

Accommodating People with Disabilities at Island Platform Bus Stops

This briefing does not represent technical guidance. Rather, it describes an emerging practice that is not used widely across Canada and is not addressed in TAC's technical publications, but that has been applied sufficiently in Canadian contexts to assess its general applicability and effectiveness.

This briefing is intended both to acknowledge the emerging practice and to help qualified practitioners conduct further testing and evaluation. It may be updated or withdrawn as more information becomes available.

Introduction

Planners and designers recognize transportation systems need to meet the needs of people with a diverse range of physical, cognitive, intellectual, psychological and sensory abilities. This has led to the growing implementation of cycling infrastructure intended for use by people of all ages and abilities including children, seniors and people with disabilities.

When continuous, separated cycling facilities, such as cycle tracks, are built along roads that also serve transit routes, the comfort and attractiveness they offer users can be preserved by routing them away from the road and behind bus stop platforms, creating “floating” or “island platform” bus stops. Guidance on island platform bus stops is included in TAC's *Geometric Design Guide for Canadian Roads* (2017), and they have seen significant implementation across Canada.

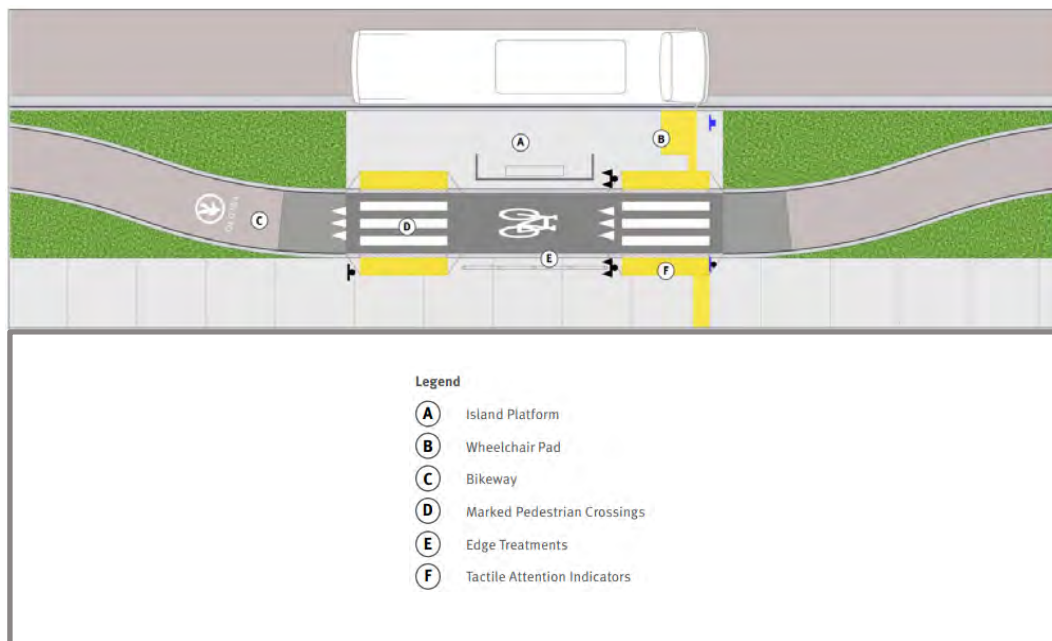
While island platform bus stops reduce conflicts between cyclists and motorists, they introduce new barriers for pedestrians (particularly those with sight loss and other disabilities) who must cross the bikeway between the sidewalk and bus stop. In 2020, the British Columbia Human Rights Tribunal found the installation of island platform bus stops by the City of Victoria discriminated against the complainant and members of the Canadian Federation of the Blind – a ruling that resulted in nation-wide attention. The CNIB Foundation research report *Cycling Infrastructure and People with Sight Loss – Design Challenges and Opportunities at Transit Stops Across Canada* (2023) further elaborated on the significant challenges posed by island platform bus stops for people with sight loss.

This briefing examines these challenges, suggests ways to mitigate conflicts between cyclists and people with disabilities at island platform bus stops, and highlights some real-world examples across Canada.

Features

Figure 1 shows some basic features of accessible island platform bus stops. While it is important to evaluate a range of solutions at every bus stop, these features are promising components of any design and their consistent use within a jurisdiction can help create a user-friendly travel environment.

Figure 1: Basic features of an accessible island platform bus stop



TransLink and the British Columbia Ministry of Transportation and Transit

Outcomes

Effectively designed island platform bus stops achieve several important outcomes. The following paragraphs summarize those goals and some supportive design features.

Help people with sight loss find the bus stop and transit service information. Island platform bus stops are unconventional, and can lack some of the tactile and auditory cues of regular bus stops that people with sight loss have learned to rely on. Helpful measures include:

- Tactile attention indicators (“attention TWSIs”) at points where pedestrians cross the cycling facility
- Tactile directional indicators (“directional TWSIs”) that show the travel path between sidewalk and bus pad

- Bus shelters on the island, rather than behind the sidewalk, that provide delineation and enable wayfinding through echolocation
- Secondary bus stop identification poles on sidewalks, signs with braille and tactile lettering, and tactile layout maps that provide accessible information for users with sight loss

Increase the conspicuity of pedestrian crossings to encourage cyclists to slow down and yield. Island platform bus stops can create an uncertain right-of-way situation, and some studies show a significant proportion of cyclists fail to yield to pedestrians even when crossings are marked. Measures that can help include:

- Raising, narrowing and/or adding horizontal deflection to the bikeway as it approaches the island bus stop
- Enhanced signage and pavement markings to remind cyclists of their obligation to yield at pedestrian crossings of the bikeway
- Pedestrian crossing control measures such as actuated flashing beacons or dynamic signs

Provide clear, detectable edges between the bikeway and the sidewalk or island platform. Measures that can prevent pedestrians with sight loss from accidentally stepping into the bikeway can include landscaping, intermediate-height bikeways (i.e. at a different elevation than the platform and sidewalk), and tactile delineation of bikeway edges.

Help pedestrians detect oncoming cyclists. Cyclists are difficult to hear above the background traffic noise and other urban sounds, and some people with sight loss simply avoid island platform bus stops due to their fear of colliding with an undetected cyclist. It is possible emerging tools and technologies, such as those providing tactile or audible feedback if a cyclist is approaching, could help.

Applicability

Island platform bus stops are generally found on collector and arterial roadways serving fixed-route transit service. They typically require more than 5 metres of in-boulevard width to accommodate an island (2-4 metres wide), a bicycle path (1.5-2.5 metres wide) and a sidewalk (1.5 metres or more).

The accessibility measures discussed in this briefing are generally applicable wherever the combination of cycling and transit activity poses comfort and safety challenges for travellers of all ages and abilities.

Implementation issues

Current design guidance

British Columbia Ministry of Transportation and Transit partnered with TransLink to publish the *Design Guide for Bus Stops Adjacent to Cycling Infrastructure* (2024) – the first North American guide to designing island platform bus stops that meet the needs of people with disabilities while also being comfortable for cyclists of all ages and abilities. While several cities have also developed internal design materials, there is no national guidance on this subject for Canadian practitioners.

Consideration of alternatives

Due to the inevitability of conflicts between cyclists and transit users at island platform bus stops, there are several alternatives that may deliver better outcomes for all road users and should be considered before creating a new island platform bus stop.

Opposite-side bikeway. In some cases (e.g. along one-way streets) it may be possible to locate the bikeway on the opposite side of the road from the transit stop.

Centre median bus facilities. Locating a busway in the median of a road eliminates the need for curbside bus stops.

Alternative cycling route. Planners could locate the cycling route along a different road, or consider an off-road multi-use pathway rather than a curbside bike path.

Relocated bus stop. Where bikeways and bus routes overlap for only a short distance (e.g. a single block) it may be possible to move the bus stop outside that area. Moving a bus stop from a mid-block location to a signalized intersection, where the island platform can be integrated with a pedestrian crosswalk refuge area, can also mitigate risk of cyclist-pedestrian conflicts.

Constrained bus stop with no island platform. This involves raising the bikeway to sidewalk level at the bus stop, so that buses stop directly adjacent to the bikeway. This uses space more efficiently by avoiding the creation of an island platform, but would have uncertain impacts on cyclist-pedestrian conflicts and is unlikely to be a preferred solution.

Do nothing. Another option is to require buses to merge across the bikeway to access curbside bus stops. This avoids cyclist-pedestrian conflicts at the bus stop but introduces a new on-road conflict between cyclists and buses. Furthermore, because buses and cyclists tend to travel at the same average speed, this approach could lead to a cyclist encountering repeated conflicts with the same bus.

Contributing risk factors

While it is important to evaluate design alternatives anytime an island platform bus stop is used, several factors contribute to the potential for cyclist-pedestrian conflicts and the resulting need for careful consideration:

- Locations with high pedestrian volumes (e.g. a downtown area)
- Locations with high cyclist volumes (e.g. along a major cycling route)
- Locations with high-frequency bus service (e.g. 10 or more buses per hour)
- Locations with a two-way cycling facility
- Locations where cyclists approaching a bus stop are descending a grade of 2% or more

Emerging technologies

While the inclusion of special bicycle signals or other visual/audible technologies could mitigate the risks inherent in island platform bus stops, the reliability and effectiveness of such products or treatments have not been well studied in a Canadian context. Some promising measures are being demonstrated internationally:

- Artificial intelligence-based camera detection and warning systems are being piloted in Ireland and the United Kingdom. Using a camera to view the upstream bike path, these systems provide audible feedback to pedestrians about whether a sufficient gap is present in bicycle traffic to cross the bicycle path
- In Ireland, unique signals for cyclists are used where pedestrians cross the bicycle path; they are smaller than normal and display a green or red indication. Legal amendments have legalized this treatment, and evaluation is ongoing

Figure 2: Island platform bus stop with bicycle signal pilot project, Dublin, Ireland



Urban Systems

Maintenance

Island platform bus stops have implications for maintenance effort and cost, with winter snow clearing and durable design elements being important considerations; some municipalities have reported measures such as half-height curbs present maintenance challenges. It is therefore important to engage operational staff in local design decisions.

Engagement and education

Involving people with disabilities in the design process can ensure planners and designers have a clear understanding of possible challenges and users' views on alternative solutions. Furthermore, educating a broad audience of road users when introducing island platform bus stops can ensure both cyclists and transit users understand how the infrastructure is meant to function. This is particularly important because many transit users may be unprepared to encounter a bikeway upon exiting a bus.

Unresolved issues

When cyclists and pedestrians come into conflict, they typically make eye contact and then adjust their paths of travel. They often yield to one another based not on signage, but on who will arrive first at the point of conflict – meaning that signs, markings and similar measures intended to establish a preferred behaviour may have limited effectiveness. On the other hand, guiding users through measures such as tactile surfaces has been found to be very useful.

Difficulties experienced by people with sight loss at island platform bus stops (i.e. reliably detecting approaching cyclists and having confidence they have stopped) directly impact their sense of safety and autonomy. This situation adds to other challenges created by interactions between cyclists and pedestrians with sight loss.

Examples of use

City of Winnipeg

Notable island platform bus stops in Winnipeg include those built along McDermot Avenue in 2018. They incorporate several key design elements outlined in this briefing:

- Tactile attention indicators on the sidewalk to alert people with sight loss
- Tactile direction indicators that guide pedestrians from the sidewalk across the bikeway to the passenger landing pad and the bus stop identification pole
- A grass buffer that provides a clear, detectable edge between the sidewalk and the bikeway
- A concrete crosswalk surface that visually differentiates the crosswalk from the asphalt bikeway
- An elevated bikeway that narrows as it transitions from street level to the level of the bus stop, to slow cyclists and warn them of the upcoming pedestrian crossing

Since 2018, Winnipeg has also implemented island platform bus stops in constrained locations where it maintained critical elements including minimum length and width of the platform, the raised bikeway, detectable tiles, and concrete crosswalk surface.

Figure 3: Island platform bus stop on McDermot Avenue in Winnipeg



Urban Systems

Ville de Montréal

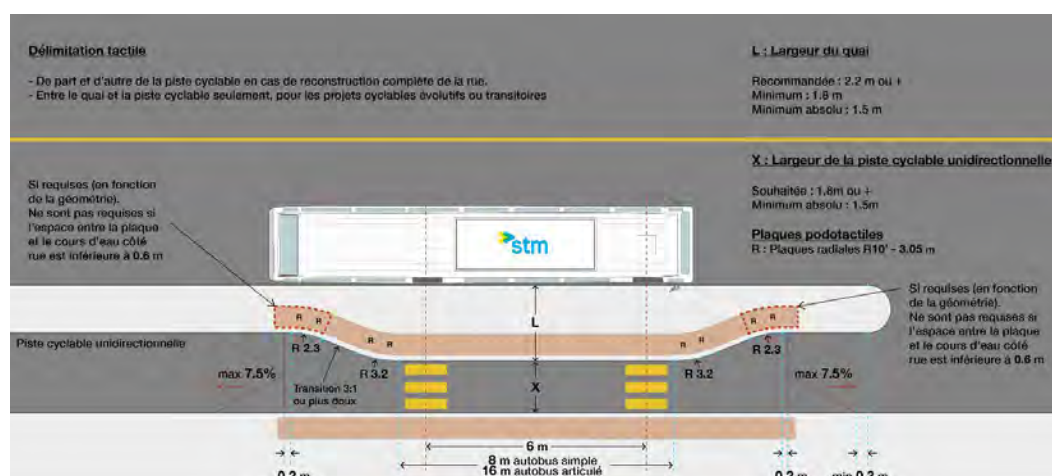
Montréal has built island platform bus stops using its internal guidance document “Arrêts d’autobus universellement accessibles en bordure d’un aménagement cyclable” (Universally Accessible Bus Stops Next to a Cycle Path), which addresses a variety of installation conditions including space-constrained applications. Strategies that encourage cyclists to slow down and yield to pedestrians include:

- For raised one-way bikeways, narrowing the bikeway to 1.5 metres (minimum) to 1.8 metres (desirable) adjacent to the stop
- For street-level one-way bikeways, raising the bikeway adjacent to the stop (and if that is not possible, then maintaining a width of 2.3 metres for snow clearing and maintenance)

The guideline establishes priorities for width-constrained locations, and accepts reduced bikeway and platform widths rather than integrating the bikeway and platform into a shared space. The resulting space on the island platform may be insufficient to add a shelter, leading transit users to queue on the sidewalk rather than on the island. For width-constrained locations, Montréal’s guidance says to first reduce the bikeway width to an absolute minimum of 1.5 metres (raised bikeway) or 2.3 metres (street-level bikeway), then to reduce the bus stop platform width to an absolute minimum of 1.5 metres.

Continuous tactile attention indicators are used on both sides of the bikeway to demark pedestrian areas and warn people with sight loss of the bikeway.

Figure 4: Design for an accessible island platform bus stop next to a raised unidirectional bikeway



Ville de Montréal

This figure is available in French only.

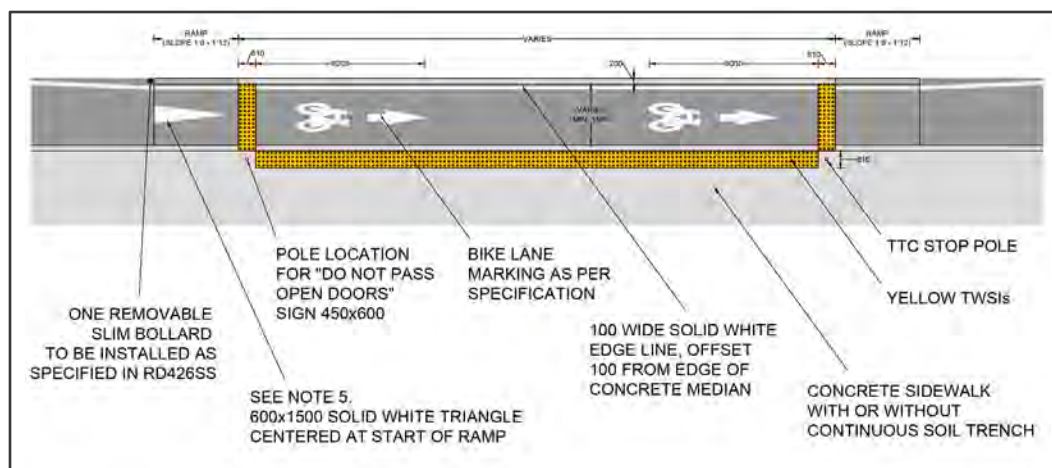
City of Toronto

Toronto uses two different standards to guide the design of bus stops next to bikeways. Both include many features referenced in this report including TWSIs and raising of bikeways adjacent to the stop.

Integrated bus stops

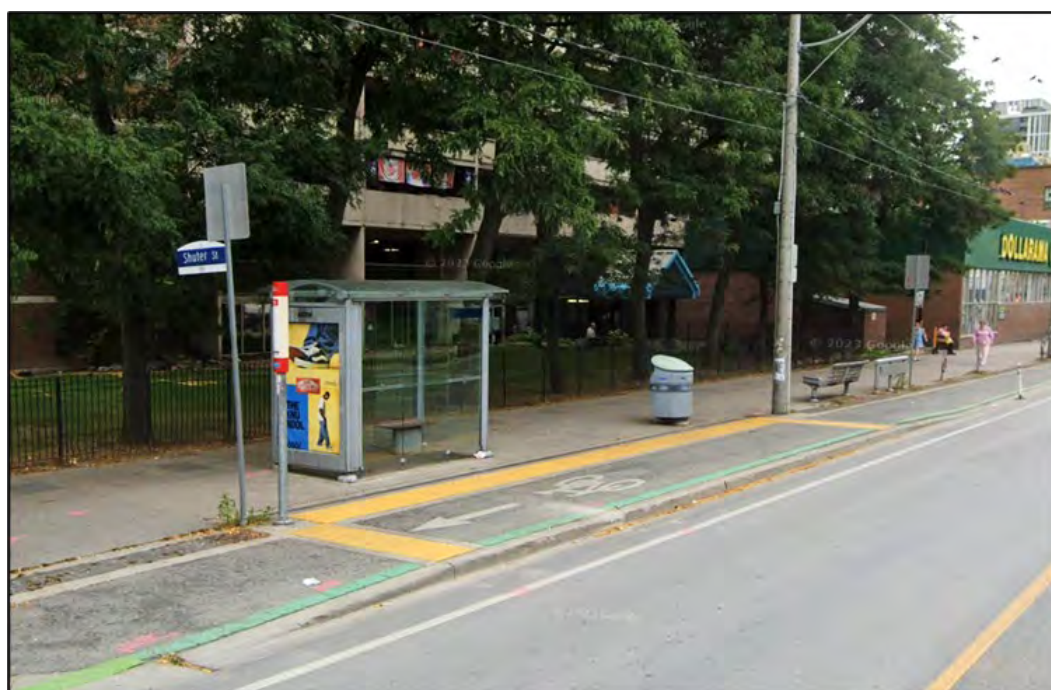
This standard was first implemented on Sherbourne Street. In this configuration, transit passengers wait behind the integrated boarding area/bikeway, which is delineated by yellow tactile surface indicators, and they only cross when a bus/streetcar is at the platform with doors open. Cyclists can ride through the boarding area when no transit vehicles are present, but they must stop when transit doors are open to serve passengers. A “Do Not Pass Open Doors” sign for cyclists is placed prior to the boarding area. Toronto has eight different versions of standard drawings, and the preferred version is a uni-directional bikeway platform without trench drain (City of Toronto, Standard Construction Drawings for Cycling Infrastructure, Drawing T-603.057).

Figure 5: City of Toronto integrated bus platform standard drawing T-603.057



City of Toronto

Figure 6: Integrated bus platform at Sherbourne Street and Shuter Street



City of Toronto

Island platform bus stops

This second, newer standard generally matches other configurations described in this briefing. The City is working with the Toronto Transit Commission to finalize its first version of standard drawings for island platform bus stops, including near-side/far-side and uni-directional/bi-directional variations. Guidance from the 2023 CNIB study has been integrated for finding the bus stop, orienting and navigating the bus stop, and interactions with cyclists. Some key features include:

- Shark's teeth and "Cyclists Yield to Pedestrians" signs prior to the pedestrian crossings
- Tactile surface indicators and ladder markings at pedestrian crossings
- Detectable edge treatment between the bikeway and sidewalk with a preference for beveled curbs (for cane-detectability)
- Channelization on the platform (e.g. railings, seat walls, garden beds) to guide pedestrians to the crossings
- Requirement for a shelter (with no advertising panels) on the platform
- Preference for two pedestrian crossings to the island platform, or direct access to a signalized crossing

Island platform bus stops have been implemented at Evelyn Wiggins Drive and Murray Ross Parkway as part of the City's first protected intersection, and on Kipling Avenue at Rowntree Road as part of a road reconstruction and multi-use trail project.

Figure 7: Island platform bus stop on Kipling Avenue



City of Toronto

Resources

City of Toronto. 2023. [*Standard Construction Drawings for Cycling Infrastructure, Integrated Bus Stop Drawings Drawing No. T-603.052 - T-603.059*](#)

CNIB Foundation. “[Island Platform Transit Stops](#)” [accessed May 20, 2025]

CNIB Foundation. 2023. [*Cycling Infrastructure and People with Sight Loss – Design Challenges and Opportunities at Transit Stops Across Canada*](#)

Irish National Transport Authority, Department of Transportation. 2023. [*Cycle Design Manual*](#) (see Section 4.2.12.3 Bus Stops, TL201, TL203)

Living Streets. 2024. [*Inclusive Design at Bus Stops with Cycle Tracks*](#)

TransLink and British Columbia Ministry of Transportation and Transit. 2024. [*Design Guide for Bus Stops Adjacent to Cycling Infrastructure*](#)

Transport for London. 2024. [*Bus Stop Bypass Safety Review 2024, Second Edition*](#)

Ville de Montréal. 2022. *Arrêts d’autobus universellement accessibles en bordure d’un aménagement cyclable*

Acknowledgements

This briefing is based on a [volunteer project report](#) developed by TAC's Active Transportation Integrated Committee. The efforts of the following authors and contributors to that report are gratefully acknowledged:

- Chris Baker (City of Winnipeg)
- Yousteena Bocktor (WSP Canada)
- Stephen Gagne (City of Toronto)
- Justin Jones (HDR Engineering)
- Bartek Komorowski (Ville de Montréal)
- Andrew Monson (ISL Engineering & Land Services)
- Brian Patterson (Urban Systems)
- Matt Pinder (Mobycon)

Disclaimer

While TAC and the authors endeavour to ensure that all information in this publication is accurate and up to date, they assume no responsibility for errors and omissions. This publication does not reflect a technical or policy position of TAC.

© 2025 Transportation Association of Canada

The Transportation Association of Canada (TAC) is a not-for-profit, national technical association that focuses on road and highway infrastructure and urban transportation. TAC members include all levels of government, businesses, academic institutions, and other associations.

TAC provides a neutral, non-partisan forum for these organizations to share ideas, build knowledge, promote best practices, foster leadership, and encourage bold transportation solutions.

401 - 1111 Prince of Wales Drive, Ottawa, ON K2C 3T2

Tel: 613-736-1350 | Email: secretariat@tac-atc.ca

www.tac-atc.ca

ISBN: 978-1-55187-726-6

Ce document est aussi disponible en français.