



## 6.1 TRANSIT STOPS

York Region Transit (YRT) operates a variety of transit routes including Viva Bus Rapid Transit (BRT) Routes, standard YRT routes, and community bus routes. Depending on the characteristics of these routes, headways can vary from five to sixty minutes, and a wide range of transit vehicles are used to service the various routes.

This chapter presents some **generalized design concepts for addressing the interactions between transit stops and pedestrian and cycling facilities**. In the vicinity of all transit stops, the safety of passengers boarding and disembarking from transit facilities should be emphasized through **clear pedestrian priority**. From the perspective of transit vehicle operators, treatments that enhance the visibility of pedestrians and cyclists will help to reduce potential conflicts with transit vehicles.



The following principles should be applied when designing active transportation facilities around transit stops and stations:

- Whenever possible, **the preferred approach is to separate through cyclists and pedestrians from transit passengers.**  
Depending on the active transportation facilities, treatments may involve:
  - Bending the multi-use path behind the transit facility and providing a paved connection to the passenger area
  - Bending the separated cycling facility behind the transit facility to avoid interactions with passengers
  - Ramping an on-road cycling facility up into the boulevard in advance of the transit stop in order to bend it behind the transit facility
- Where it is not possible to bend facilities away from transit facilities due to property or ROW constraints, **mitigation strategies must be employed to reduce or limit conflicts.**  
Depending on the type of facilities, strategies may include:
  - Application of enhanced pavement markings for on-road cycling facilities to alert bus drivers of potential conflicts with cyclists
  - Providing signage and pavement markings that alert cyclists to pedestrian priority where the cycling facility must cross through shared space
  - Providing other clues that emphasize a changing condition such as through the use of different surface materials for shared facilities or plantings
- Requiring cyclist to dismount at transit stops is generally not a viable solution and should be avoided

The following types of active transportation facilities at both near-side/far-side and midblock transit stops with bus bays are illustrated in these guidelines:

- Dedicated bikeway (i.e. bike lanes) with sidewalk
- Separated bikeway (i.e. raised cycle track or in-boulevard cycle track) with sidewalk for both constrained and unconstrained conditions
- Multi-use path

## Dedicated Bikeway & Sidewalk with Transit Stop

### Minimum

- 1 Bike lane to ramp up to sidewalk elevation through the bus bay in advance of the transit boarding zone (1.8 m MIN to 3.0 m PREF) in advance to accommodate the length of a bicycle. A sample cross-section for the ramp is shown in Exhibit 6-3.
- 2 Conflict zone pavement marking through the pedestrian conflict zone and along the full length of the tactile plate.
- 3 Tactile plate to be provided along the length of the transit boarding zone. Length of the tactile plate should be determined based on the number and length of anticipated transit vehicles using the stop at a given time (to allow for all-door boarding).  
For reference, typical lengths include 12.5 m (conventional fleet) and up to 19 m (articulated bus).

### Preferred

- A 'Cyclists Yield to Pedestrians' signage (Rb-73-OTM) can be applied where there are challenges with interactions between users, and to alert cyclist of transit passengers.
- B Application of crosswalk markings lengthwise along conflict zone. As an alternative to crosswalks, bike symbols and arrows may be applied along YRT/Viva corridors.

#### Alternative Marking:

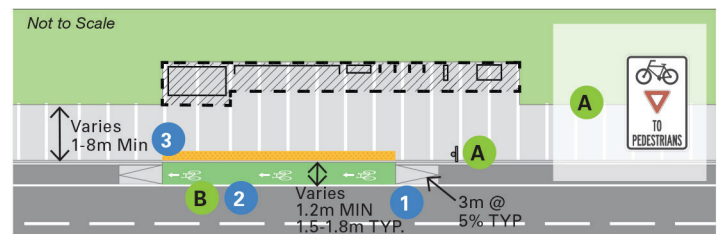
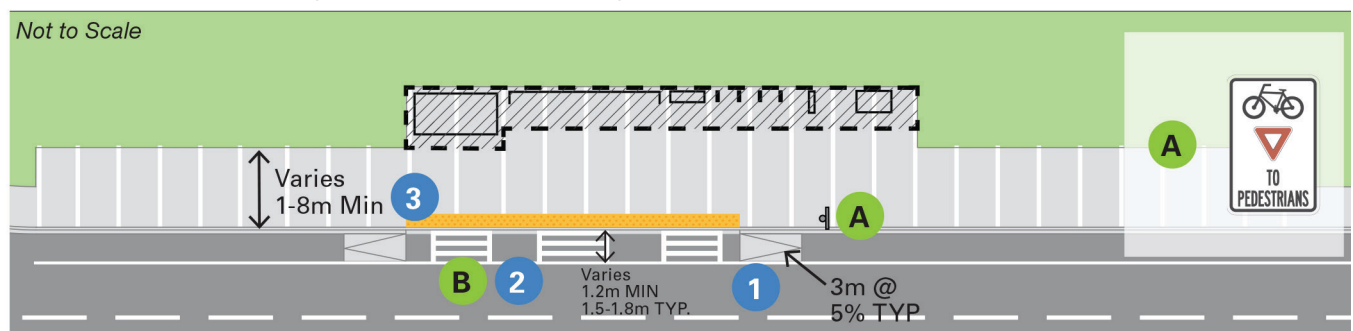
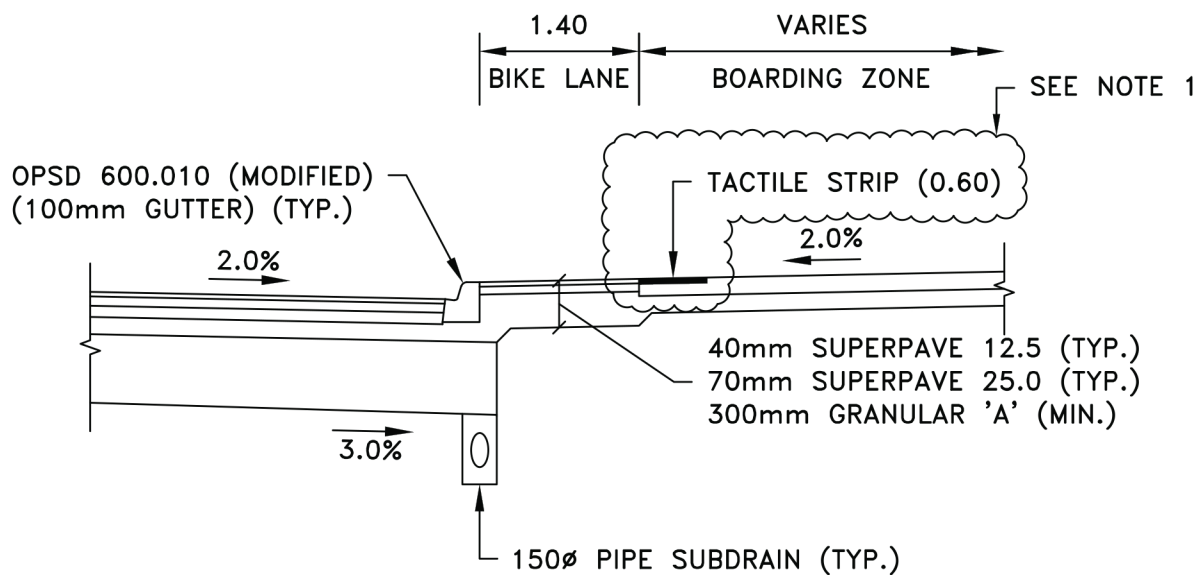


Exhibit 6-1. Dedicated Bikeway and Sidewalk Transit Concept







Source: VivaNext Typical Detail (Draft)

Exhibit 6-3. Dedicated Facility Ramping Up at a Transit Stop (Source: IBI Group)



## Dedicated Bikeway & Sidewalk with Bus Bay – Preferred


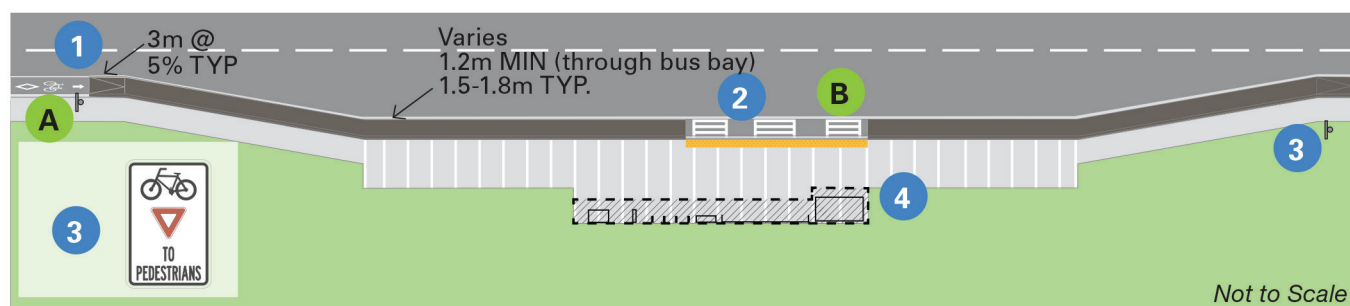
Minimum	Preferred
<ol style="list-style-type: none"> <li>1 Bike lane to ramp up to sidewalk elevation through the bus bay. It is preferred that the ramp begin in advance of the bus bay to limit potential encroachment by transit vehicles.</li> <li>2 Conflict zone pavement marking through the pedestrian conflict zone and along the full length of the tactile plate.</li> <li>3 Reserved bike lane and diamond pavement marking following bus bay in addition to bike lane signage (RB-91 - TAC)</li> <li>4 Tactile plate to be provided along the length of the transit boarding zone. Length of the tactile plate should be determined based on the number and length of anticipated transit vehicles using the stop at a given time (to allow for all-door boarding).</li> </ol>	<ol style="list-style-type: none"> <li>A 'Cyclists Yield to Pedestrians' signage (Rb-73-OTM) can be applied to alert cyclist of transit passengers</li> <li>B Application of bike symbols and arrows through the pedestrian conflict zone</li> </ol> <p>Alternative Marking:</p> 

Exhibit 6-4. Dedicated Bikeway and Sidewalk with Bus Bay Concept – Preferred



## Dedicated Bikeway & Sidewalk with Bus Bay – Retrofit

Minimum	Preferred
<ol style="list-style-type: none"> <li>1 Bike lane to be dashed through the bus bay to alert cyclists of the potential conflict with transit vehicles</li> <li>2 Conflict zone pavement marking through the conflict zone</li> <li>3 Reserved bike lane and diamond pavement marking following bus bay in addition to bike lane signage (RB-91 - TAC)</li> </ol>	<ol style="list-style-type: none"> <li>A Application of bike symbols through the conflict zone (spaced 3-5 m)</li> </ol>

Exhibit 6-5. Dedicated Bikeway with Bus Bay Transit Concept



## Separated Bikeway & Sidewalk with Transit Stop - Constrained

### Minimum

- 1 Conflict zone pavement marking through the pedestrian conflict zone and along the full length of the tactile plate
- 2 Tactile plate to be provided along the length of the transit boarding zone. Length of the tactile plate should be determined based on the number and length of anticipated transit vehicles using the stop at a given time (to allow for all-door boarding)
- 3 Bike symbol and arrow following bus bay

### Preferred

- A 'Cyclists Yield to Pedestrians' signage (Rb-73-OTM) can be applied to alert cyclist of transit passengers
- B Application of bike symbols and arrows through the pedestrian conflict zone

Alternative Marking:

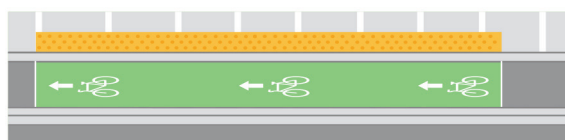
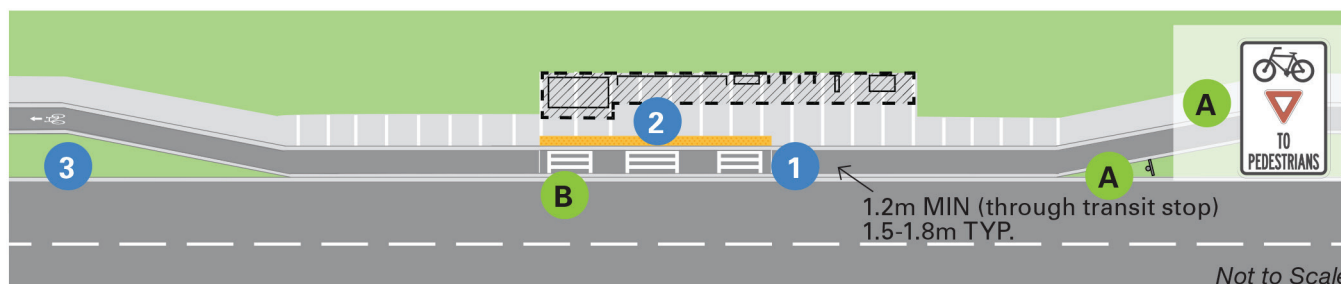


Exhibit 6-6. Separated Bikeway and Sidewalk with Transit Concept - Constrained



## Separated Bikeway & Sidewalk with Transit Stop - Preferred

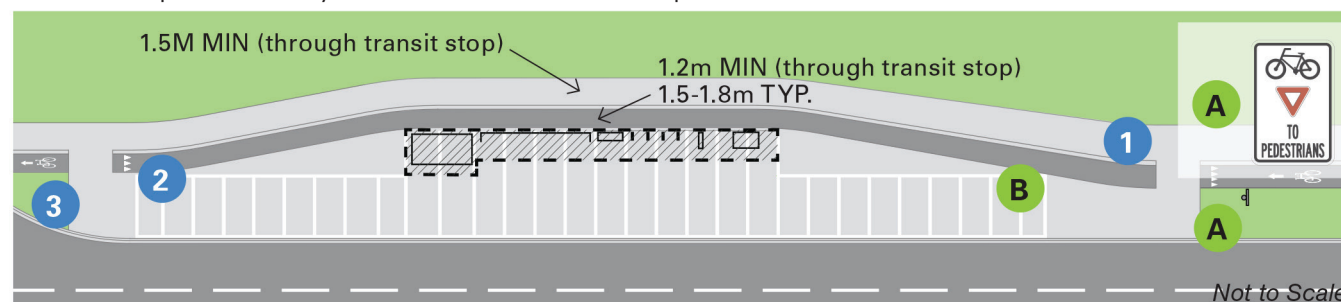
### Minimum

- 1 Sidewalk carried through the cycle track to emphasize pedestrian priority
- 2 Yield markings alerting approaching cyclists of pedestrian priority
- 3 Bike symbol and arrow following bus bay

### Preferred

- A 'Cyclists Yield to Pedestrians' signage (Rb-73-OTM) to alert cyclist of transit passengers
- B Where space is constrained pedestrians can pass through the transit bay in lieu of a separate sidewalk

Exhibit 6-7. Separated Bikeway and Sidewalk with Transit Concept - Preferred





## Separated Bikeway & Sidewalk with Bus Bay - Constrained


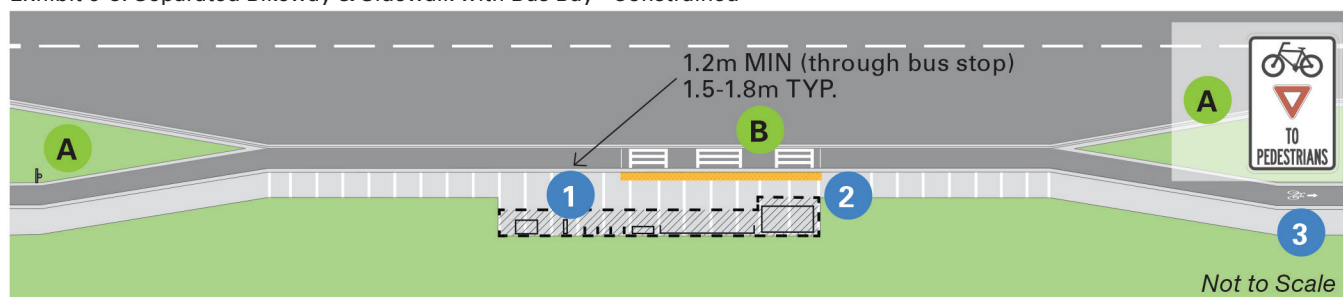
Minimum	Preferred
<ol style="list-style-type: none"> <li>1 Conflict zone pavement marking through the pedestrian conflict zone</li> </ol>	<ol style="list-style-type: none"> <li>A 'Cyclists Yield to Pedestrians' signage (Rb-73-OTM) can be applied to alert cyclist of transit passengers</li> </ol>
<ol style="list-style-type: none"> <li>2 Tactile plate to be provided along the length of the transit boarding zone. Length of the tactile plate should be determined based on the number and length of anticipated transit vehicles using the stop at a given time (to allow for all-door boarding)</li> </ol>	<ol style="list-style-type: none"> <li>B Application of bike symbols and arrows through the pedestrian conflict zone</li> </ol> <p>Alternative Marking:</p> 
<ol style="list-style-type: none"> <li>3 Bike symbol and arrow following bus bay</li> </ol>	

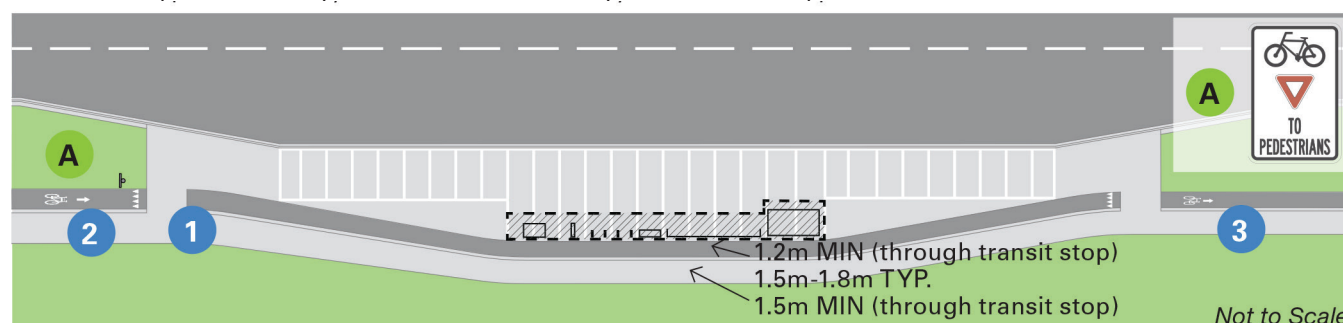
Exhibit 6-8. Separated Bikeway &amp; Sidewalk with Bus Bay - Constrained



## Separated Bikeway & Sidewalk with Bus Bay - Preferred

Minimum	Preferred
<ol style="list-style-type: none"> <li>1 Sidewalk carried through the cycle track to emphasize pedestrian priority</li> </ol>	<ol style="list-style-type: none"> <li>A 'Cyclists Yield to Pedestrians' signage (Rb-73-OTM) to alert cyclist of transit passengers</li> </ol>
<ol style="list-style-type: none"> <li>2 Yield markings alerting approaching cyclists of pedestrian priority</li> </ol>	<ol style="list-style-type: none"> <li>B Where space is constrained pedestrians can pass through the transit bay in lieu of a separate sidewalk</li> </ol>
<ol style="list-style-type: none"> <li>3 Bike symbol and arrow following bus bay</li> </ol>	

Exhibit 6-9. Separated Bikeway and Sidewalk with Bus Bay – Preferred Concept



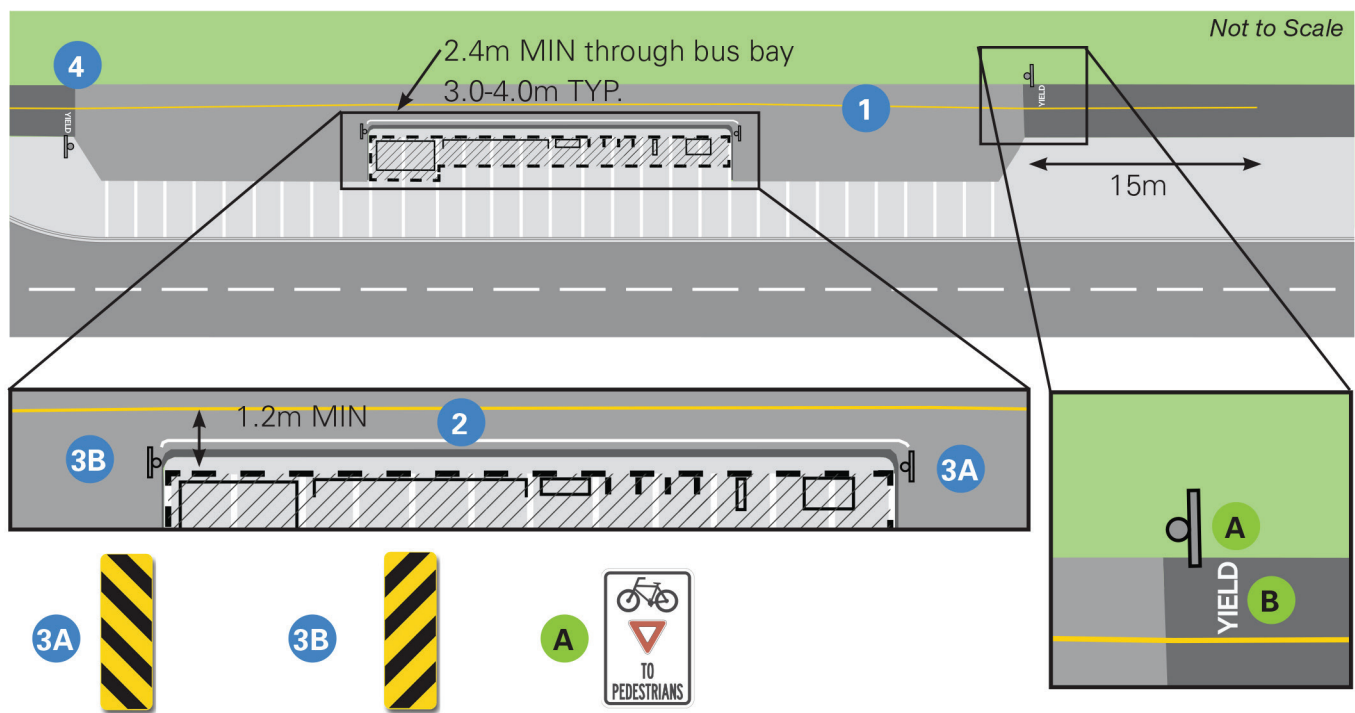
## Multi-use Path with Transit Stop

Preferred

### Minimum

- 1 A 100 mm solid yellow dividing line can be applied to the multi-use path approaching the driveway to reduce conflicts
  - 2 A 100 mm white solid line should mark the back of the transit stop, where shelters or other street furniture is provided, to warn cyclists of potential hazards
  - 3 'Object Marker' signage where there potential hazards associated with the transit stop i.e. transit shelters or bike parking (Wa-33L – OTM & Wa-33R – OTM)
  - 4 Change in surface material to emphasize pedestrian priority in the vicinity of the transit stop
- A 'Cyclists Yield to Pedestrians' signage (Rb-73-OTM) can be applied to alert cyclists of transit passengers
  - B 'YIELD' can be applied to provide additional guidance on pedestrian priority where there are challenges with interactions between user

Exhibit 6-10. Multi-use Path with Bus Bay Concept



## Multi-use Path with Bus Bay

### Minimum

- 1 A 100 mm solid yellow dividing line can be applied to the multi-use path approaching the driveway to reduce conflicts
- 2 A 100 mm white solid line should mark the back of the transit stop
- 3 'Object Marker' signage where there are potential hazards associated with the transit stop i.e. transit shelters or bike parking (Wa-33L – OTM & Wa-33R – OTM)
- 4 Change in surface material to emphasize pedestrian priority in the vicinity of the transit stop

### Preferred

- A 'Cyclists Yield to Pedestrians' signage (Rb-73-OTM) can be applied to alert cyclists of transit passengers
- B 'YIELD' can be applied to provide additional guidance on pedestrian priority where there are challenges with interactions between user

Exhibit 6-11. Multi-use Path with Bus Bay Concept

