

Transit Bus Stop Accessibility Criteria & Guidelines





Transit Bus Stop Accessibility Criteria & Guidelines

These criteria and guidelines were developed to verify if a transit bus stop is accessible or not, and should be used as a reference when designing new roads, bus stops, reconstruction of roads or new developments.

The requirements for persons with disabilities, the dimensional and operational features of the current HSR fleet of buses, City of Hamilton Site Plan Guidelines, and the practices followed in other jurisdictions were considered in the development of these guidelines. The criteria may be considered as the minimum requirements for the Bus Stop Landing Pad, and doesn't include areas or facilities beyond the bus stop landing pad. Since the features and elements of a bus stop have to be designed to suit individual locations with several other considerations and standards, this criteria may not be complete in all respects. Under such situations the user should refer to other requirements, existing conditions, limitations, and exercise their best judgement in preparing a final design for a specific location.

1. The bus stop is on a road with an urban cross section, including municipal sidewalks

For a bus stop to be accessible, it must have a raised landing pad connected to the sidewalk. Without a raised landing pad, the slope of the bus ramp would be too high for mobility device users. Because curbs and sidewalks are generally provided in urban settings only, most rural bus stops are not accessible.

FIGURE 1:



Non-accessible bus stop on a rural road with no landing pad or sidewalk

FIGURE 2:



Bus stop on an urban road with a landing pad connected to the sidewalk

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2. A minimum 9 m x 2.5 m landing pad is provided, with a hard, even surface and minimum 1.5 m x 2.5 m ramp deployment and loading area(s)

The types of transit buses currently in use in the City were considered to determine the minimum length and depth of the landing pad. The longest bus ramp extends to a length of 1.5 metres onto the landing pad when deployed. In order for a mobility device user to comfortably manoeuvre onto and off of the ramp, the landing pad must be at least 2.5 metres deep, as measured from the face of the curb. Where the landing pad abuts a sidewalk, the sidewalk width can be included to achieve a 2.5 metre landing pad depth. Ramps are located at the front and middle doors of buses. In order to span both sets of doors, the landing pad must be at least 9 metres long. For stops on routes using articulated buses, a 15 metre long landing pad is desirable, in order to provide a hard even surface for passengers alighting from the rear door. Within the landing pad a clear space of one and a half metre 1.5 metre wide by two and a half metre 2.5 metre deep area is required for ramp deployment and loading/unloading purpose (refer to the layout drawings).

FIGURE 3:



Landing pad long and deep enough to deploy the ramps and have space to manoeuvre

3. The deployment and loading area is connected to an accessible sidewalk by a hard even-surface pathway with a minimum 1.5 m clearway

To allow a mobility device user to travel between the loading area and the sidewalk, a hard even-surface pathway with a 1.5 metre clearway is required. The sidewalk itself should also be accessible, as defined in Ontario Reg. 191/11.

FIGURE 4:



A landing pad connected to the sidewalk by a concrete pathway

4. The pathways between the landing pad, sidewalk and passenger amenities are unobstructed

There should not be any obstructions for any user on the paths between the deployment/loading area, shelter, sidewalk and other passenger amenities.

FIGURE 5:



A stop with smooth unobstructed surfaces between the loading area, sidewalk and passenger amenities

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5. The sidewalk or landing pad has curb cuts where appropriate

Where appropriate, curb cuts should be provided to enable mobility device users to cross the road. In order for curb cuts to be useable for a mobility device, they must have a width of at least 80 centimetres and be provided on both sides of the roadway.

6. Landing pad cross slope is no more than 2%

Cross slope, also known as crossfall, is the slope perpendicular to the direction of the travel. For any paved surface the design practice is to provide a slope for drainage purposes. For a mobility device user to negotiate the path, the slope for the landing pad should not exceed 2%. City of Hamilton site plan guidelines also specify a maximum 2% cross slope for sidewalks and boulevards.

7. Where the bus stop abuts a steep slope, ditch or any other hazardous feature, an appropriate barrier such as a hand rail, fence or wall is provided between the landing pad and the feature

Where a steep slope, ditch or any other hazardous condition abuts the landing pad or sidewalk, a physical barrier such as a hand rail, fence or barrier wall should be constructed to protect all users.

FIGURE 6:

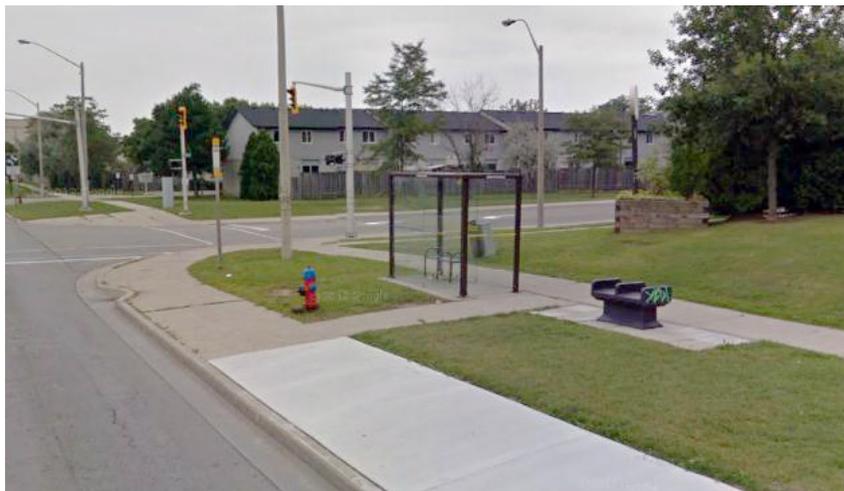


A non-accessible stop which lacks a physical barrier between the deployment area and a steep slope

8. Where shelters are provided, they are connected to the deployment and loading area via hard even surface pathway with a minimum 1.5 m clearway

Where bus shelters are located away from the landing pad, they must be connected to it by a hard, even-surface pathway with a minimum clearway width of 1.5 metres. Standard practice is to provide a paved concrete pathway.

FIGURE 7:



A shelter connected to the loading area by a concrete pathway

9. The passenger deployment areas have a vertical clearance of at least 2.1 m, and any vertical obstructions that cannot be relocated are clearly marked.

To ensure the safety of all users, vertical obstructions should be avoided below an elevation of 2.1 metres. Where obstructions cannot be removed or adjusted, they should be clearly marked (for example, a yellow sheath on a utility guy wire). Common vertical obstructions include guy wires, tree limbs, advertisement boards and utility wires.

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FIGURE 8:



A non-accessible bus stop with a utility guy wire obstructing the landing pad area, without any reflective sheath

FIGURE 9:



A bus stop with a tree lacking low-hanging branches

10. Street furniture uses AODA-compliant designs

To ensure that the transit stop is entirely accessible, service contracts entered into for the operation, maintenance and retrofitting works should require AODA-compliant design and construction. This would include the design, installation, location, and maintenance of the pathways and amenities within the bus stop area.



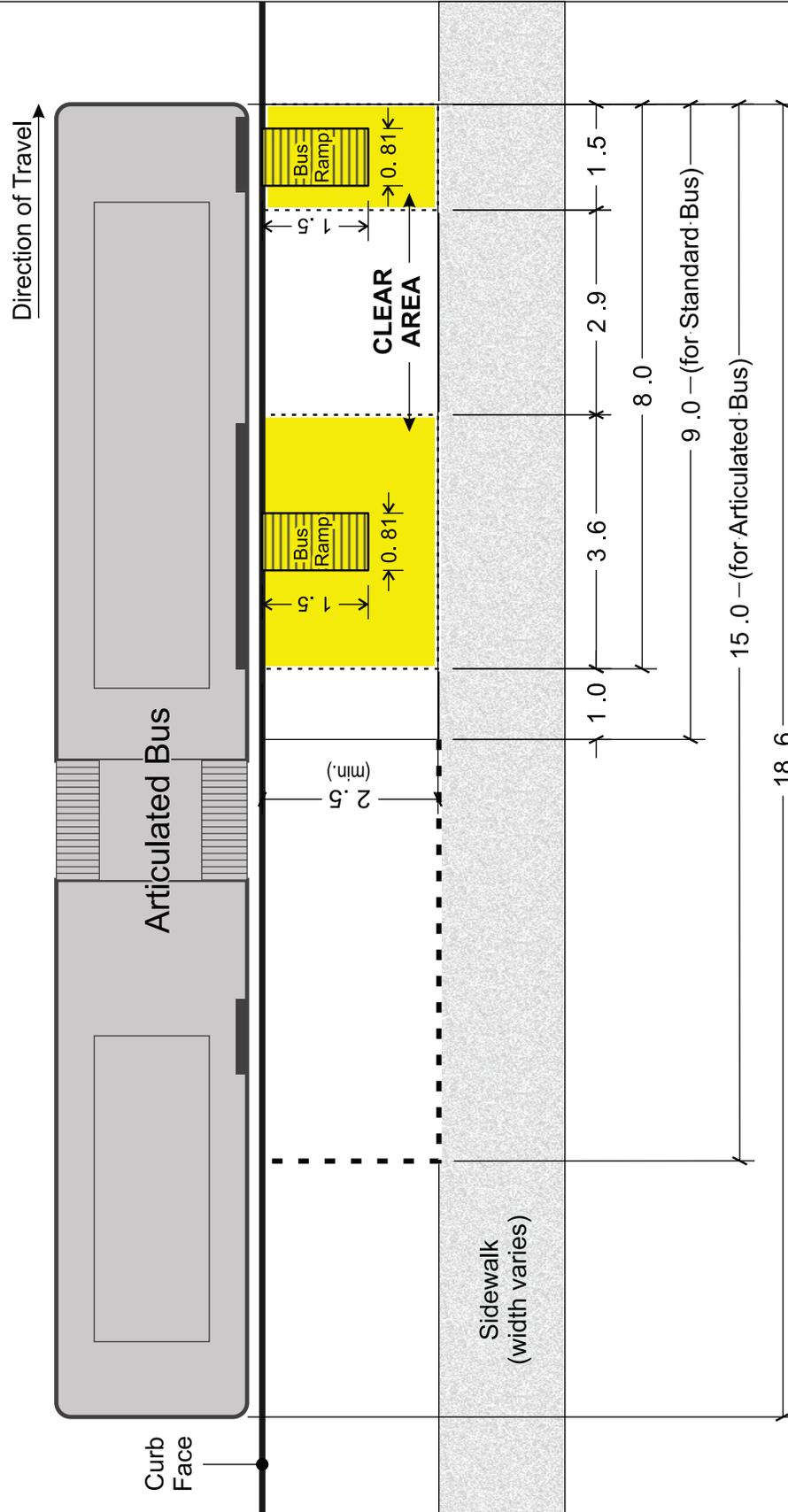
Note: All Standards and Regulations in the AODA and Ontario Regulation 191/11 Integrated Accessibility Standards apply and govern. The above guidelines are intended to supplement AODA and all applicable standards.

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Checklist for Determining if a Transit Stop is Accessible or Not

HSR Stop Number:		Location Description:	
1	Stop on an Urban Road or Rural Road?	<input type="checkbox"/> Urban Road	<input type="checkbox"/> Rural Road
2	Even, hard, non-slippery landing pad provided?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3	Concrete or Asphalt Pad?	<input type="checkbox"/> Concrete	<input type="checkbox"/> Asphalt
4	Size of the Stop Pad ___m x ___m		
		Yes	No
5	Clear Area available for ramp deployment (as per the typical drawings)	<input type="checkbox"/>	<input type="checkbox"/>
6	Bus Shelter exists or not?	<input type="checkbox"/>	<input type="checkbox"/>
7	Sidewalk exists or not?	<input type="checkbox"/>	<input type="checkbox"/>
8	Curb cut exists or not?	<input type="checkbox"/>	<input type="checkbox"/>
9	Paved connection/access (1.5m min. clear pathway) between pad, sidewalk, shelter and furniture?	<input type="checkbox"/>	<input type="checkbox"/>
10	Vertical head room clearance of 2.1m over all passenger, deployment and loading area, pathway available or not?	<input type="checkbox"/>	<input type="checkbox"/>

BUS STOP LANDING PAD REQUIREMENTS



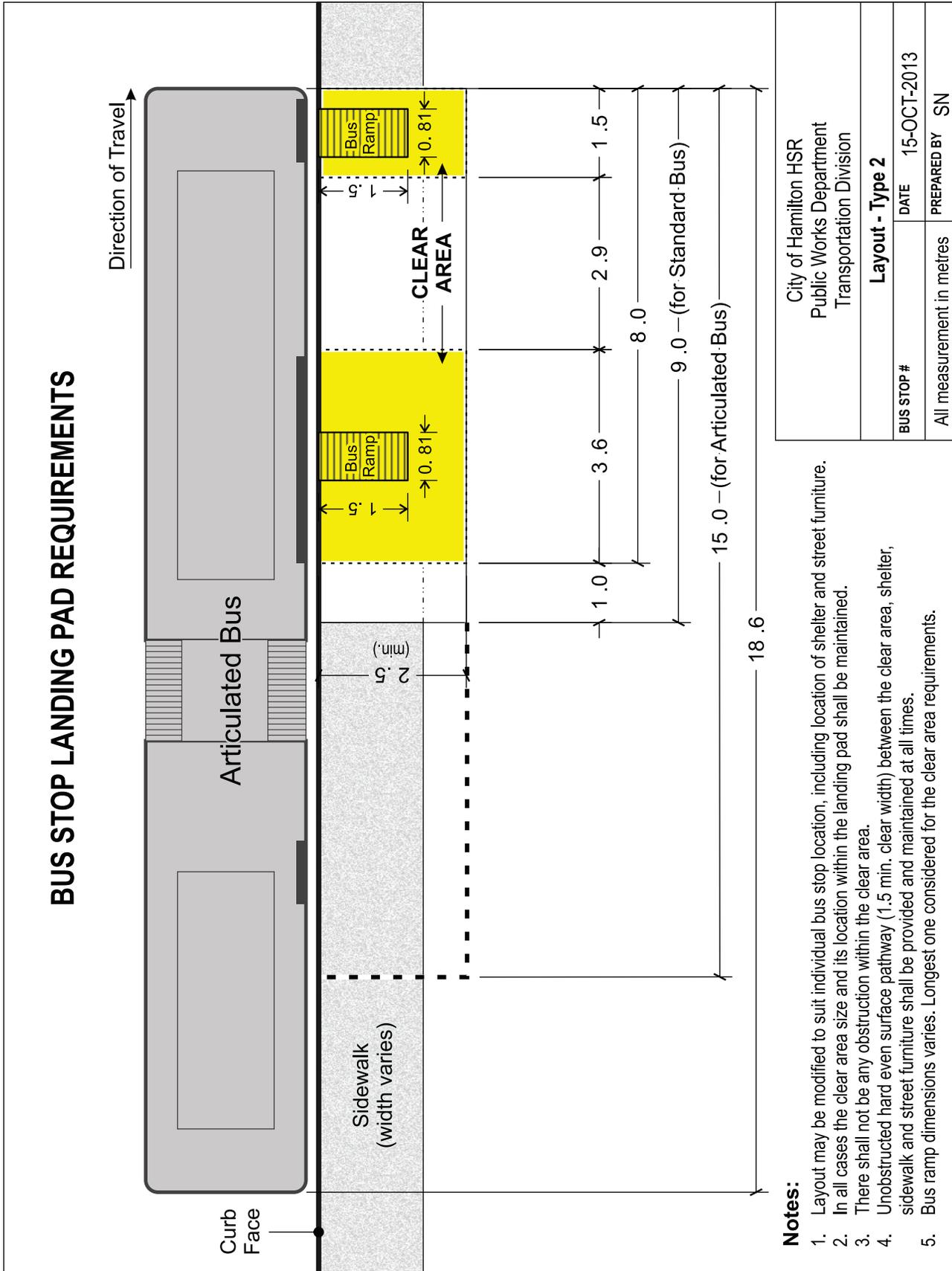
Notes:

1. Layout may be modified to suit individual bus stop location, including location of shelter and street furniture.
2. In all cases the clear area size and its location within the landing pad shall be maintained.
3. There shall not be any obstruction within the clear area.
4. Unobstructed hard even surface pathway (1.5 min. clear width) between the clear area, shelter, sidewalk and street furniture shall be provided and maintained at all times.
5. Bus ramp dimensions varies. Longest one considered for the clear area requirements.

City of Hamilton HSR Public Works Department Transportation Division	
Layout - Type 1	
BUS STOP #	DATE 15-OCT-2013
All measurement in metres	
PREPARED BY SN	

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BUS STOP LANDING PAD REQUIREMENTS



Notes:

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2. In all cases the clear area size and its location within the landing pad shall be maintained.
3. There shall not be any obstruction within the clear area.
4. Unobstructed hard even surface pathway (1.5 min. clear width) between the clear area, shelter, sidewalk and street furniture shall be provided and maintained at all times.
5. Bus ramp dimensions varies. Longest one considered for the clear area requirements.

City of Hamilton HSR Public Works Department Transportation Division	
Layout - Type 2	
BUS STOP #	DATE 15-OCT-2013
All measurement in metres	
PREPARED BY SN	

