



MISSISSAUGA

AGENDA

FACILITY ACCESSIBILITY DESIGN SUBCOMMITTEE OF THE MISSISSAUGA ACCESSIBILITY ADVISORY COMMITTEE

THE CORPORATION OF THE CITY OF MISSISSAUGA

www.mississauga.ca

MONDAY, MAY 27, 2019 – 1:30 PM

**Committee Room D – 2nd Floor, Civic Centre
300 City Centre Drive, Mississauga L5B 3C1**

MEMBERS

Carol-Ann Chafe
Emily Daigle
Clement Lowe
Steven Viera
Asim Zaidi
Naz Husain (ex-officio)

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Find it Online

<http://www.mississauga.ca/portal/cityhall/accessibilityadvisory>

CALL TO ORDER

APPOINTMENT OF THE CHAIR

ITEMS FOR CONSIDERATION

1. Bicycle Bypass Lanes at the Skymark Drive and Explorer Drive Roundabout

Fred Sandoval, Active Transportation Coordinator, Transportation & Works

Mattea Turco, Active Transportation Coordinator, Transportation & Works

2. Development of Park 524 & 525

Jordan Wu, Project Leader, Landscape Architect, Parks Development

Stephanie Payne, Project Manager, MBTW Group, MBTW | WAI

3. Accessible Beach Routes

Virginia Kalapaca, Project Leader, Landscape Architect, Parks Development

DATE OF NEXT MEETING

Monday, June 24, 2019 - 1:30 PM, Civic Centre, Committee Room D – 300 City
Centre Drive, Mississauga

ADJOURNMENT

City of Mississauga Memorandum



Date: April 17, 2019

To: Facility Accessibility Design Subcommittee

From: Mattéa Turco, Active Transportation Coordinator

Meeting Date: May 27, 2019

Subject: Bicycle Bypass Lanes at the Skymark Drive and Explorer Drive Roundabout

Background

The intersection of Skymark Drive and Explorer Drive was retrofitted from an all-way stop to a roundabout in 2016 (see images below).



The aerial image on the left is from early 2016 while the aerial image on the right is from 2017.

At the time the roundabout was constructed, bike lanes existed on the west end of Skymark Drive from Satellite Drive to Explorer Drive. Bike lanes were later added to the north end of Explorer Drive in 2017 and additional bike lanes will be added to the south end of Explorer Drive between Skymark Drive and Eglinton Avenue in 2019.

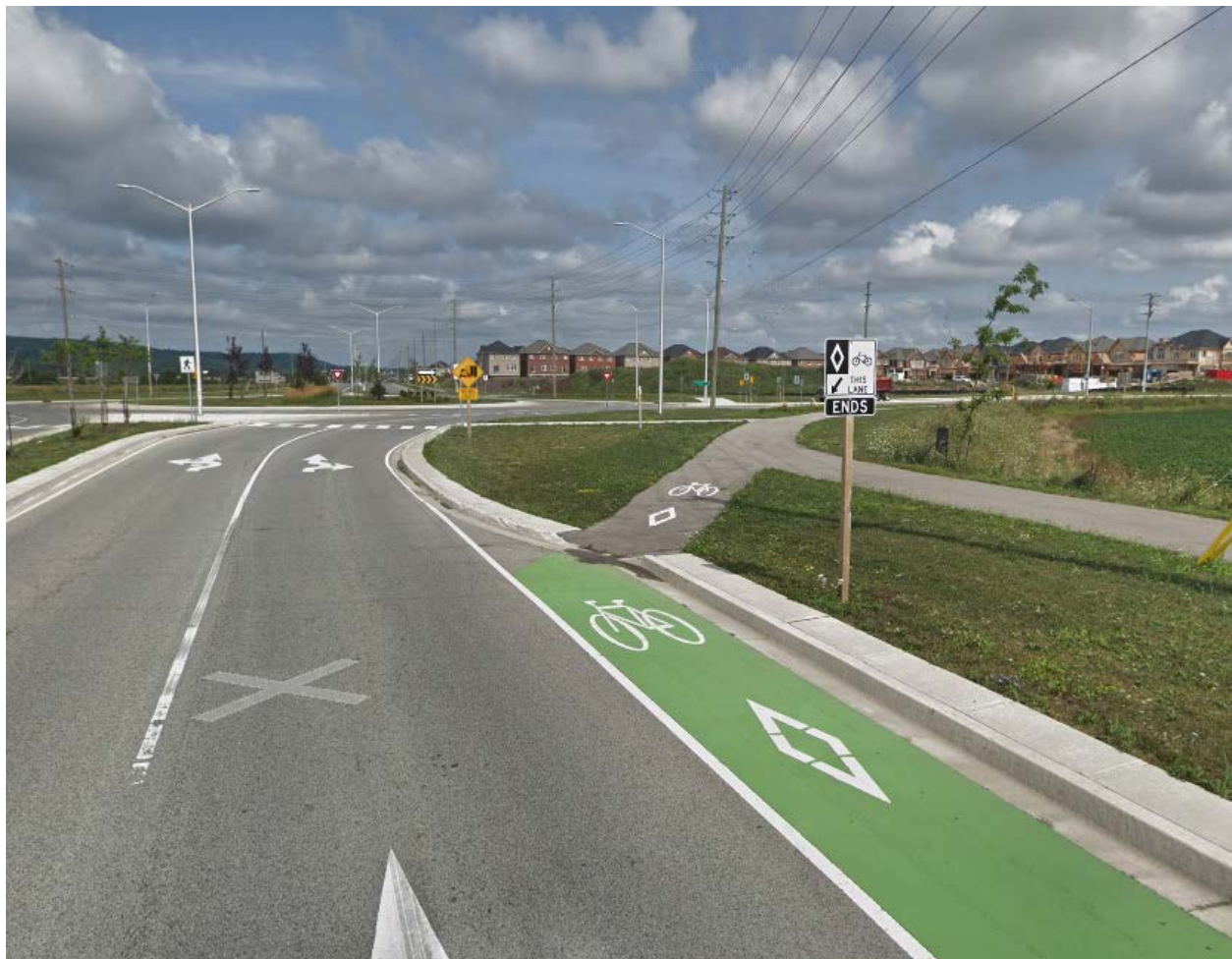
With cycling facilities on three approaches to the intersection, it is important that the roundabout has infrastructure to safely accommodate cyclists and keep the network connected.

Purpose

While the preferred option would be to have separated cycling facilities on the boulevard to allow cyclists to ride through the roundabout, this is not an option for Skymark Drive and Explorer Drive since the roundabout has already been built.

In order to improve cycling safety and connectivity at this intersection, the City of Mississauga will be adding bicycle bypass lanes to the roundabout.

Bypass lanes are ramps from the road to the sidewalk that allow cyclists to move through the roundabout as a pedestrian if they don't feel comfortable riding on the road with larger vehicles (see image below).



Google: Roundabout at the intersection of Tremaine Rd and Louis Saint Laurent Ave in Milton Ontario.

| | | | |
|--------------------------------|--|------------|---|
| Sidewalk Prioritization Matrix | | 2019/04/17 | 3 |
|--------------------------------|--|------------|---|

Alternatives

The Ontario Traffic Manual Book 18, a design guide for cycling facilities, does not provide detailed information on accommodating cyclists in a roundabout. In order to ensure both cyclists and pedestrians can safely use roundabouts; the City of Mississauga's Active Transportation Team has developed the alternatives below to incorporate cycling into the existing roundabout.

Alternative 1

The first alternative has cycling bypass ramps built from the road to the intersection and connects the on road cycling facilities to the existing pedestrian zones. This option is more convenient for cyclists as it provides them with a separated facility and a more direct path of travel.

Since the concrete apron is considered a pedestrian zone, stop and dismount signs will be installed where the bypass ramp meets the concrete.

A possible concern with this alternative is that a few of the bypass ramps connect with the existing concrete apron in close proximity to pedestrian crossings.

For a detailed drawing of Alternative 1 please see Appendix A

Alternative 2

The second alternative, while similar in most aspects to the first alternative seeks to address possible conflicts between pedestrians and cyclists by having the cycling bypass ramp end 15 metres before any pedestrian crossings.

As noted in the National Cooperative Highway Research Program Report 672 on Roundabouts, a bicycle bypass ramp has the potential to be confused as a pedestrian ramp by those who are visually impaired and should be placed at least 15 metres before a crosswalk to avoid any confusion (U.S. Department of Transportation, pg. 6-73). Where the bypass ramp ends prior to the crosswalk, a shared space at least 3 metres wide would be provided to ensure both cyclists and pedestrians have enough space to manoeuvre. The end of the ramp would be signed directing cyclists to dismount and walk their bikes while in the shared space.

For a detailed drawing of Alternative 2 please see Appendix B

Additional Design Options

A few additional design options have been detailed below. These options can further improve accessibility at roundabouts where cycling and pedestrian facilities exist.

The first option is to include a textured separation between the concrete and the asphalt when the sidewalk and the bypass ramp run parallel to each other (see image below). This textured and coloured delineation as well as the difference in surface type will help highlight the separate spaces and reduce potential confusion.



Image: Cycle track parallel to sidewalk with texture separation, City of Toronto

The second option is to include tactile plates or a textured surface at the beginning or end of the bicycle bypass ramps. This is an option recommended in Ontario Traffic Manual Book 18 so that visual impaired pedestrians do not misinterpret the ramp as a transition to a crosswalk (pg. 138).

A third option would be to incorporate directional tactile walking surface indicators in the concrete to direct pedestrians to the crossing or sidewalk (see image below). These guidelines would help direct pedestrians through the roundabout, keeping them within the pedestrian zone.



Image: Directional tactile walking surface indicators (red line) directing pedestrians to sidewalk from shared space, City of Toronto

Sidewalk Prioritization Matrix

2019/04/17

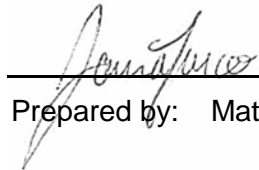
5

The third option would not be possible to incorporate into this project since the sidewalk has already been build; however, if it is a preferred treatment, it will be considered for future roundabouts.

Conclusion

In order to improve pedestrian and cycling facilities through the roundabout at Skymark Drive and Explorer Drive, the City of Mississauga's Active Transportation Team has developed two alternatives along with additional design options to be considered by the Facilities Accessibility and Design Subcommittee (FADS).

The feedback received through this process will help inform future roundabout designs.



Prepared by: Mattéa Turco, Active Transportation Coordinator

Sidewalk Prioritization Matrix

2019/04/17


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Appendix A: Alternative 1



Skymark Drive and Explorer Drive Roundabout
Option 1

Active Transportation
Matt  a Turco, 2019/03/22


N

Not to scale

Sidewalk Prioritization Matrix

2019/04/17

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Appendix B: Alternative 2

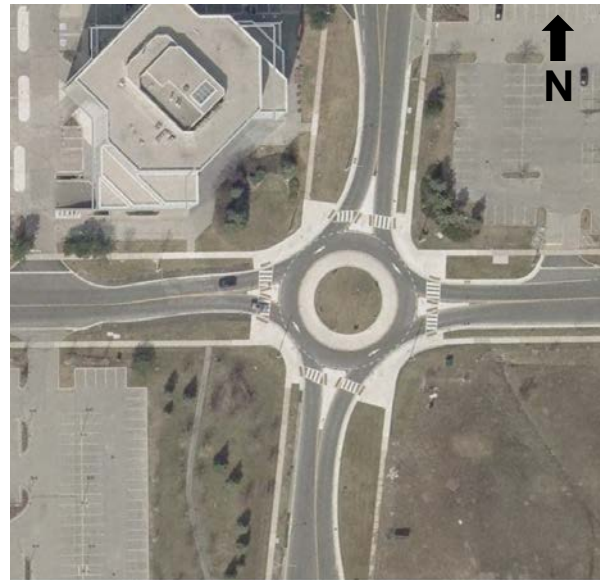


Bicycle Bypass Lanes at the Skymark Drive and Explorer Drive Roundabout

Creating an Accessible Space for
Pedestrians and Cyclists

Background

- Was an all-way stop.
- Converted to a roundabout in 2016.
- Bike lanes on 3 approaches.

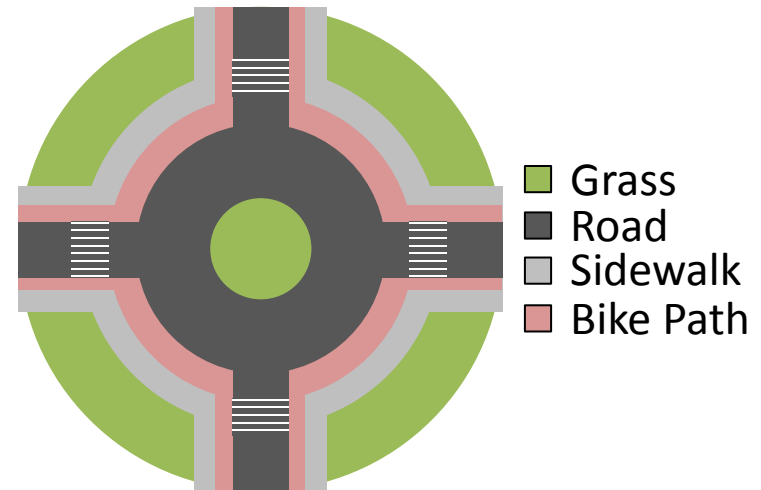


Purpose

- Bike lanes cannot go through a roundabout on road.
- The preferred option would be to have a bike path separate from the road and pedestrians so cyclists can ride through the roundabout.



Google images: www.google.ca



Purpose



Google maps image of a roundabout at the intersection of Tremaine Rd and Louis Saint Laurent Ave in Milton Ontario: www.google.ca

The City will be adding bicycle bypass lanes to the roundabout.

We need your feedback to ensure the end result is safe and accessible.

Design Alternatives

Alternative 1

- Build cycling ramps up to the intersection and connect to existing concrete apron.
- Sign would be put up telling cyclists to stop and dismount

[Skymark & Explorer Roundabout - Option 1.pdf](#)

Alternative 1 Pros

- More convenient for cyclists

Alternative 1 Cons

- Some ramps lead straight to pedestrian crossing.

Alternative 2

- Build cycling ramps up to a shared space that is 15 metres away from the pedestrian crossing.
- Extend the concrete apron and sidewalk to create a larger shared space.
- Sign would be put up telling cyclists to stop and dismount

[Skymark & Explorer Roundabout - Option 2.pdf](#)

Alternative 2 Pros

- None of the cycling ramps lead into the crosswalk.

Alternative 2 Cons

- Less convenient for cyclists

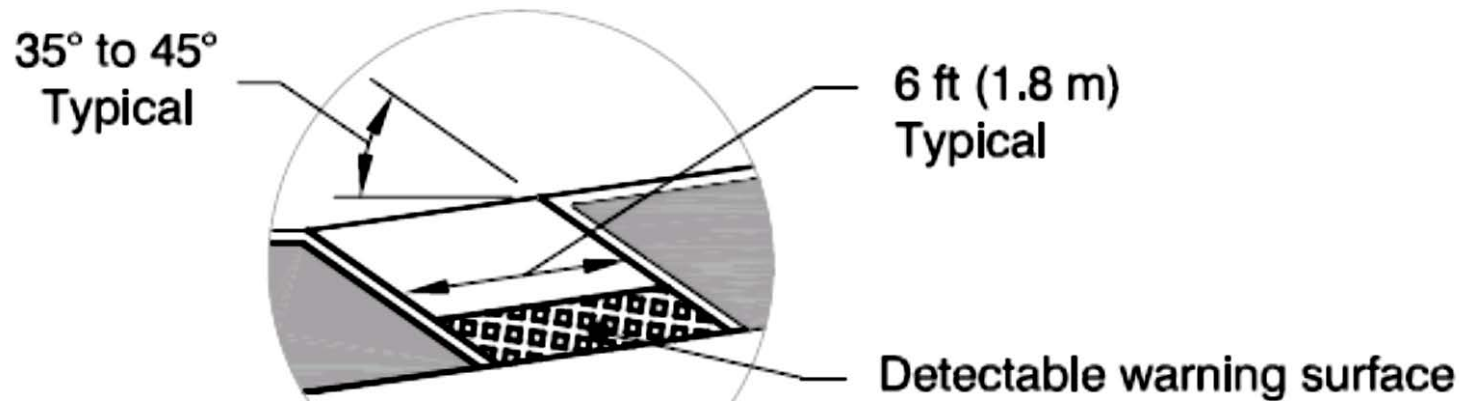
Other Design Considerations

Textured Separation



A textured strip of concrete or asphalt separating the cycling path from the sidewalk when they run side by side.

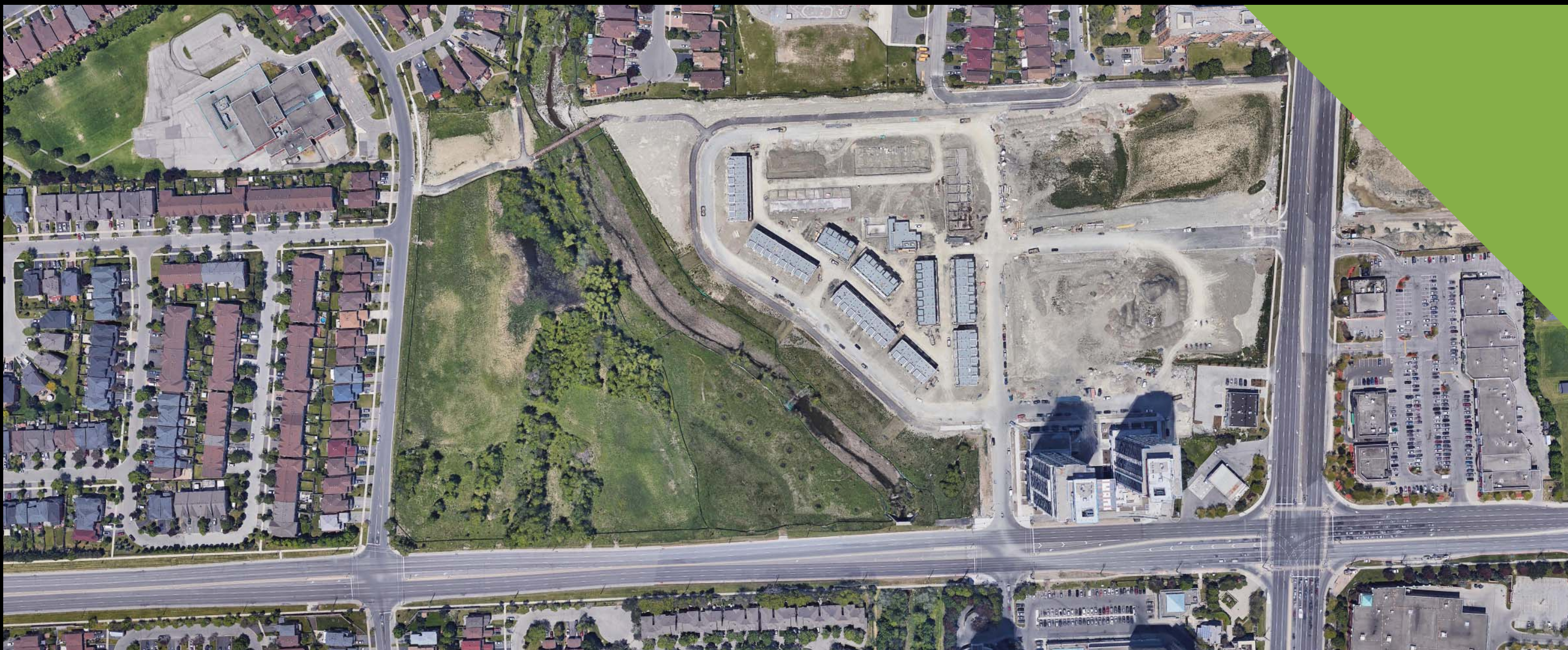
Tactile Plates on Bike Path Ramps



OTM Book 18 suggests that a detectable warning surface should be provided at the end of the ramp so that visually impaired pedestrians do not misinterpret the ramp as a transition to a crosswalk.



A textured strip of concrete, asphalt, tactile plates or guide lines that lead pedestrians in the direction they should travel to get through the roundabout or access a crossing.



FADS Committee Meeting

Development of Park 524 & 525

City of Mississauga

May 27, 2019

Agenda

Development of Park 524 & 525

Project Overview

Proposed Park Program

Final Development Plan

Design Strategies / Standards Applied

Policy & Framework Review

Questions

Project Overview

Development of Park 524 & 525



Proposed Park Program

Development of Park 524 & 525

- **Parking**
- **Seating & Gathering Areas**
- **Walkways & Trails**
- **Open Play Field**
- **Fitness Stations**
- **Basketball & Tennis Courts**
- **Play Site**
- **Naturalized Areas & Stormwater Management**

Final Development Plan

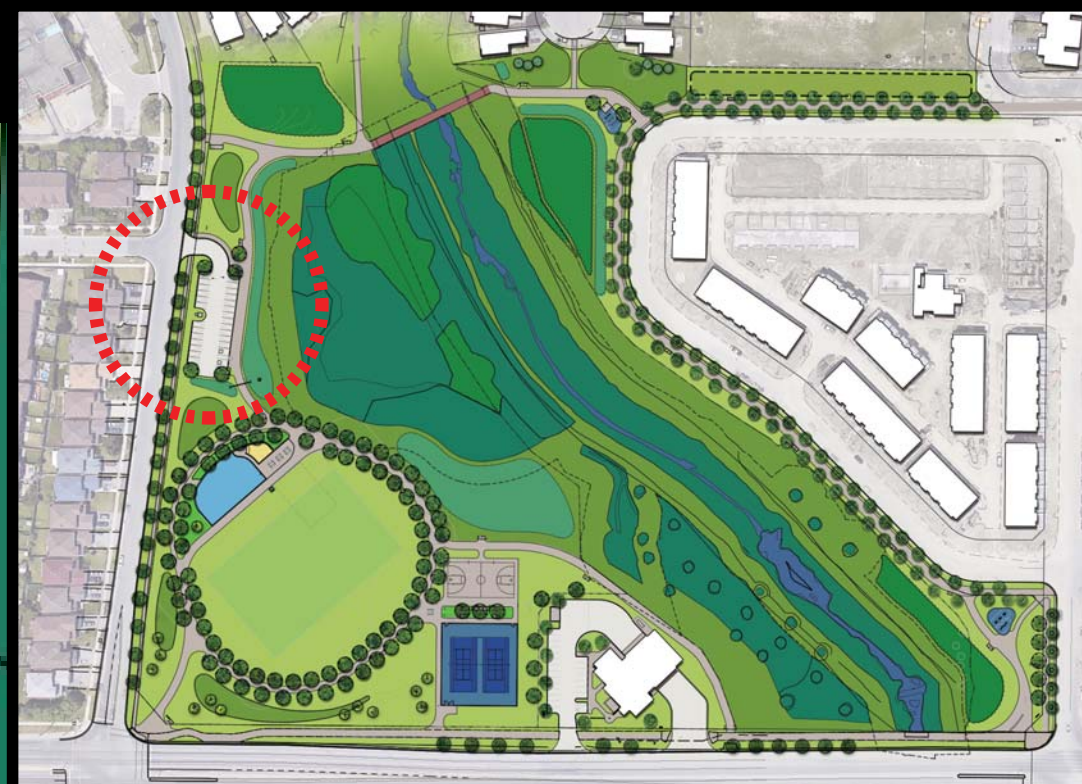
Development of Park 524 & 525



Design Strategies/Standards Applied

Development of Park 524 & 525

Parking

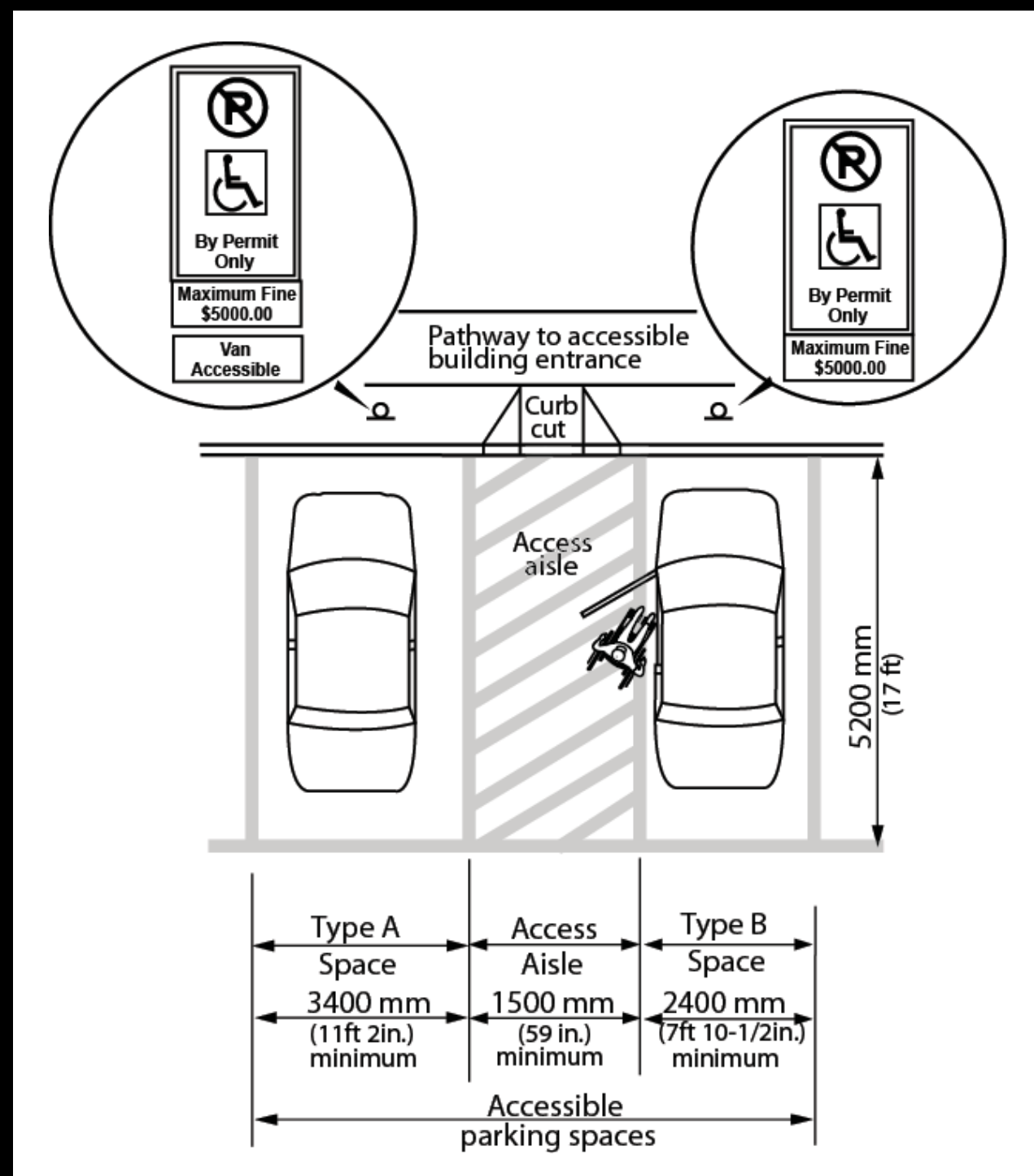


- **Surfacing**
- **Aisles**
- **Signage**
- **Total Parking: 27**
- **Accessible Parking: 2**

Design Strategies/Standards Applied

Development of Park 524 & 525

Parking

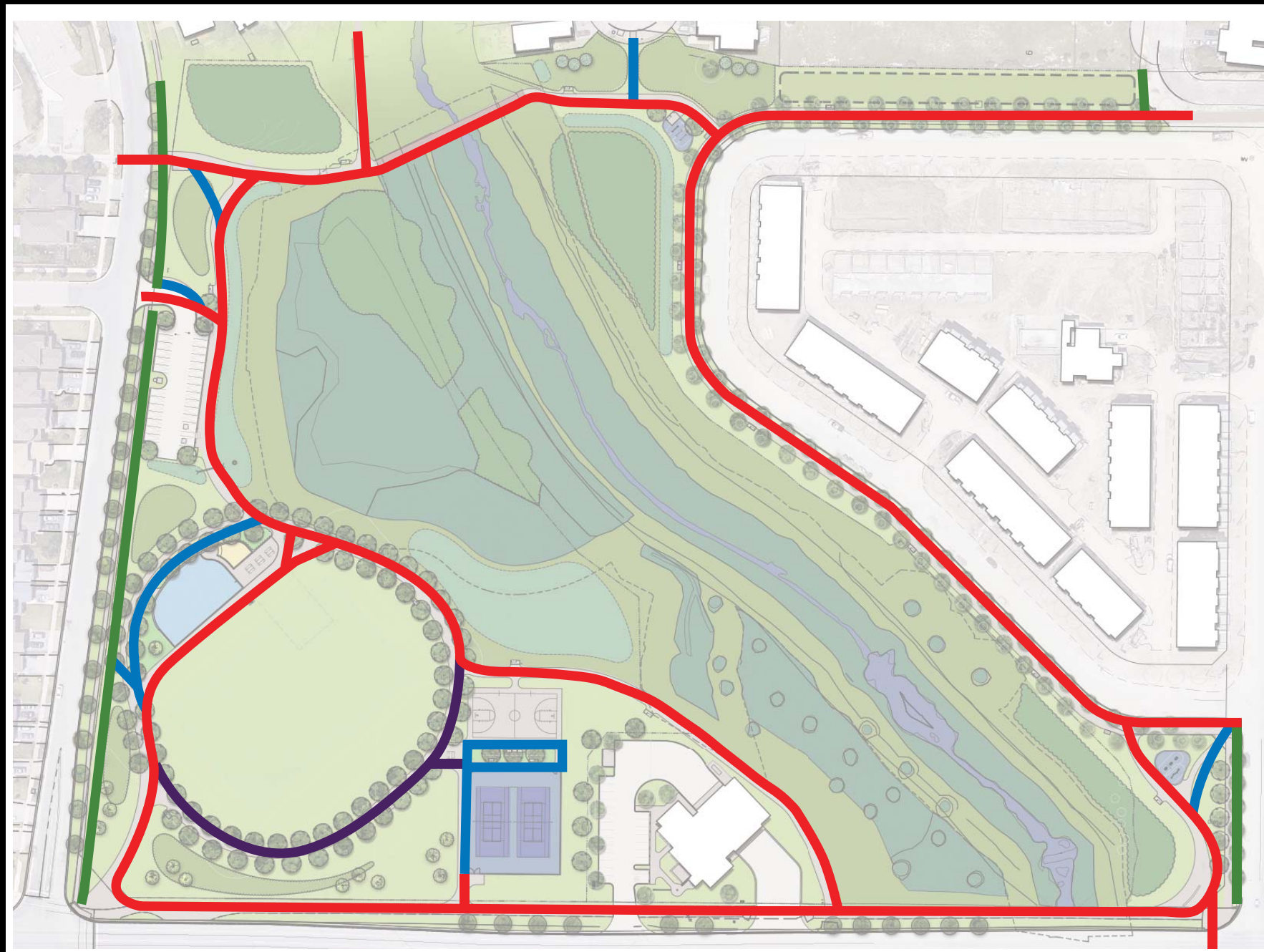


Side-by-side Parking Space

Design Strategies/Standards Applied





Development of Park 524 & 525

Walkways & Trails



- **Surfacing**
- **Running Slope**
- **Cross Slope**
- **Clear Height**
- **Edge Protection**

Legend

-  **3.5m wide multi-use trail & parks maintenance route**
-  **3.0m wide park trail**
-  **2.1m wide pedestrian path**
-  **1.5m wide standard sidewalk**

Design Strategies/Standards Applied

Development of Park 524 & 525

Fitness Stations

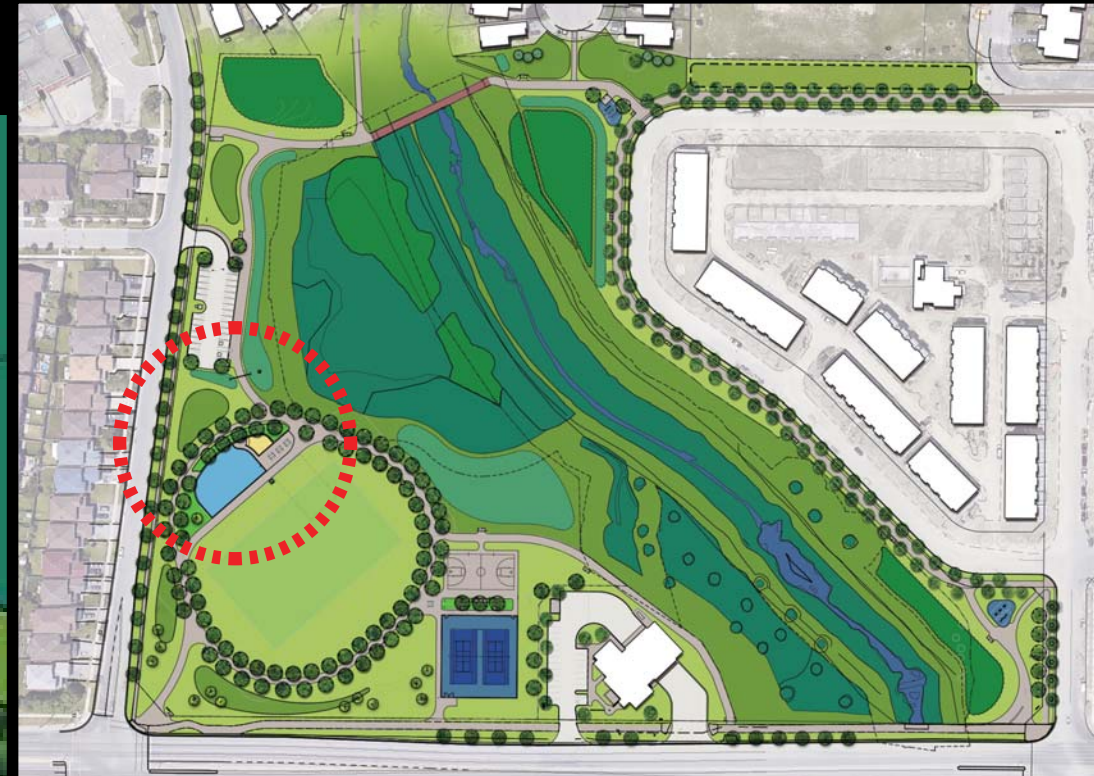


- Surfacing
- Signage

Design Strategies/Standards Applied

Development of Park 524 & 525

Play Site

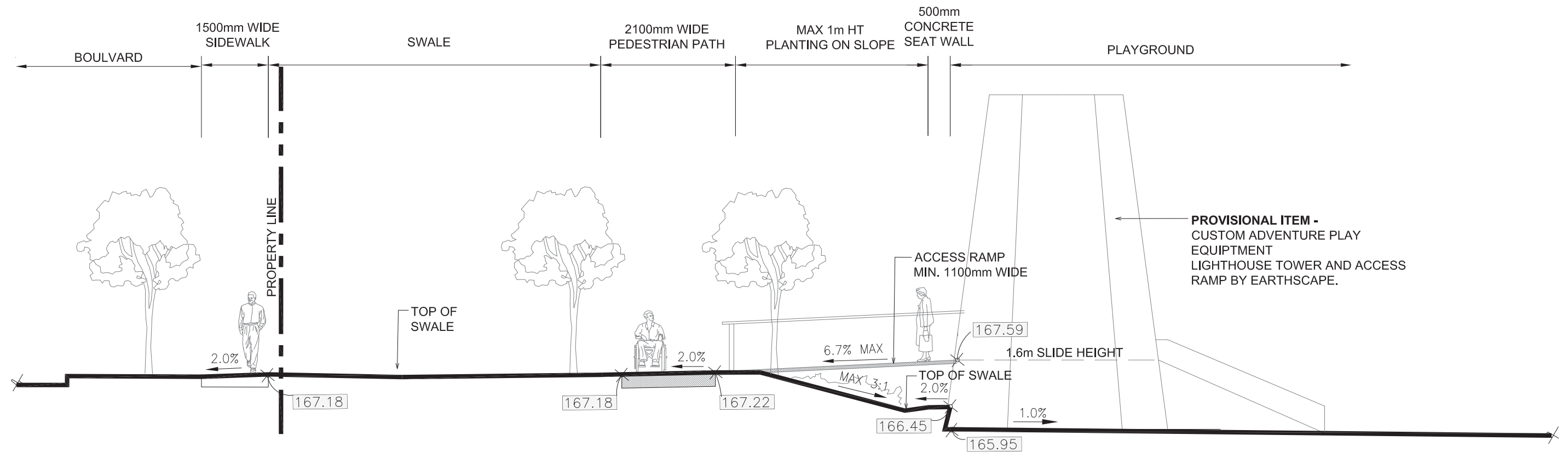


- **Inclusive Play**
- **Annex H**
- **CSA**
- **Surfacing**
- **Seating**

Design Strategies/Standards Applied

Development of Park 524 & 525

Play Site



Design Strategies/Standards Applied

Development of Park 524 & 525

Seating & Gathering Areas



- Surfacing
- Slope
- Access
- Spacing
- Seating
- Clear Area

Legend



Existing Bench / Rest Area

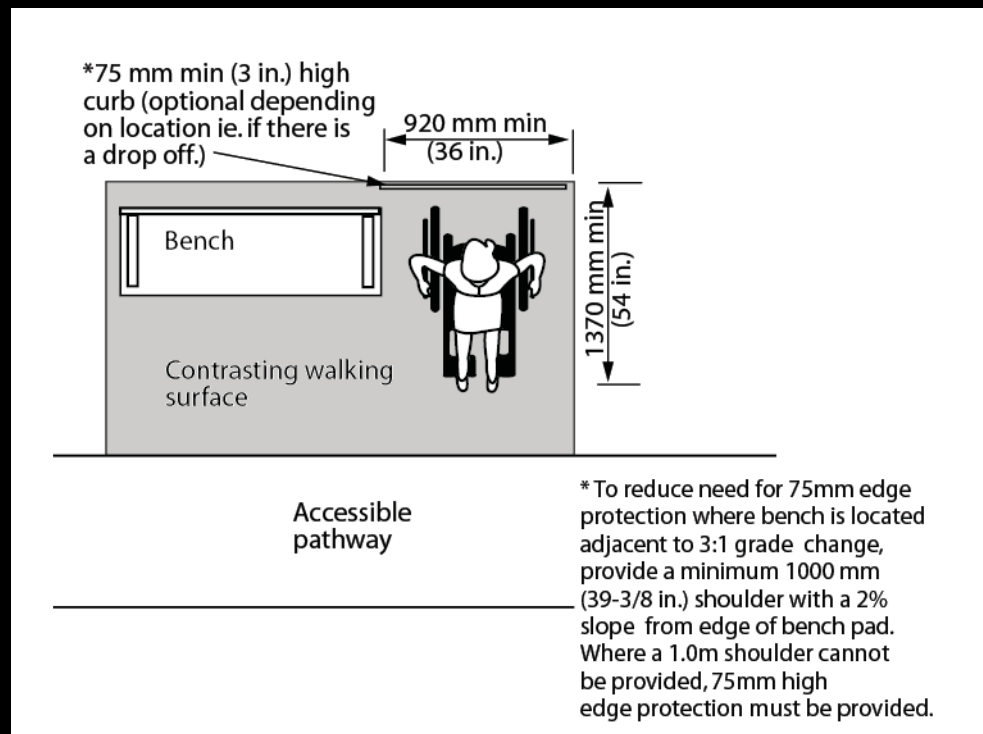


Proposed Bench / Rest Area

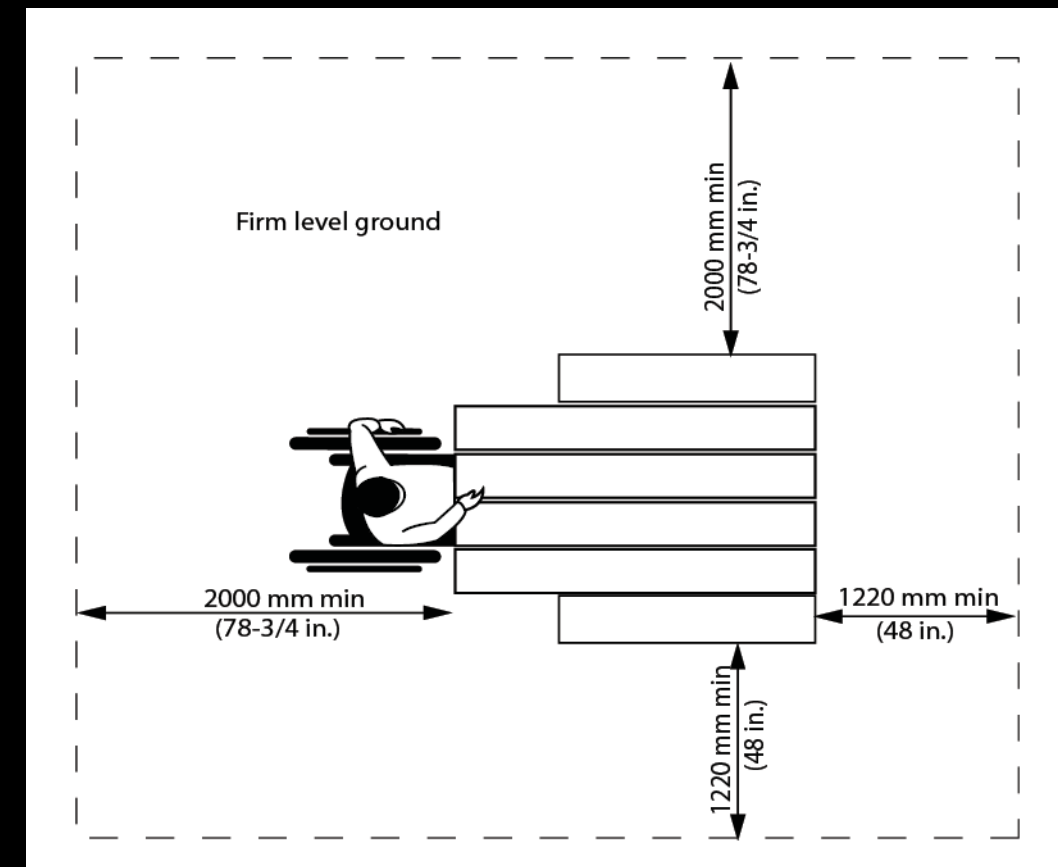
Design Strategies/Standards Applied

Development of Park 524 & 525

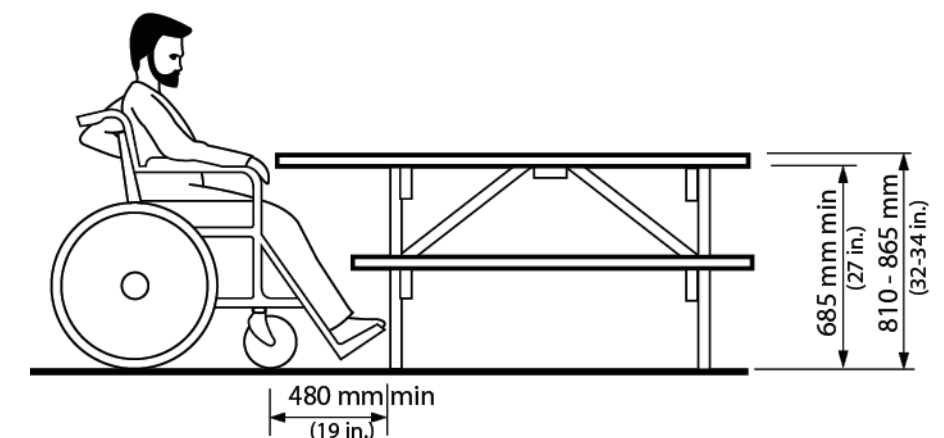
Seating & Gathering Areas



Bench Seating



Accessible Tables



Design Strategies/Standards Applied

Development of Park 524 & 525

Open Play Field

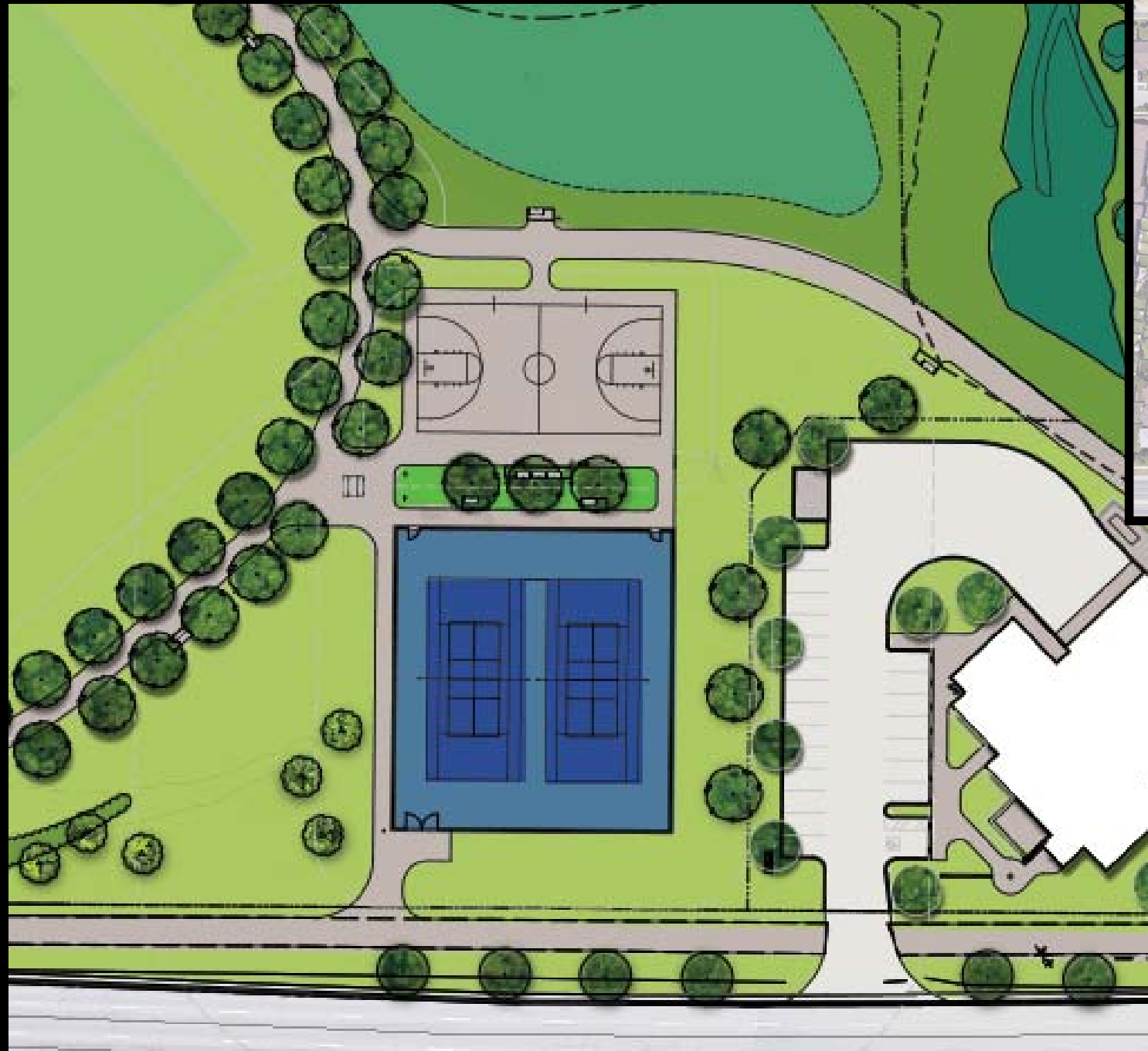


- Surfacing
- Slope
- Access

Design Strategies/Standards Applied

Development of Park 524 & 525

Basketball & Tennis Courts



- Surfacing
- Slope
- Access

Design Strategies/Standards Applied

Development of Park 524 & 525

Naturalized Areas & Stormwater Management

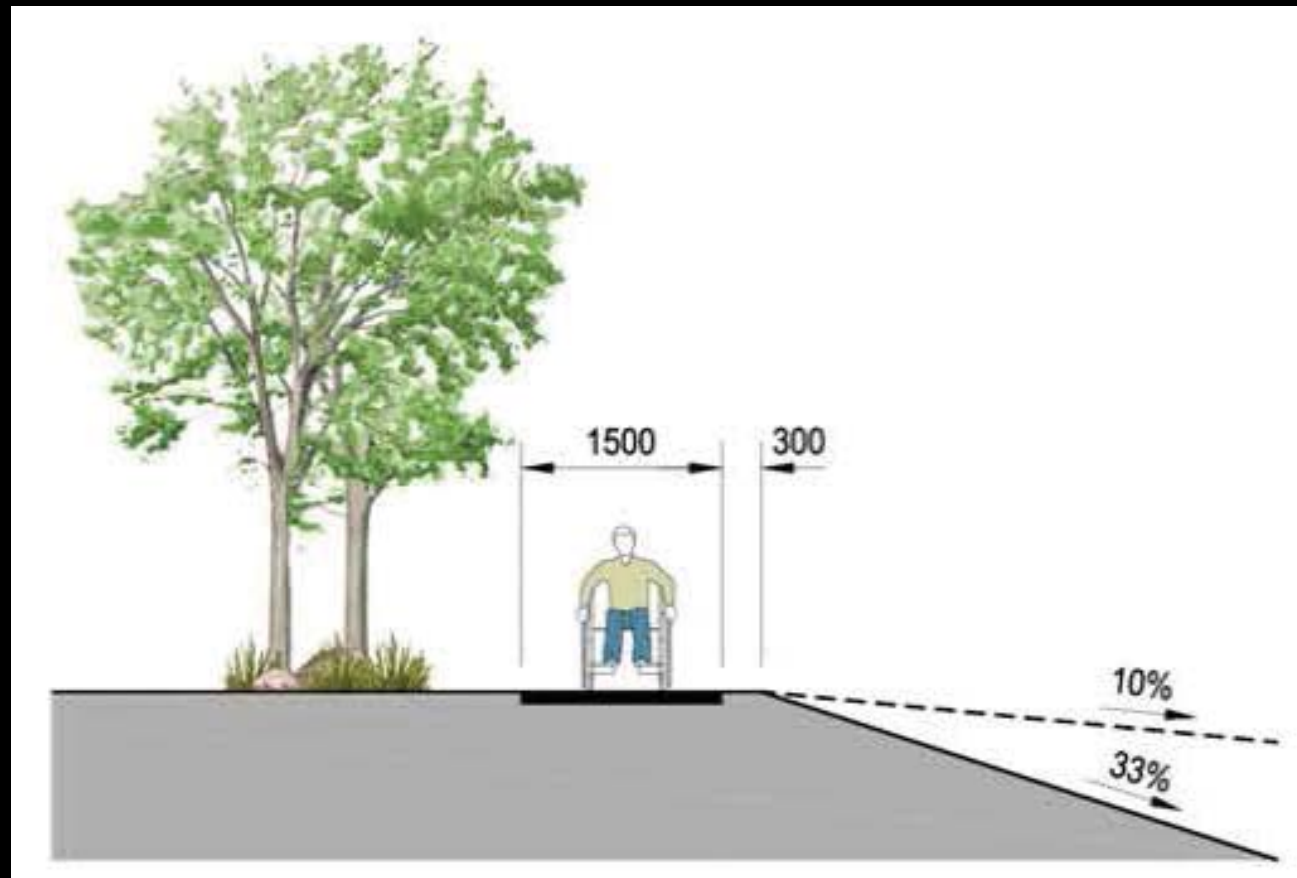


- Surfacing
- Slope
- Access

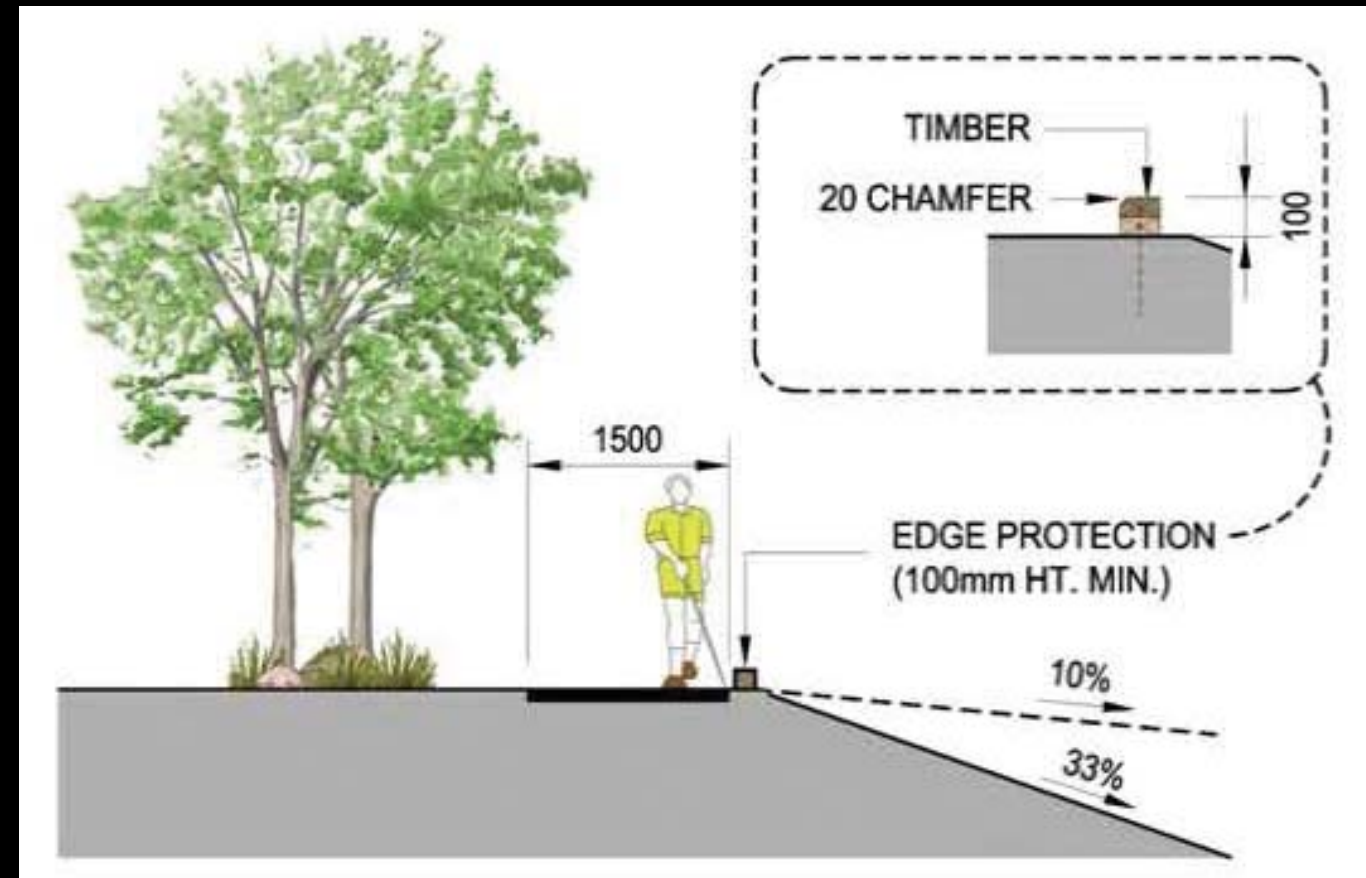
Design Strategies/Standards Applied

Development of Park 524 & 525

Naturalized Areas & Stormwater Management



Safety Shoulder



Edge Protection

Policy & Framework Review

Development of Park 524 & 525

KEY DOCUMENTS

- **Facility Accessibility Design Standards (2015)**
- **Official Plan (2010)**
- **Older Adult Plan (2009)**
- **Accessibility Plan (2008)**
- **Arts and Culture Master Plan (2009)**
- **Accessibility Design Guidelines for York Regional Forest Trails, 2013**
prepared by The MBTW Group
- **Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11**
 - **Technical Requirements for Recreational Trails**

Questions?

Accessible Beach Routes

Prepared by: Virginia Kalapaca
Park Development

Accessibility For Ontarians With Disabilities Act, 2005 Integrated Accessibility Standards O.Reg 191/11

Design Of Public Spaces Standards (Accessibility Standards For The Built Environment)

Beach access routes: are routes that are constructed and are intended for pedestrian use by the public and that provide access from off-street parking facilities, recreational trails, exterior paths of travel and amenities to an area of a beach that is intended for recreational use by the public.

Summary of Technical Requirements [s. 80.10]

New or redeveloped beach access routes must:

1. a minimum clear width of 1,000mm
2. a height clearance of 2,100mm above the beach access route
3. A maximum running slope of 10%
4. firm and stable surface
5. Constructed surfaces:
 - a) A maximum cross slope of 2%
 - b) 1:2 bevel at changes in level between 6mm and 13mm
 - c) Where the change in level exceeds 200mm - a ramp must be installed
 - d) Surface openings must not exceed 20 mm. in dia.
 - e) elongated openings must be oriented perpendicular to the direction of travel
6. Non-constructed surfaces must have a cross slope that allows for drainage

Recommended locations for accessible beach routes pilot project

Criteria for an accessible beach route location:

- Sand beach
- Accessible from existing park trail connection
- Close proximity to parking lot in park

Recommended park locations:

- Jack Darling Memorial Park
- Lakefront Promenade

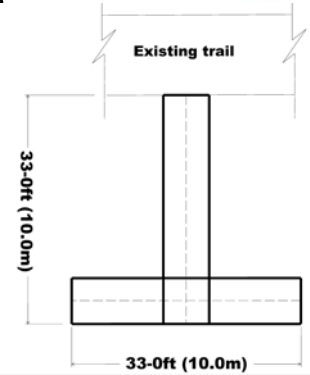
Installation: June 2019 (seasonal installation and will be removed over-winter)

Accessible Beach Routes

Accessible Beach Mats provide a portable, nonslip surface for people with disabilities, walkers, the elderly or parents with strollers to access the beach.



Jack Darling Park P012

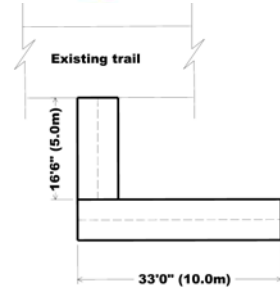


- Located with 100m of existing parking lot
- Located on an existing paved park trail
- Maximum slope of 3%



Lakefront Promenade P323

- Located with 100m of existing parking lot
- Located on an existing paved park trail
- Maximum slope of 5%



DRAFT

Any Questions?