pad should be permanently fixed to the floor and set back the distance of one stair tread. It should run the full width of the stairs and extend back approximately 600mm to 650mm.

Creating a visual difference between the color of the stairs from the landing areas or at each floor level provides additional cues for a person with low vision to identify the difference between a vertical path of travel and a horizontal path of travel.

A contrasting color strip shall be included along the entire front edge of each tread. This helps to visually separate each step within the flight of stairs. Stairs that are the same color without edging blend together when viewed from above. The color yellow is vibrant and easy to identify against...
most other background colors. Yellow is suitable for an aging eye.

Handrails (railings) are required to assist a person by providing support for balance or mobility. See the section on *Handrails* below.

**Ramps**

A ramp is a sloping walkway leading from one level to another and is required if the transition between the two levels is 13mm or higher. The preferred rise to run ratio for a ramp is 1:20 (e.g. 20 inch length for each inch of elevation). However, various standards reference different ratios; which usually is dependent upon the environment where they are used. Existing structures have far more physical restrictions when ramps are added as an afterthought to the construction. Where possible, a 1:12 ratio should be considered the minimum slope for interior spaces, but there are times when a steeper slope may be used.

The OBC requires ramps to have a minimum width of 900mm. A flat clear space measuring 1670mm by 1670mm of flat ground at both the top and bottom of the ramp. If the length of the ramp exceeds 9000mm, a landing shall be created to provide a flat area of rest measuring 1670mm in length and the same width of the ramp. If the ramp changes direction a landing shall be used to provide space to accommodate the turning radius (1670mm by 1670mm) required for most mobility devices.

Ramps that are not bordered by walls may require either a handrail or a raised edge. The recommended height of the raised border according to the *Design of Public Spaces* is 50mm (CSA B-651 recommends 75mm). This helps prevent wheelchair wheels from slipping over the edge, and/or it helps a person with a vision related disability to physically identify the edge of the ramp using a cane.

When railings are used, the railings shall be installed on both side of the ramp. This helps a person using a mobility device to use the railing to aid in moving along the length of the ramp, or as a way to keep from rolling backwards if they take a rest along the sloped section of the ramp. Additional information about the design criteria for *handrails* can be found in subsequent sections of this document.
Handrails

Round rails provide a more natural and comfortable grip. A person with limited dexterity may have difficulty holding onto a square or rectangular railing. In order for a person to place his/her hand onto the rail, a minimum of 35mm to 45mm distance between the railing and the vertical surface (wall) is required. If the vertical surface is rough, such as areas with stucco or cement surfaces, additional clearance between the rail and the wall will reduce potential injury (recommend 45mm to 60mm).

Handrails are required to be on both sides of the stairs. This accommodates a person as he/she travels up or down the stairs and is of benefit for a person who may only have use of one hand/ arm.

In the case of multi-story buildings, one railing shall run continuous the entire series of stairs. This accommodates safety in the event of an emergency where lighting levels may be low. A continuous railing allows a person to have constant contact with the railing as it guides them to the level they can escape the building. It also benefits a person with a vision disability.
Railings shall be mounted between 860mm and 920mm from the floor. An extension at the top of each flight of stairs shall protrude horizontal to the floor for 300mm prior to the first step. This serves as advance warning of the change in elevation and provides time and space for a person to prepare him/herself to descend the stairs. At the bottom of each flight of stairs the handrail shall continue its slope the distance equal to one full tread and then extend an addition 300mm horizontal extension. This allows a person to gain his/her balance or breath before letting go of the railing.

Provide strong color contrast between the walls and the railings as a way of enhancing its placement for ease of grasping. This is helpful if a person needs to grab the railing unexpectedly.

**Doors**

As mentioned previously, there are a number of (differing) criteria for suggested accessible door widths. Of the examples given previously, CSA provides the narrowest recommended opening for a doorway at 810mm. This is sufficient for the majority of assistive devices to fit through. However, all standards are suggestions and they represent the smallest acceptable size, therefore, when given the opportunity, choose a wider doorway.

When assessing a doorway for accessibility the space is measured between the two vertical frames of the door without obstructions; which means any hardware such as locks, doorknobs, levers, handles, or push bars are subtracted from the opening measurements.

Door hardware should be operable with either a closed fist or open palm. Either of these replicate how a person with a disability may be able to operate the hardware. Round door knobs are difficult for a person with limited dexterity to grasp, in some cases requiring both hands to operate. The twisting motion of a round door knob is also difficult for a person with mobility limiting conditions such as arthritis in the wrist, elbow and shoulders.

A lever style door handle is preferred over a round door knob. A D-shaped handle that allows a person to pull the door open using a modified hand grip or assistive device is also useful. The location and purpose of the door will determine which is more appropriate.

Locking mechanisms should be sliding locks. Round locking mechanisms have the same barriers as round door knobs, plus, they are typically smaller in size making them more difficult to grasp.
In order to be considered accessible, a device must be able to be operated with a closed fist and requires the use of one hand. Any items that require the dexterity of fingers, or the focal strike of a digit is considered inaccessible.

Measuring an accessible opening, such as a door, is done with the door at a $90^\circ$ angle to the frame. Hardware that extends into this open space is subtracted from the total clearance.

Due to the increasing size of powered mobility devices, recent changes to the Ontario Building Code now requires a minimum opening of 850mm for all new construction and renovations.
Powered door openers are useful when opening large or heavy doors. Care should be taken when installing a powered door opener that the push button controller is along a natural path of travel. There should not be any obstructions accessing the button controller or between the controller and the door. The controller should be positioned on a flat, hard surface to accommodate a person using a wheelchair to access it. The door that is operated by the controller should not require the person with a disability to backup out of its swing path as the door opens. The operating door should have a sign indicating it is operated by the controller to reduce the potential of injury as the door opens.

Windows placed in the door, or at the side of the door, provide a visual aid of what is on the other side. This is helpful for safety reasons and reduces the potential of two people bumping into one another as they operate the door from opposite directions.

Do not place signs (name, office numbers) on doors. Doors left in the open position are not easily viewed from the hallway. Plus, for a person who is blind or has low vision, placing signs (in particular Braille signs) on the door is dangerous as the person is vulnerable if the door opens from the opposite side by a person who is unaware the person with a disability is standing in front of the door.

When two doors are in series (creating a vestibule), the total distance between both doors shall be a minimum of the width of the door that swings within the space plus an additional 1200mm. This provides sufficient room for the door to open, allow a person to move through the door and be able to move to the next door and position appropriately to move through the door.
Vertical Space

Contrast the color of walls and floors to provide a sense of orientation for a person with low vision. As well, doors and door frames should also contrast the surrounding walls. Similar colors or tones blend together and create visual confusion.

The average person seated in a wheelchair has a forward upper reach range of 1200mm and lower reach range of 400mm from the floor. If they are able to approach an item by aligning their wheelchair alongside, the upper reach range is 1400mm with a lower reach of 230mm. Items such as, light switches, display racks, supply shelves, etc., that are mounted outside these ranges are considered inaccessible.
Counters/Service Desks/Displays

A person seated in a wheelchair may have difficulty accessing service if the counters are positioned too high. In order to create an accessible experience, horizontal work surfaces should be between 730mm and 860mm from the ground to the top (work) surface and a clear space below that is at least 480mm deep and 680mm of clear knee space. The clear space below allows a person to position his/her mobility device under the counter without having to lean forward – similar to sitting at a desk.

Color contrast of the horizontal surface compared to the floor and surroundings helps to identify the useable workspace and identifies the edge of the flat surface. Avoid reflective surfaces as these are difficult for a person with low vision to interpret the space.

Reception desks that are higher than 860mm create both a physical and attitudinal barrier when interacting with a person seated in a mobility device or someone who is short in stature.

The surrounding floor space should be clear of all items such as chairs, waste baskets, display stands.

Display racks should be positioned at or below 1200mm. This is the average height a person seated in a wheelchair can reach. Anything above 1200mm is considered inaccessible and may require the person with a disability to ask for assistance.

Tables and service counters need a clear space for a person to maneuver his/her wheelchair into position. A clear height of 680mm provides sufficient space for the average wheelchair armrests to fit under the surface and a depth of 480mm allows a person to pull up to the table/counter edge.
WAITING AREAS

Designated waiting areas that have fixed seating shall dedicate space for people who use mobility devices such as scooters and wheelchairs. The *Design of Public Spaces* standard requires that the number of accessible spaces equals 3% of the total number of seats, with one space being the minimum required.

Accessible seating shall be mixed throughout the general seating area versus a space dedicated solely to people who use wheelchairs. Many people who use wheelchairs travel with family, friends, attendants, therefore combining seating options allows these groups to remain together when seated.

Seating for individuals who do not use wheelchairs or scooters shall include seats with and without arm rests. This accommodates a variety of needs and ability to access the seat, including the ability for a person who uses a wheelchair to slide and transfer from their wheelchair to the chair without the armrest interfering with the movement. Chairs without armrests also benefit people who are obese and eliminates embarrassment if they are unable to fit between the fixed armrests.

Be aware of the environment when creating public spaces. This example of a waiting area includes a literature display behind a row of chairs. A person using a wheelchair would not be able to access the literature.

This seating arrangement also discourages viewing of literature when visitors are seated in the chairs.
**WASHROOMS**

Include a minimum of one accessible, gender-neutral washroom that is separate from other washroom facilities. This is helpful for a person with a disability who may require assistance from an aide or family member of the opposite sex. For example, a female attendant accompanying a male who uses a wheelchair can create an uncomfortable situation for other men using the facilities at the time if the attendant must accompany the person into the men’s washroom.

Provide at least one accessible stall in public washrooms even if there is a separate accessible washroom. This allows people with disabilities to remain with their peers rather than seek out a separate room away from others in their group. Also, not everyone who benefits from an accessible toilet stall uses a wheelchair and therefore that person may purposely chose to not use the designated individual washroom.

**ACCESSIBLE TOILET STALLS**

The following criteria are from CSA B651-12:

The door shall be a minimum of 810mm wide. The door hinges should allow the door to self-close.

Use a D-shaped handle to pull open the door and a second D-shaped handle on the inside of the door to pull it shut. Mount the inside door handle near the hinge side of the door – accommodates a person seated in a wheelchair without having to reach forward to pull the door shut.

Use locks that slide into
position rather than twist.

The overall floor space of an accessible toilet stall shall be a minimum of 1500mm by 1600mm.

Install the toilet with its midline between 460mm and 480mm from the wall; this provides a comfortable reaching distance to the grab bar mounted on the wall. The opposite side of the toilet should allow a clear floor space of at least 900mm; this allows for space for a person to align his/her mobility device and transfer onto or off of the toilet.

An L-shaped grab bar mounted on the wall beside the toilet should be positioned with the horizontal portion at a height of 750mm to 850mm from the floor and the vertical portion at a distance of 150mm from the front edge of the toilet. The new OBC has eliminated the option of a single straight grab bar mounted on an angle – this design has the potential to cause a person to fall. While pro-active modifications are not required under the legislation, removing a grab bar mounted on an angle is an easy fix and should be considered for safety reasons.

A second straight grab bar should be mounted horizontal above the toilet tanks. This helps a person transferring from his/her wheelchair onto the toilet.

The toilet tissue dispenser fits easily under a properly mounted L-shaped grab bar; mounted between 600mm and 700mm from the floor and positioned approximately 150mm in front of the edge of the toilet.

Where possible, automated flush controls are beneficial to a person with a disability by eliminating manual operation of this task. Toilets with hand activated flush controls should have good color contrast from the toilet tank, for example, a chrome flush control on a white toilet. A white control on a white toilet tank may be difficult to see.

Choose a toilet for the space where it will

Flush control buttons should operate by hitting with a flat (open) hand or closed fist. In the above example, activation requires the ability to target the button and use finger strength to activate.
be used. Ensure that the flush control is on the side away from the wall (the area considered the transfer side). This eliminates the need for a person to reach across the toilet to activate the flush, which may be difficult for a person with poor balance or when seated in a wheelchair.

Do not choose toilets with the push button flush valves unless it is elevated from the tank and can be activated using a flat palm of the hand.

**LAVATORIES**

Sinks mounted within a counter provide a space for a person with a disability to place items to assist with hygiene, or if special devices are required, such as taking medicine. A counter eliminates the need to place items on the floor which is difficult for a person seated in a mobility device or who has poor balance or limited flexibility to reach to the floor. The appropriate horizontal surface for a counter is mounted between 810mm and 860mm from the floor.

Contrast the horizontal surface of the counter from the floor. This provides a visual cue of where to place items without the items being placed too close to the edge where they could fall or be knocked off.

Counters should be designed to include an open knee area of at least 680mm under the counter. This helps reduce the distance a person has to reach to access the sink and faucet.

Exposed pipes must be insulated to reduce the chance a person with limited sensation in his/her legs will be burned without realizing it.

Automated faucets are ideal. However, if manual faucet controls are used, they should include a lever style controller, preferably a single lever so that both temperature and flow can be adjusted with a single hand. Do not use round faucet controls.
URINALS

Vertically mounted grab bars on either side of a urinal provides assistance to a man who uses a wheelchair or scooter, allowing him to pull himself from a seated position to a standing position.

Grab bars are also helpful for a man to help stabilize his stance if he has a balance disorder or poor stamina while standing.

AMENITIES

All amenities such as soap dispensers, paper towel or air dryers, garbage containers, door hardware (including locks), coat hooks, and light switches should be mounted so the point of interaction/operation is less than 1200mm from the floor.

An accessible washroom can quickly become inaccessible if a garbage can is placed in the path of travel to access the washroom or any amenities within the space.

Automated lights help reduce energy and eliminate the need for a person to have the strength/dexterity to operate the light switch.

L-shaped grab bars mounted within any standard toilet stall creates a more accessible and safe
environment for a person with a disability or the elderly. Placement of the grab bar and the toilet tissue dispenser is the same as for an accessible toilet stall (see above).

**CONCLUSION**

The greatest challenge when reviewing existing properties is they were not designed to be accessible. Modifications to become accessible as an afterthought can be expensive and create restrictions that keep the finished product from meeting even the most relaxed of standards. The CSA B651-12 document, referenced throughout this document, provides a good review to compare existing buildings with accessible design. However, as mentioned previously, new construction, renovations or redevelopment of the built environment requires that the new Ontario Building Code and the *Design of Public Spaces* standard are the minimum standards for accessible design. Choosing to create spaces that exceed the minimum standards will help benefit people with disabilities as they visit, volunteer or work at any of the Ontario Land Trust Alliance member agencies.
Information contained in this document is not to be considered legal advice. Always consult with your legal counsel in areas that may involve the Ontario Human Rights Code.

At the time of writing this report there are no requirements to proactively modify the built environment to become accessible to people with disabilities. However, creating an accessible Ontario is the goal of the Accessibility for Ontarians with Disabilities Act (AODA).

At such time as renovations or new construction is being considered please check with the latest requirements in the province of Ontario or your local jurisdiction governing such matters.

The AODA is law in Ontario. Learn how it affects your organization and understand the timelines for compliance.