



CI-0202

TAB 2: SITE INFRASTRUCTURE AND DEVELOPMENT Station Sites

Entrances: shall be accessible to people using wheelchairs or scooters. The following features shall form part of an accessible entrance:

- > Power assisted door operators, with guards;
- > Accessible entrances shall be clearly marked with the International Symbol of Accessibility;
- > Can be easily opened with one hand;
- > Canopies or other sheltering devices where present, shall have adequate headroom; and
- > Mats shall be level with the floor and door thresholds are bevelled so they do not create a tripping hazard.



PEDESTRIAN AND BICYCLE PATHS

- > Provide dedicated and continuous routes for pedestrians throughout the station and connections to surrounding areas.
- > Pedestrians should not be required to cross the parking lot in order to access the station building.
- > Ensure pedestrian pathways are separated from vehicular traffic whenever possible.
- > Walkways shall be minimum 1.6 m wide.
- > When an entrance is provided from a recreational trail, a clear opening between 850 mm to 1000 mm is required, whether the entrance includes a gate, bollard, or other barrier.
- > The exterior path must meet the following requirements:
 - o It must have a 1:2 bevel at changes in level between 6 mm and 13 mm.
 - o It must have a maximum running slope of 1:8, or be designed as a ramp, at changes in level greater than 13 mm and less than 75 mm.
 - o It must have a maximum running slope of 1:10, or be designed as a ramp, at changes in level greater than 75 mm or less than 200 mm.
 - o It must be designed as a ramp, meeting all requirements and codes pertaining to ramps at changes in level greater than 200 mm.
- > Sidewalk and walkways shall be raised and constructed of hard and sustainable level materials that are slip resistant.



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TAB 2: SITE INFRASTRUCTURE AND DEVELOPMENT Station Sites

- > Provide curb cuts at all crossings to enable access for people using mobility devices.
- > Provide dedicated or shared bicycle lanes along primary vehicular roads leading to and from the station. Depending on the station configuration, it may be preferable to introduce a separate bicycle entrance. The width of a dedicated bike lane shall be no less than 1.5 m.
- > The bike route shall be distinguished with specially coloured paving, line painting, or graphic.
- > Ensure bicycle access routes are free of obstacles such as curbs and signs. Provisions for bicycle ramps and gutters shall be considered where barriers are unavoidable.

SHARED PEDESTRIAN/CYCLISTS PATH

Design Use:

- > Shared pedestrian/cyclists paths are to be used, on a site by site case, where it is determined to promote a safe and visible alternate mode of transportation at stations.
- > Shared paths should provide connectivity from the main municipal access points, surrounding neighbourhoods and to existing recreational paths, where applicable.
- > Shared paths are to be implemented in conjunction with and leading to bicycle shelters and racks.

Design Intent:

- > A “shared path” is considered to be a single lane of travel, delineated for pedestrians and a single lane of travel delineated for cyclists.
- > Newly constructed shared-use paths should be built to provide access for people with disabilities and provide sufficient width to accommodate the potential condition of two wheelchairs having to pass, side by side.
- > The shared path should have a centreline pavement marking, to reduce the cyclists’ perception of freedom to manoeuvre between lanes.
- > Key features to be considered include trail access points, grade, cross-slope, street crossings, curb ramp design, railings, and signage.

Design Requirements:

- > The shared path width should be minimum 3 m wide.
- > Surfaces must be constructed of hard and sustainable level materials that are firm, stable, and slip-resistant.



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TAB 2: SITE INFRASTRUCTURE AND DEVELOPMENT
Parking Infrastructure

- > Stalls abutting curbs shall be 4.5 m long with a 1.0 m allowance for vehicle overhang.
- > Parallel parking stalls shall be 3 m wide x 7 m long.
- > Material for 1 m overhang shall be determined by implementing progressive, sustainable and environmentally friendly design practices and solutions.
- > Refer to Line Marking Section to see appropriate Figures.



Barrier Free Parking

- > Barrier Free Parking shall be located close to the station building entrance and/or rail/bus platform access. Parking spaces designated for persons with disabilities and accessible passenger pick-up areas that serve GO facilities should be located on the shortest possible circulation route to an accessible entrance (preferably 30m or less).
- > The following two types of parking spaces shall be provided for the use of persons with disabilities:
 - o Type A, a wider parking space which has a **minimum width of 3.4 m by a depth of 5.5 m** and signage that identifies the space as “van accessible”. In addition a 1.5 m wide barrier free access aisle is required adjacent to the parking space. This can be shared with another parking space.
 - o Type B, a standard parking space which has a **minimum width of 2.4 m by a depth of 5.5 m** In addition, a 1.5 m wide barrier free access aisle is required adjacent to the parking space. This can be shared with another parking space.
- > If the total number of accessible spaces is an even number, the types required are divided equally. If the total number of accessible spaces is an odd number, the one remaining ‘odd-numbered’ space may be a Type B.
- > Parking lots shall have the minimum number of designated Barrier Free Parking spaces for passengers with disabilities in accordance with the DRM standard outlines in the table below.

(Note:GO transit has issued a memo to the AODA agency in response to the increase in the number of accessible spaces required in the AODA regulation. The number of accessible parking spaces will meet the DRM standard currently in place, or whatever the ridership demands are at a specific location, which may amount to more than the DRM standard and AODA regulation)



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TAB 2: SITE INFRASTRUCTURE AND DEVELOPMENT
 Parking Infrastructure

Total Number of Parking Spaces	Number of Designated Spaces*		
	Percentage Formula	Minimum Number of Spaces (Type A)	Minimum Number of Spaces (Type b)
1 – 100	4%	1	1
101 – 200	3%	2	2
201 – 500	2%	3	3
501 – 1,000	1.5%	4	4
1,001 – more	1%	5	5

The accessible route shall not be located where it would require people to pass behind vehicles that may be backing out. Colour-contrasted bollards or curbs should be used to prevent parked vehicles from protruding into the accessible circulation route.

Each Barrier Free Parking space shall be clearly marked with a sign bearing the International Symbol of Accessibility. Where the location of designated accessible parking spaces is not obvious, directional signage incorporating the International Symbol of Access shall be placed along the route leading to the designated parking spaces.

If there are more than three (3) designated spaces adjacent to each other, there shall be continuous low curb with detectible surfaces along the entire length of multiple designated spaces (no curb ramp for each unloading area).

For additional guidelines regarding accessibility and Figures refer to Accessibility section, TAB 1 of this manual. For signage refer to Signage Section, TAB 6 of this manual.



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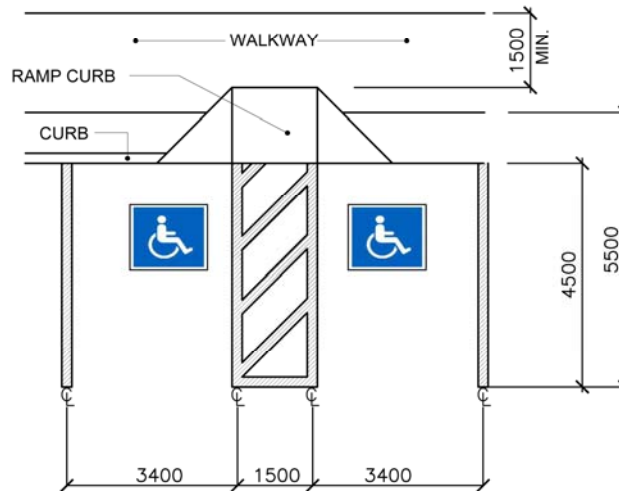
TAB 2: SITE INFRASTRUCTURE AND DEVELOPMENT
Pavement and Line Markings

FIGURE: DESIGNATED PARKING - CONFIGURATION FOR TWO OR LESS PARKING SPOTS

SECTION:
Tab 2: Site Infrastructure and Development

FIGURE:
Designated Parking – Configuration for Two or Less Parking Spots

DESIGNATED PARKING CONFIGURATION FOR TWO OR LESS PARKING SPOTS



NOTES:

- RECOMMENDED UNOBSTRUCTED ACCESSIBLE ROUTE SHALL BE MINIMUM 1500 mm WIDE
- SEE ALSO LINE MARKING FOR CROSSWALKS

COLOR : LINE MARKING : REFER TO TAB 2: SECTION C1-0204 LINE MARKINGS CHART .
WHEELCHAIR SYMBOL: REFER TAB 2, SECTION C1-0203 BARRIER FREE PARKING STALLS FOR COLOUR SCHEME

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS



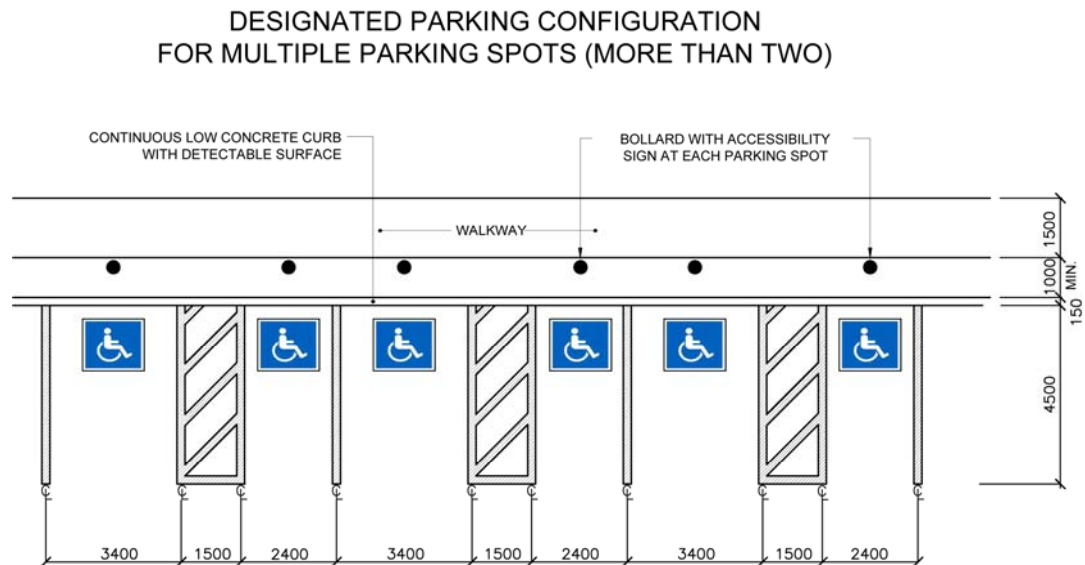
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TAB 2: SITE INFRASTRUCTURE AND DEVELOPMENT
Pavement and Line Markings

FIGURE: DESIGNATED PARKING - CONFIGURATION OF MULTIPLE PARKING SPOTS (MORE THAN TWO)

SECTION:
Tab 2: Site Infrastructure and Development

FIGURE:
Designated parking – Configuration of Multiple Parking Spots (More than Two)



NOTE:

THE RECOMMENDED MAXIMUM PATH OF TRAVEL SHALL NOT EXCEED 30 m, FROM LAST ACCESSIBLE PARKING SPOT TO THE NEAREST ENTRANCE.

THE MAXIMUM NUMBER OF BARRIER FREE PARKING SPOTS IN ONE ROW SHALL NOT EXCEED 8 SPACES INCLUDING 4 HATCHED UNLOADING AREA.

COLOR : LINE MARKING : REFER TO TAB 2: SECTION C1-0204 LINE MARKINGS CHART .
WHEELCHAIR SYMBOL: REFER TAB 2, SECTION C1-0203 BARRIER FREE PARKING STALLS FOR COLOUR SCHEME



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TAB 2: SITE INFRASTRUCTURE AND DEVELOPMENT
Furnishings and Amenities



ACCESSIBLE CURBS

- > Accessible curbs (curb cuts) shall be provided where pedestrian paths intersect with vehicular roads, at barrier-free parking spaces, and wherever there is change in level along a barrier-free path of travel.
- > Directional grooves at 300 mm centres shall be provided, in accordance with OPSD 310.030.
- > Where an accessible curb is provided, the surface shall have tactile indicators on its surface that meet the following requirements:
 - have raised tactile profiles
 - have a high tonal contrast with the adjacent surface
 - are set back between 150 mm and 200 mm from the curb edge
 - extend the full width of the curb
 - have a minimum of 610 mm in depth
 - have a maximum running slope of 1:15

GUIDE RAILS, GUARDRAILS AND BOLLARDS

Steel Beam Guide Rails	Metal Pipe Guard Rails	Bollards
At hazardous grade slopes for vehicular safety	At walkways adjacent to hazardous traffic or ditches	To prevent vehicular access at transformers, gas meters, hydrants, accessible parking spots, near ancillary rooms in parking garages, vehicular traffic areas in bus and rail maintenance etc.,

MATERIALS

- > Steel Rail Guide Rails shall be in accordance with the applicable OPSD, Section 900.
- > Metal Pipe Guard Rails shall be galvanized pipe minimum 50 mm diameter, and 1070 mm high with mid-rail, etc. Decorative steel fencing may be used in lieu of railing.



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TAB 4: STATION INFRASTRUCTURE
Station Buildings

DESIGN REQUIREMENTS

The following tables (and/or figures) refer to the detailed room design program for individual rooms in a typical station building:

WAITING AREA	
Room Name	Description
Location	The waiting area shall project beyond the main building, with sight lines along the length of the building and maximized sight lines to the exterior.
Features	<ul style="list-style-type: none"> > Minimum queuing space in front of ticket sales counter shall be 5-7 passengers per attendant; queuing space shall be increased based on historical peak station demand information provided by GO staff. > Combined circulation/waiting space shall be provided beyond the queuing space on the basis of 0.7 m² for each passenger. Concession space (staffed kiosk or vending alcove); > High ceiling to a maximum of 4 m with daylighting (clerestory bay gable windows, or skylights);peaked or shallow arch ceiling for perimeter illumination (cove lighting); > Station attendant ticket sales counter complete with purse shelf, with butt-joint clear glazing from the counter top to the bulkhead soffit. > A minimum of 3% of new seating must be accessible with a minimum of one accessible space when constructing a new waiting area or are redeveloping an existing waiting area, where the seating is fixed to the floor.
Doors	<ul style="list-style-type: none"> > Glazed aluminum frame single door entrances at right angles to the main building, to minimize drafts, protected by the roof overhang, with doors hinging to open against exterior walls. > Two (2) adjacent doors without a post between, with a guard rails. Guardrail to have rubber doughnut bumpers. Power operated doors, where they open into a route of travel, shall have cane-detectable guardrails or other barriers at right angles to the wall containing the door.



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TAB 4: STATION INFRASTRUCTURE
Station Buildings

FIGURE: BARRIER FREE DESIGNATED WAITING AREA WITH FIXED SEATING DESIGN REQUIREMENTS

SECTION:
Tab 4 Station Buildings

FIGURE:
Barrier Free Designated Waiting Area with fixed seating Design requirements

