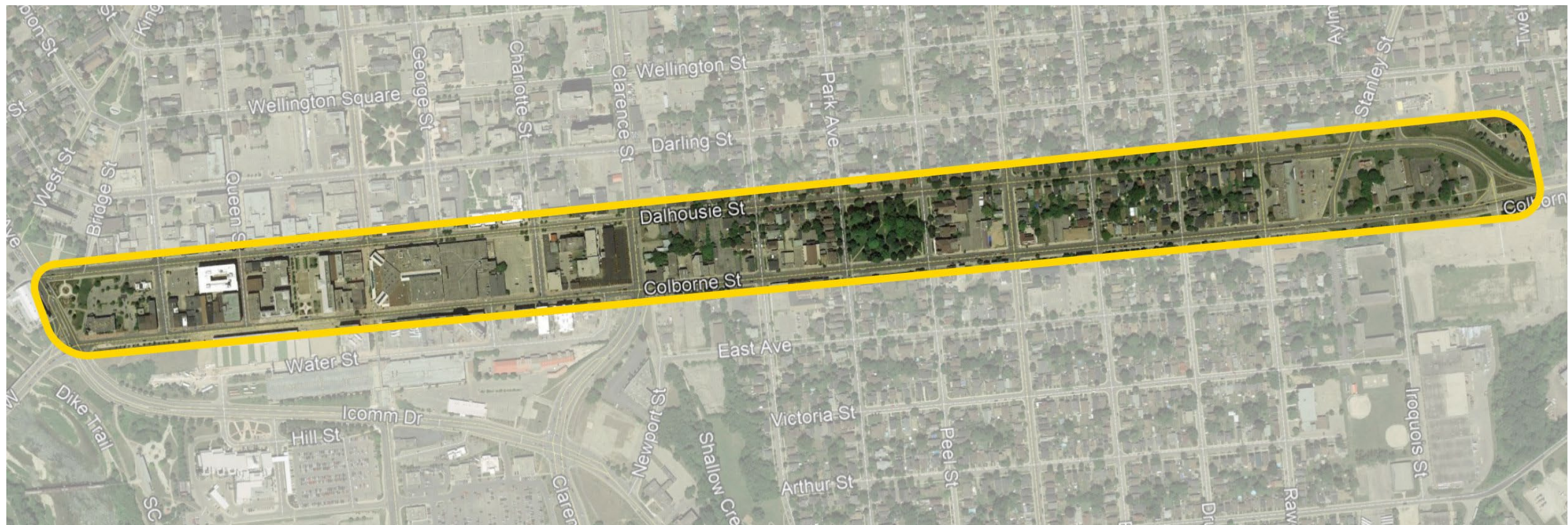


# Downtown Brantford Streetscape Class Environmental Assessment (EA)

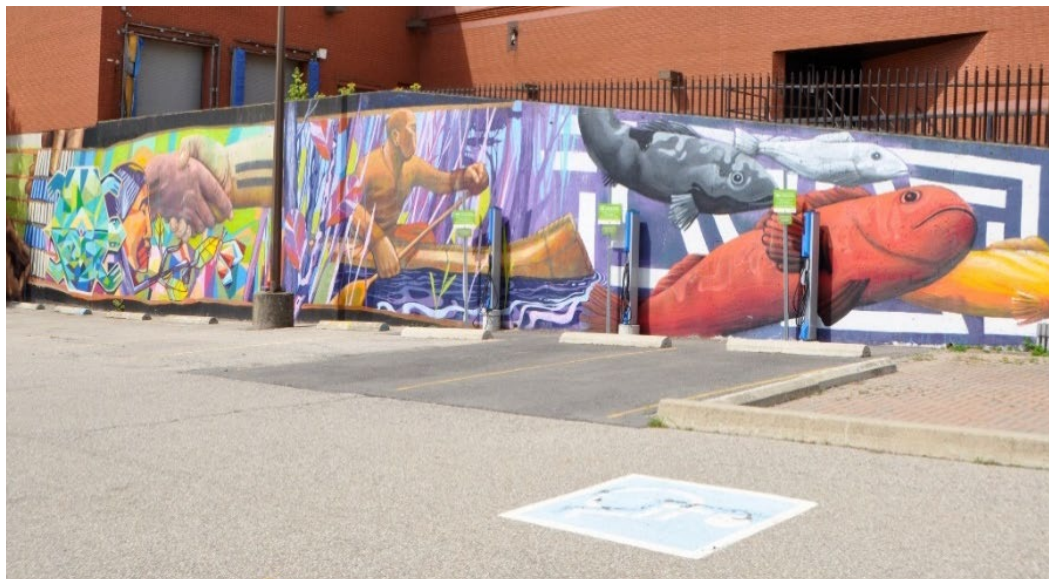
## Public Information Centre #2



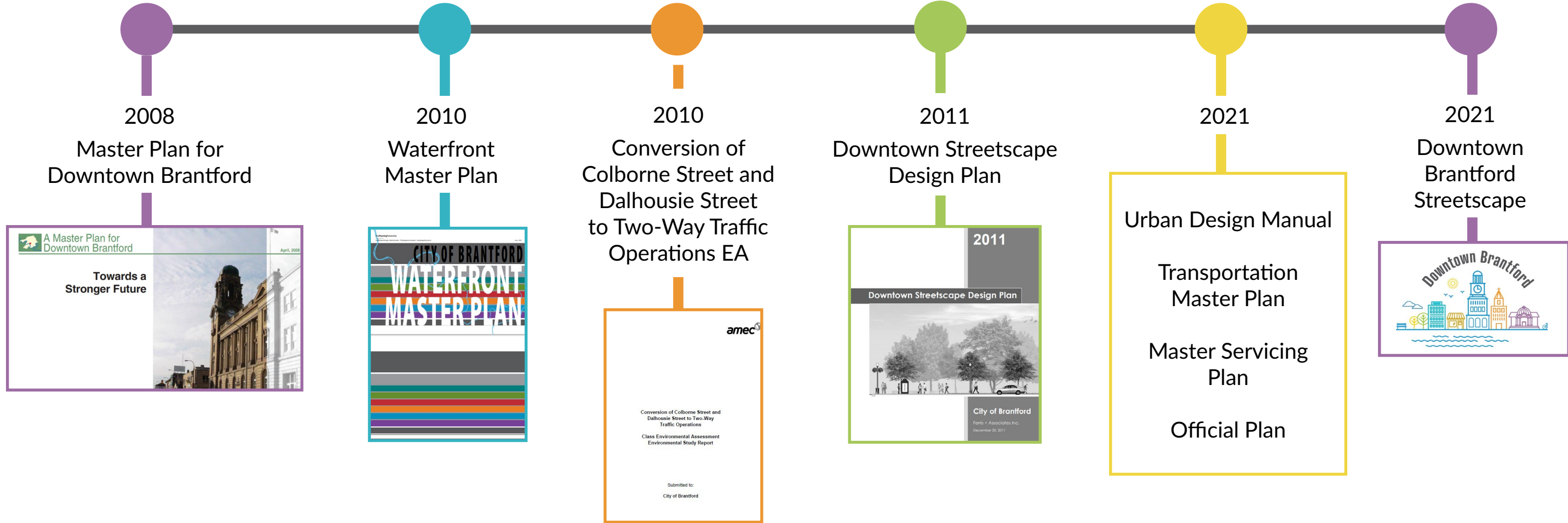


# Agenda

1. Previous Studies
2. Review of study area, process and status
3. Purpose of Public Information Centre (PIC) #2
4. Review feedback to date
5. Evaluation criteria
6. Present alternatives
7. Present technically preferred alternative
8. Next steps

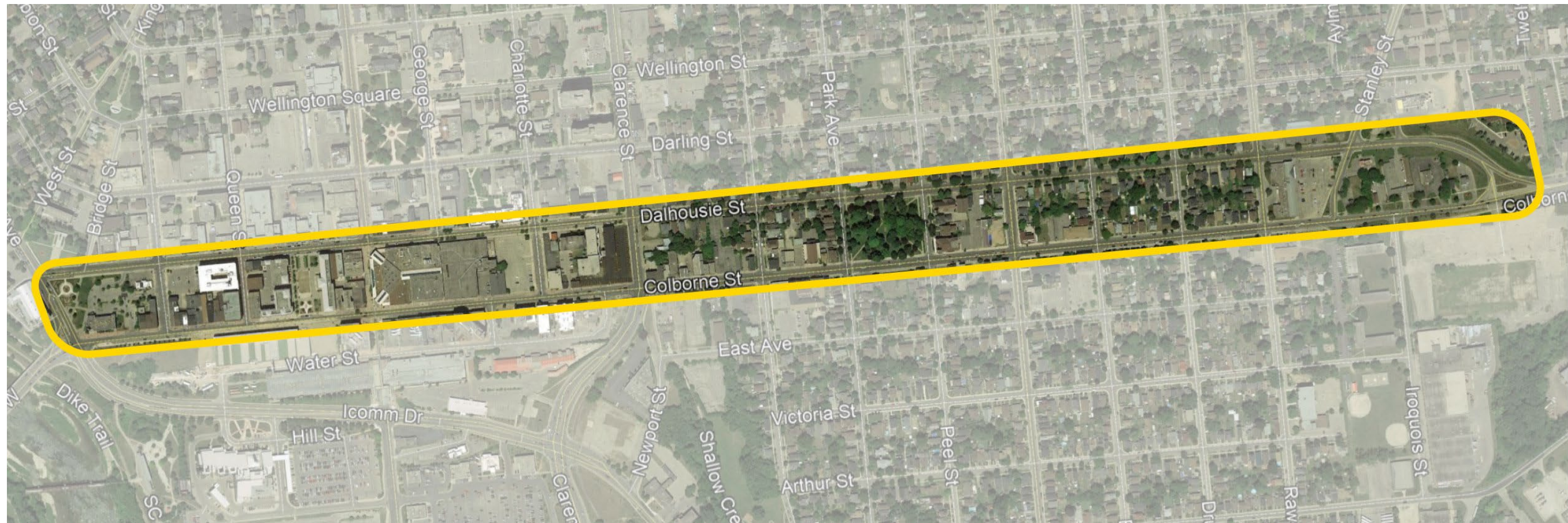


# Previous Studies





# Study Area and Scope



Study area includes:

- Colborne Street and Dalhousie Street from Brant Avenue and Icomm Drive to the east limit where Colborne Street and Dalhousie meet.
- North/South streets between Colborne Street and Dalhousie Street including Brant Avenue, King Street, Queen Street, Market Street, Charlotte Street, and Clarence Street.

The project includes underground infrastructure and above-ground streetscaping improvement – road configuration, street furniture, plantings, etc.

Due to aging infrastructure in the Downtown area, capacity will be reviewed.

Infrastructure improvements include watermain, sanitary sewer, storm sewer, and replacement of all utilities.





# Constraints



Curbside Management:  
garbage collections six days  
a week.

Wide Lanes: Encourages  
faster travel.

Loading: No drop-off area  
for key destinations.

Aesthetics: Absence of  
greenery.





# Project Guiding Vision

## Vision

Create a Downtown Brantford that is attractive, vibrant, and safe for all users while providing the infrastructure needed to handle growth in the City's core.

- Make Downtown a destination place;
- Enhance infrastructure for all transportation modes including pedestrians, cyclists, transit users; and
- Improve accessibility and safety in the core.

## Problem/Opportunity Statement

Revitalize Brantford's core by improving infrastructure, accessibility, safety, and rebuilding an aesthetically beautiful and adaptable Downtown.


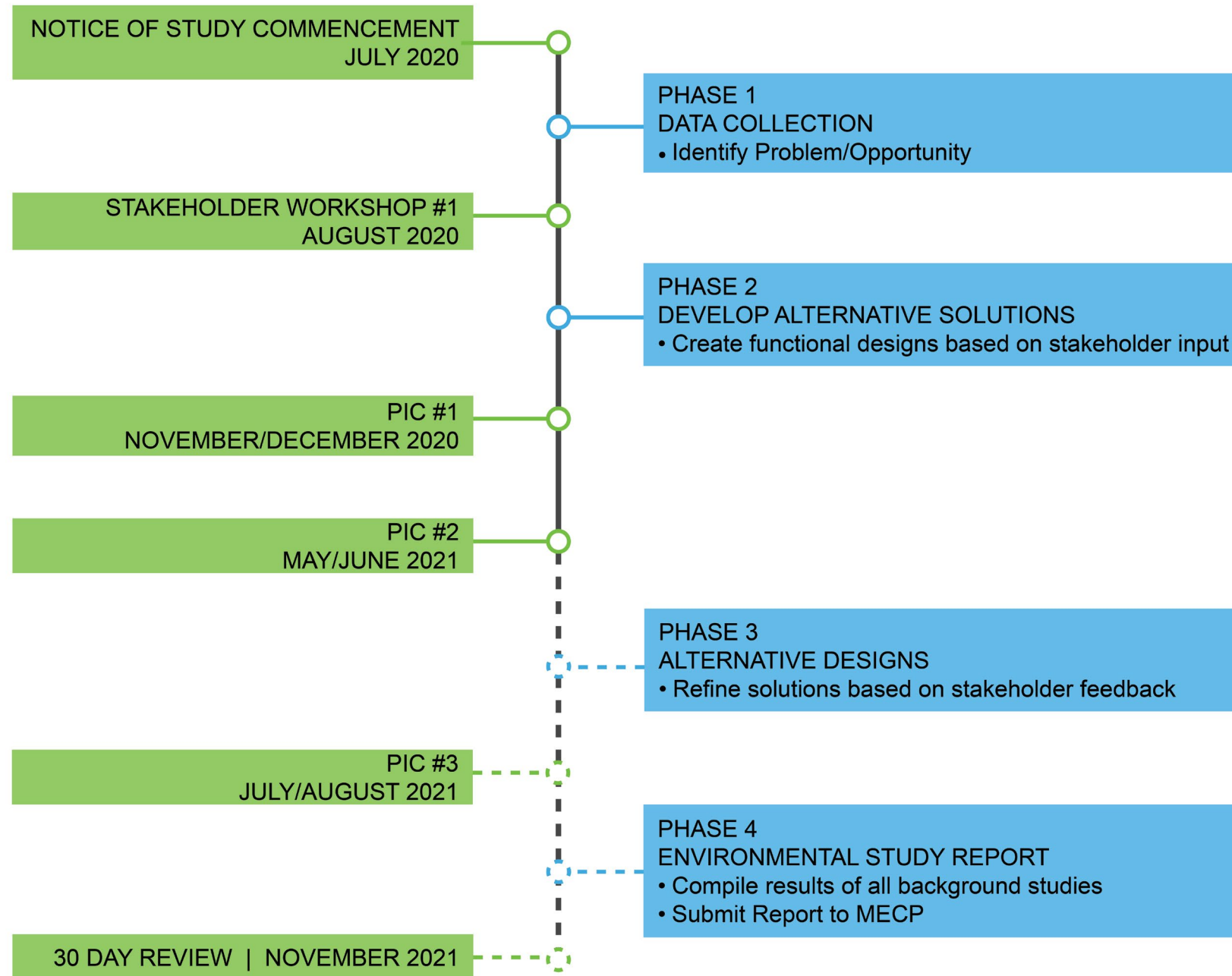


The Vision and Problem/Opportunity Statement were developed at the beginning of the project and act as reminders of the objective of the project as it moves along.



# Class EA Planning & Design Process

## Municipal Class Schedule 'C' Environmental Assessment Process



This project is following the Municipal Class Schedule 'C' Environmental Assessment process.

PIC #1 was used to present the public with example cross sections and introduce the project.

We are at PIC #2 where we are presenting a technically preferred alternative.

PIC #3 will take place in the Summer of 2021.



# Public Information Centre (PIC) #2

## Two Main Objectives of PIC #2

1. Present the design alternatives that were evaluated, including proposed cross sections.
  - Each design alternative has been evaluated based on results of background studies.
2. Present the technically preferred alternative, and rationale behind how and why it was selected.





# Common Themes and Questions

## Public Survey, Stakeholder Workshops, PIC #1



How do you usually travel to Downtown?

74% of survey respondents drive.



What are some things that make you want to visit a City's Downtown?

Shopping and Services – 44.1%

Restaurant Cafes, Patios – 39.5%

Festivals and Special Events – 27%



Stakeholder Workshops and PIC #1 Feedback

- Create pedestrian friendly environment.
- Add bike lanes through Downtown.
- Reduce speeding Downtown.
- Beautify the area – more greenery.
- Make Downtown more age-friendly and accessible.
- Maintain high level of on-street parking.
- Increase feeling of safety.
- Attract visitors.



How do you usually travel within Downtown?

49% of survey respondents walk to their destination.



Top 5 priorities for Downtown Brantford

1. Enhance public safety.
2. Attract new business.
3. Improve walkability.
4. Keeping streets and walkways clean.
5. More greenery.





# Cycling Connectivity



- Functional cycle lanes Downtown can connect to existing and proposed cycle lanes.
- Existing bike route on Wellington Street.





# Key Studies

## Summary of Background Studies



### Natural Environment

No significant impacts to ecology of natural features. Proposed streetscaping is likely to provide improved overall habitat due to increased cover and green space.



### Archaeological

Mixture of areas with archaeological potential.



### Cultural Heritage

- 201 Built Heritage Resources.
- 6 Cultural Heritage Landscapes.
- Detailed designs should avoid impacting heritage locations.



Anticipated reconstruction is contained within City's right of way, does not include any buildings or structures.

Right of ways are considered disturbed and low potential of any archaeological or cultural heritage potential.





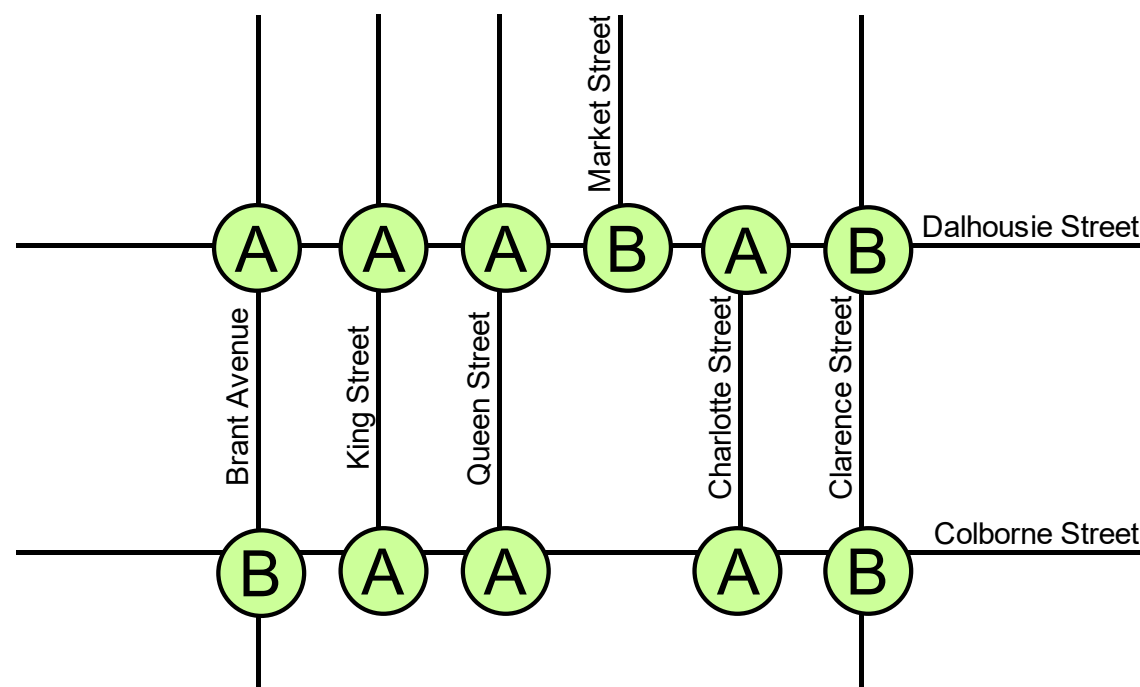
# Traffic Study Findings

## Existing Operations

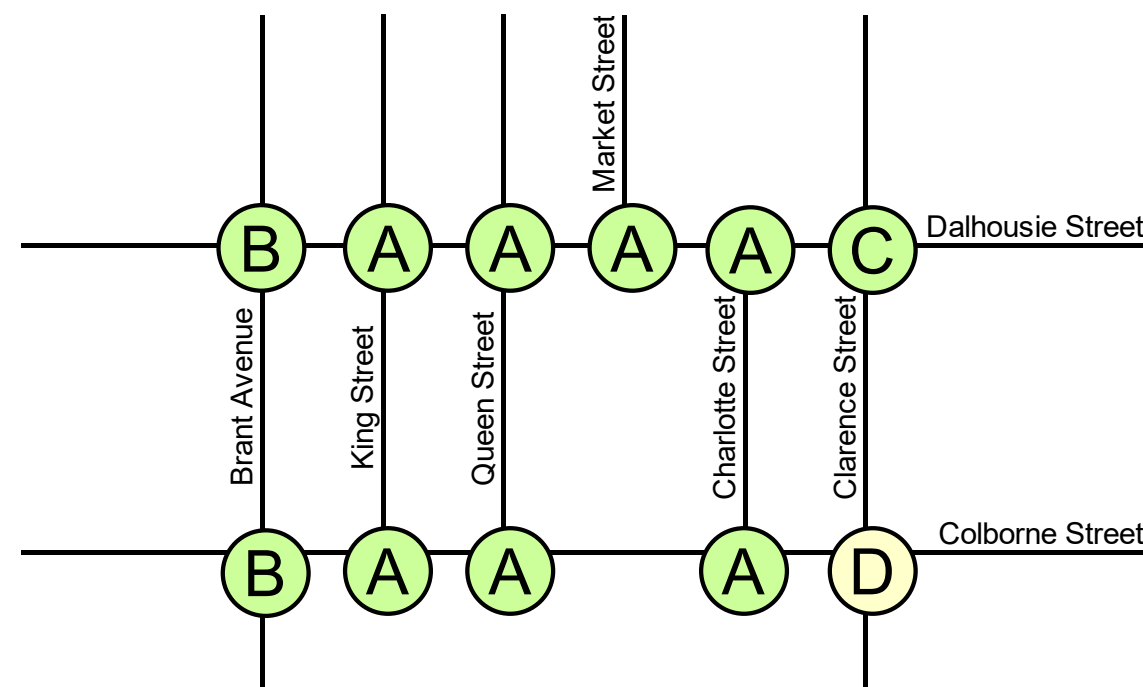
- Traffic analysis has been conducted at strategic intersections.
- Overall Levels of Service (LOS) are acceptable under existing conditions.
- This figure provides a snapshot of how the corridor operates under current conditions in the AM and PM peak.
- To evaluate, a letter grade is assigned to each intersection based on the Level of Service it provides
- A Level of Service A is an intersection that has little or no delay when travelling through it.
- A Level of Service F is an intersection that has significant queuing and delay.
- The letter grade represents an average of all the movements associated with the intersection.
- The focus of traffic study was Colborne Street and Dalhousie Street, from Brant Avenue to Clarence Street.
- An intersection with a Level of Service D is considered acceptable for a downtown setting.

LOS (Delay s)	DESCRIPTION	LOS (Delay s)	DESCRIPTION
<b>A</b>	Little to no delay	<b>D</b>	Frequent queuing and delay
<b>B</b>	Minimal delay	<b>E</b>	Increased queuing and delay
<b>C</b>	Some queuing and delay	<b>F</b>	Significant queuing and delay

Weekday AM Peak Hour



Weekday PM Peak Hour



Downtown Brantford Streetscape | May 2021



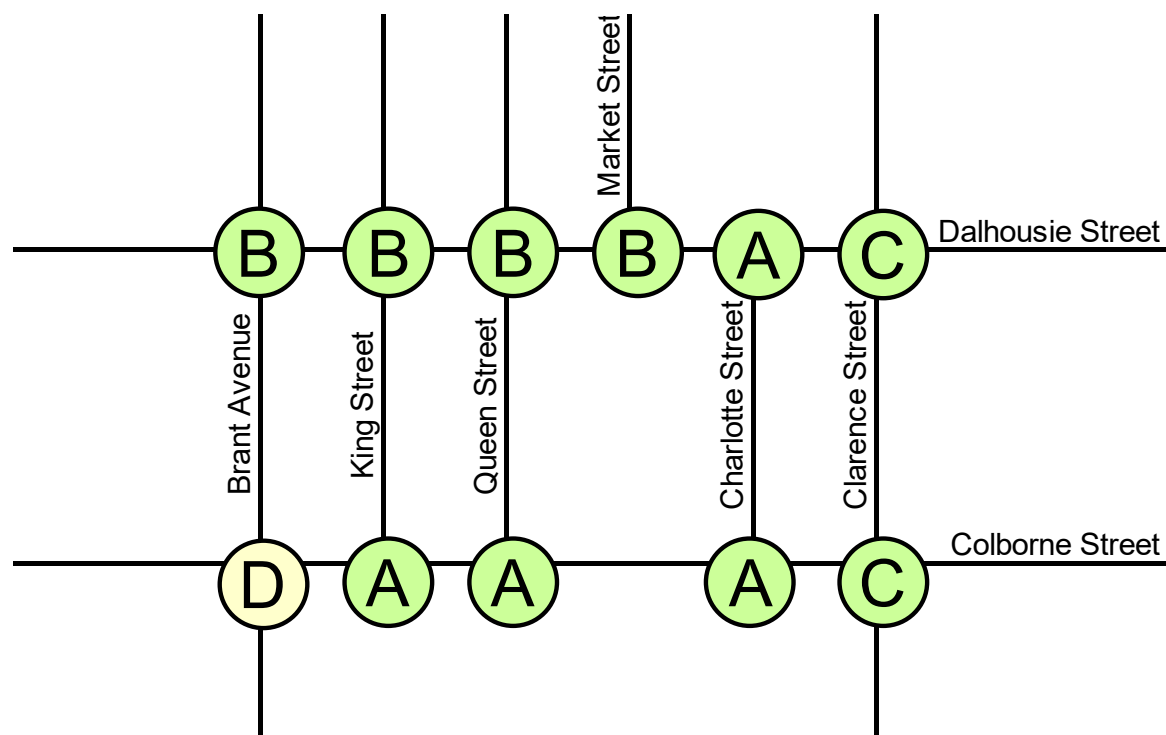
# Traffic Study Findings

## 2041 Operations (One Way)

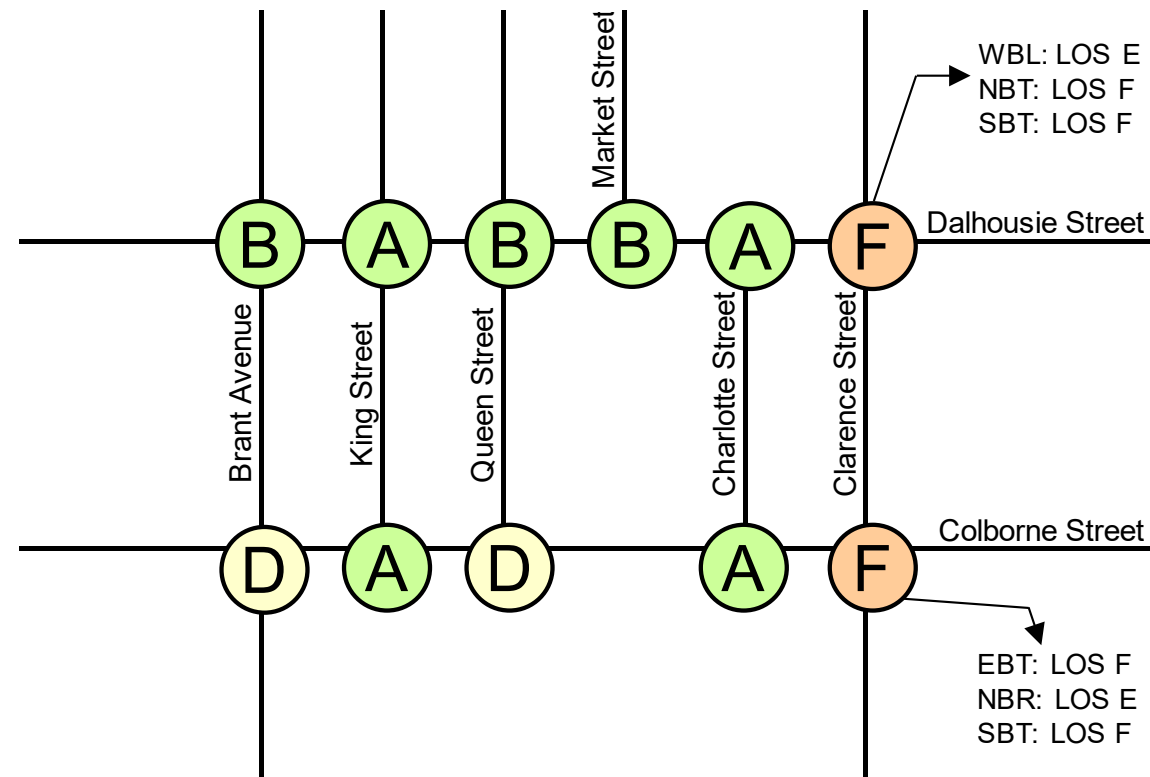
- Results based on 2041 traffic projections.
- Signal timings optimized in assessment.
- Under the one-way scenario, significant queuing and delay is projected along Clarence Street corridor.
- Under this scenario, there is significant queuing and delays occurring along Clarence Street at Colborne and Dalhousie.
- The addition of turning lanes would need to be considered to improve the level of service along Clarence Street.
- Train tracks along east side of Clarence Street are a significant constraint.

LOS (Delay s)	DESCRIPTION	LOS (Delay s)	DESCRIPTION
<b>A</b>	Little to no delay	<b>D</b>	Frequent queuing and delay
<b>B</b>	Minimal delay	<b>E</b>	Increased queuing and delay
<b>C</b>	Some queuing and delay	<b>F</b>	Significant queuing and delay

Weekday AM Peak Hour



Weekday PM Peak Hour





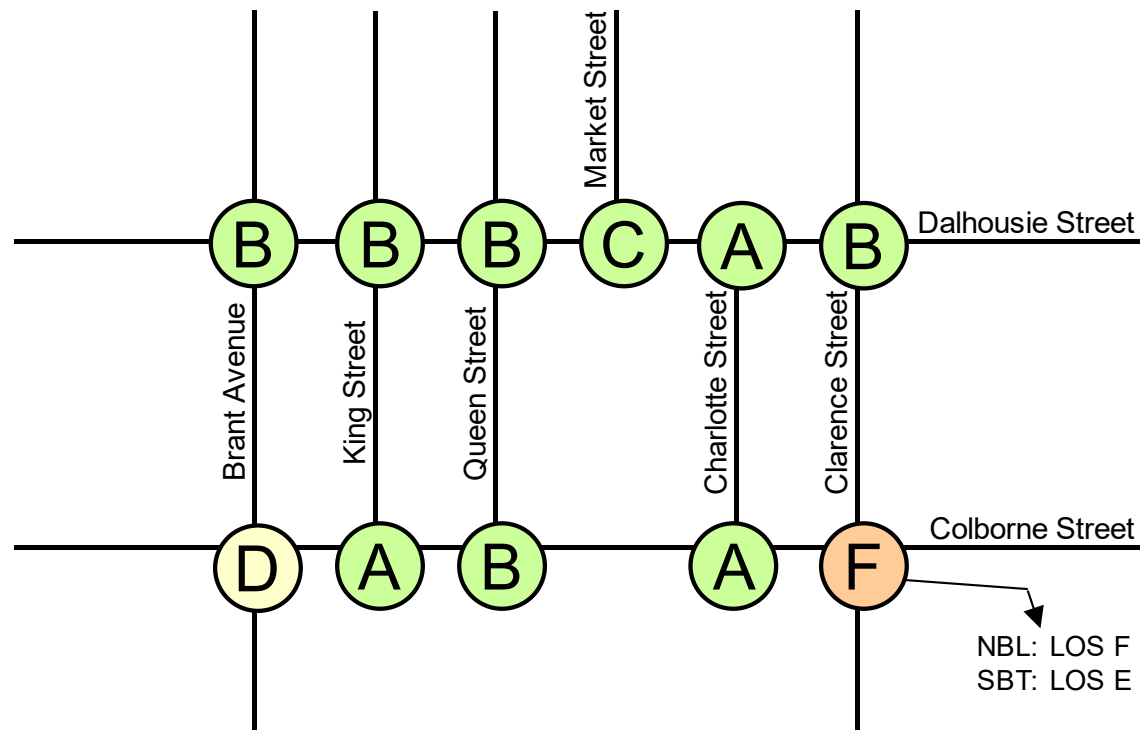
# Traffic Study Findings

## 2041 Operations (Two Way)

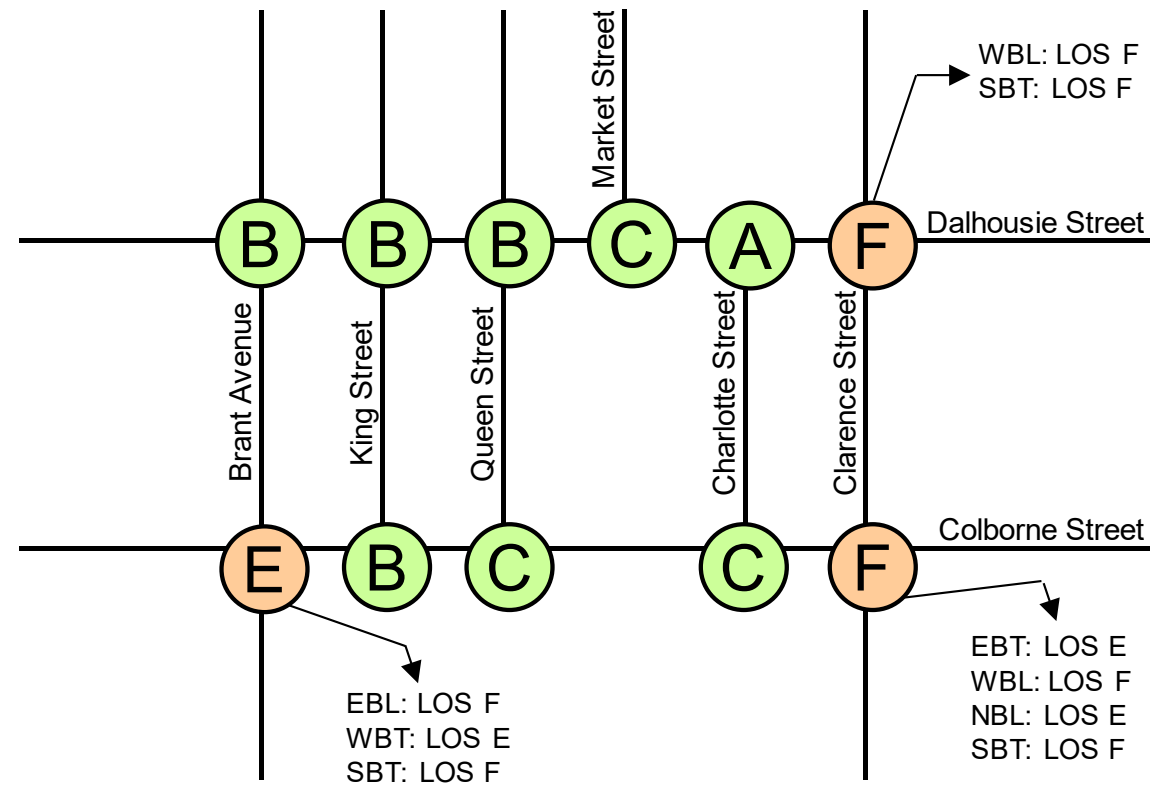
- Results based on 2041 traffic projections.
- Signal timings optimized in assessment.
- Under the two-way scenario, increased delays projected along Brant Avenue corridor.
- Under this scenario there is significant queuing and delay projected along Clarence Street corridor.

LOS (Delay s)	DESCRIPTION	LOS (Delay s)	DESCRIPTION
<b>A</b>	Little to no delay	<b>D</b>	Frequent queuing and delay
<b>B</b>	Minimal delay	<b>E</b>	Increased queuing and delay
<b>C</b>	Some queuing and delay	<b>F</b>	Significant queuing and delay

Weekday AM Peak Hour






Weekday PM Peak Hour



# Traffic Study Findings

## Changes in Level of Service (LOS)

Intersection	Existing	2041 One-Way	2041 Two-Way
Brant/Colborne (AM)	B	D	D
Brant/Dalhousie (AM)	A	B	B
Brant Colborne (PM)	B	D	E
Brant/Dalhousie (PM)	B	B	B
Clarence/Colborne (AM)	B	C	F
Clarence/Dalhousie (AM)	B	C	B
Clarence/Colborne (PM)	D	F	F
Clarence/Dalhousie (PM)	C	F	F

 One way is more efficient.  
 One way is more efficient.  
 Two way is more efficient .

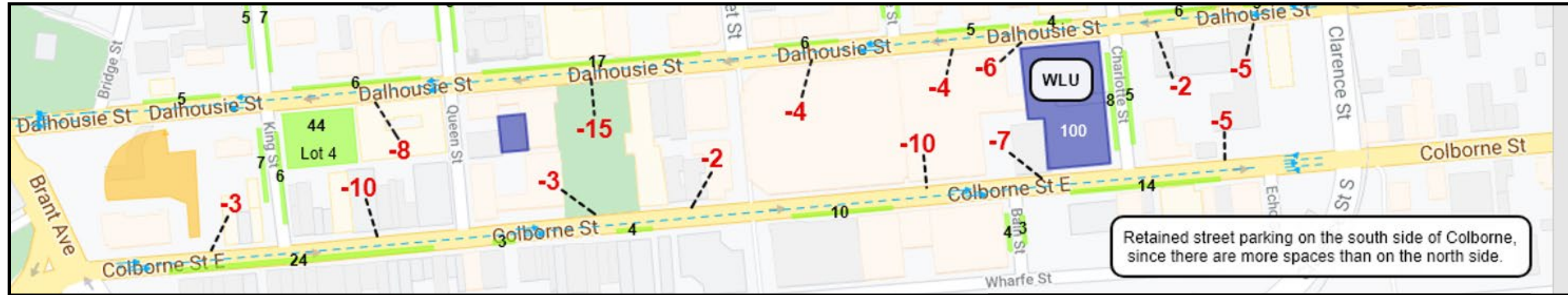
- One-way traffic is more efficient than two-way.
- Clarence at Colborne and Dalhousie still both F's.
- In both scenarios, improvements to Clarence Street should be considered, including curbside management and garbage collection, loading and unloading, emergency vehicles, etc.
- There are additional factors that are not directly represented in the traffic study.
- The results of the traffic study we completed using the current Transportation Master Plan.





# Parking Study Findings

## Existing and Proposed Parking Removal



	Existing	Proposed	Gain/Loss	Gain/Loss (%)
On-Street Parking	541	457	(84)	(15%)
Off-Street Parking	1,141	1,141	0	0%
<b>Total</b>	<b>Total</b>	<b>1,682</b>	<b>1,598</b>	<b>(5%)</b>

- One way and two way both have a loss of 84 on-street parking spots and will retain parking on only one side of the streets. These spots are lost to accommodate bike lanes.
- Before COVID-19, the parkade operated at 60% peak capacity, 380 available spaces
- Through further design, may be able to retain some of the lost parking spots
- Design will attempt to incorporate on street parking on side streets where possible



# Evaluation Criteria

## User Benefits

## Other Benefits



### Vision

- Improved walkability through Downtown.
- Increased pedestrian capacity.
- Is a “People Place”, streets are animated.

- Necessary infrastructure improvements – all modes.
- Attractive, vibrant, unique.



### Social Environment

- Addresses curbside management issues.
- Accessibility is addressed for all users.
- Improved pedestrian and cycle facilities.
- Accommodation for public transit.
- Consideration for parking.

- Minimal cultural heritage and archaeological impacts.
- Improves natural environment.
- Contributes to improved quality of life and public health.
- Addresses climate change.



### Safety

- Feeling of comfort and safety.
- Street-level activity encouraged.
- Roads and sidewalks are safe and accessible for all users.

- Reduction in vehicular accidents overall.
- Encouraging safe use of sidewalks and roads under all conditions.
- Safer pedestrian crossings – shorter crossing distances, dedicated crossings.



### Traffic Operations

- Sufficient level of service.
- Minimizing traffic disruption from loading/unloading.

- Integrated transportation network.
- Minimize need for widening.
- Encourages decrease in single-occupant vehicle travel.



### Costs

- Minimal property impacts.


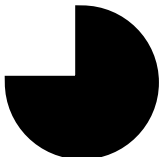
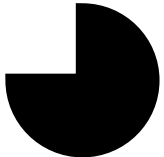
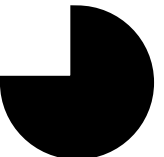
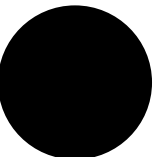
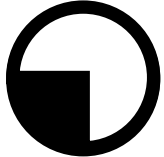
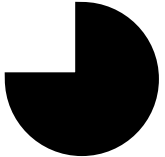
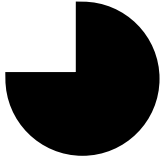
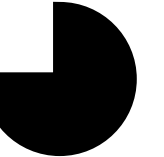
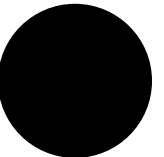
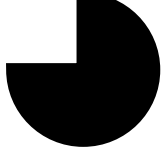
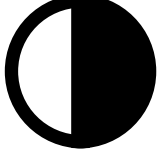
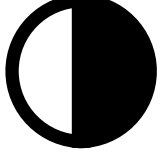
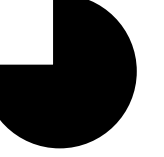

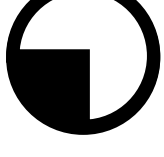
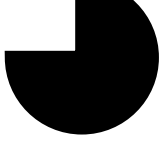
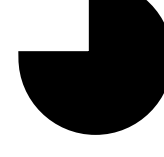
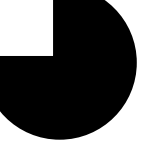
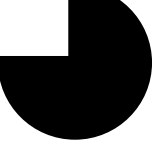
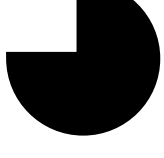
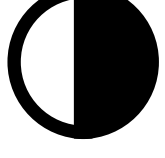
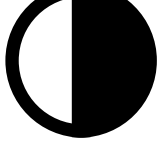

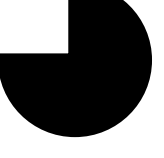





- Capital construction costs.
- Consideration for long-term maintenance costs.
- Constructability – disruption during construction.

Evaluation of cost is limited to streetscaping features and maintenance – excludes cost of underground infrastructure replacement, as that will be the same under all scenarios.





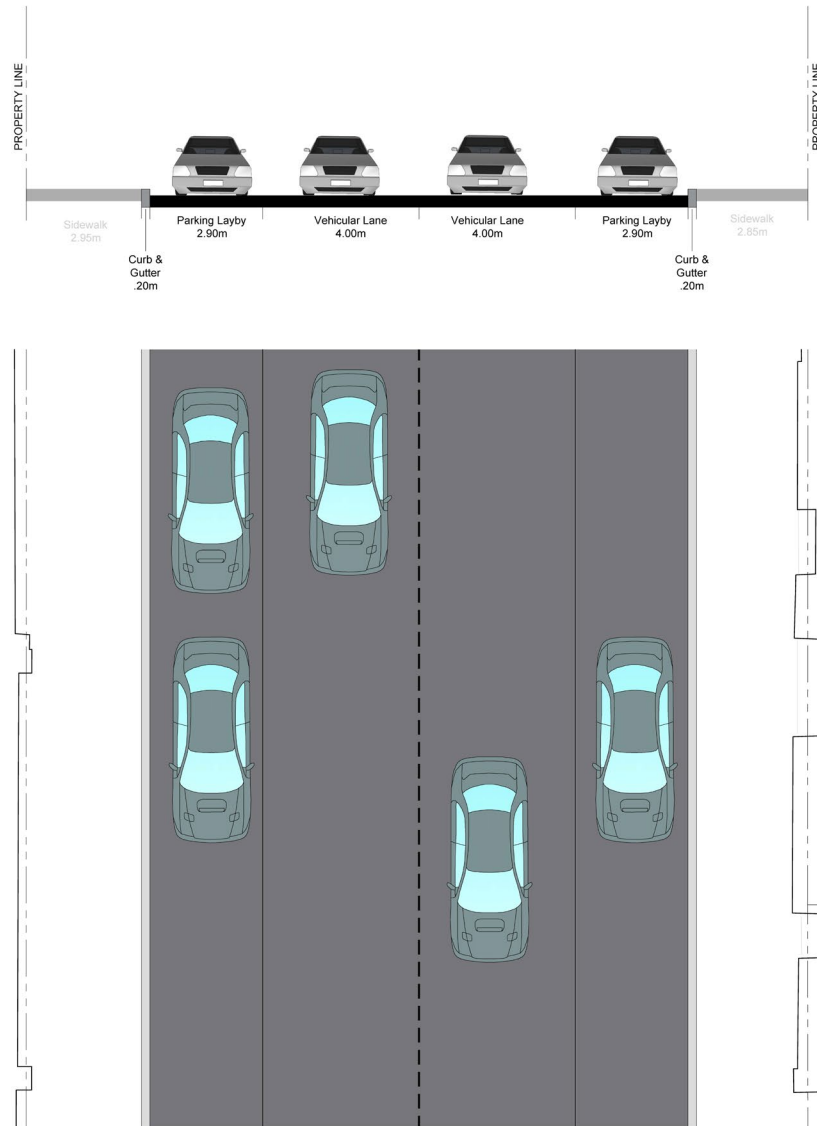
# Evaluation Summary

Evaluation Criteria	Alternative 1: Do Nothing	Alternative 2: Two Way (Bi- Directional Bike)	Alternative 3: Two Way (Separated Bike)	Alternative 4: One Way (Bi- Directional Bike)	Alternative 5: One Way (Single Bike)
Vision					
Social Environment					
Traffic Operations					
Safety					
Cost					
Preferred					



# Alternative 1: Do Nothing

## Do not proceed with the project any further



**Vision:** Doing nothing does not meet the City's vision for creating a Downtown that people want to visit, and make it more walkable. Underground infrastructure will need to accommodate needs of planned growth.

**Social Environment:** No improvement to aesthetics, walkability, no cycling facility.

**Traffic Operations:** Under current conditions, traffic will not be impacted, and capacity does not appear to be an issue.

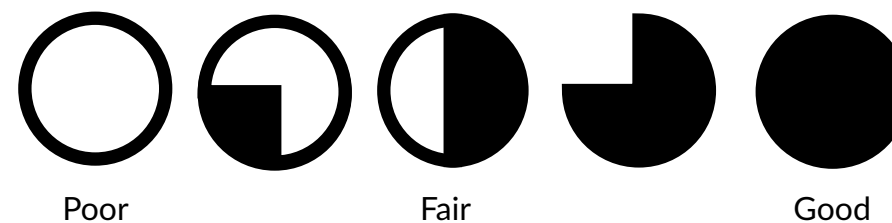
**Safety:** Speed of traffic through Downtown not addressed.

**Cost:** The lowest cost option is to do nothing. Will still require some cost to improve so that accessibility is addressed.

### Evaluation

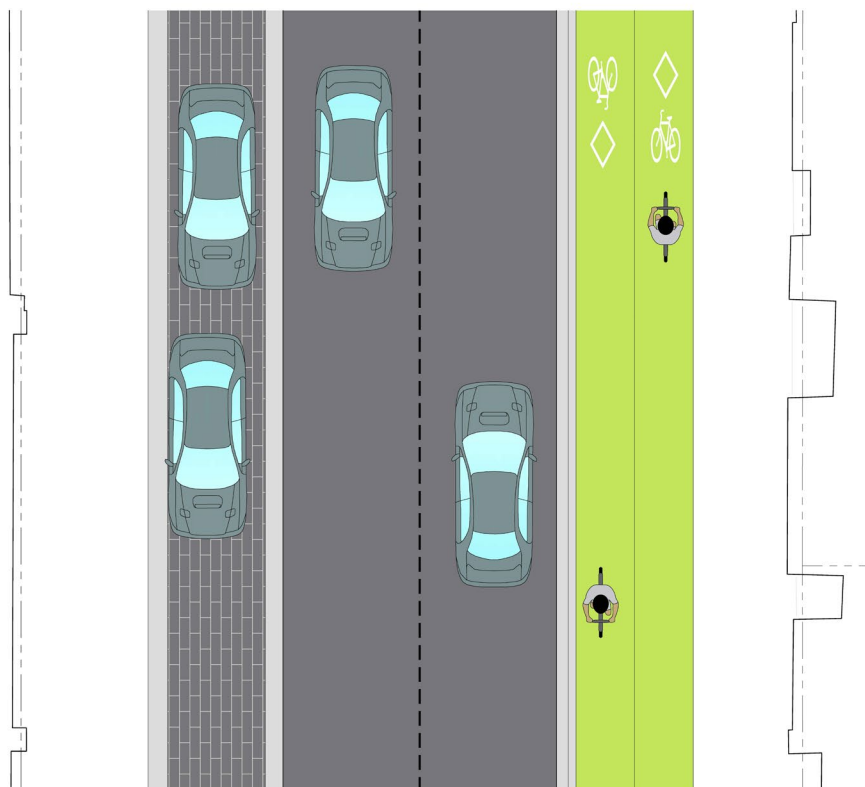
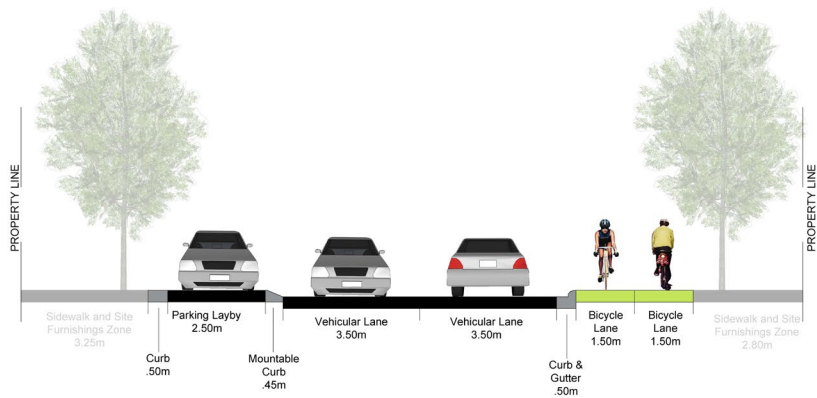


### Legend





# Alternative 2: Two-Way Traffic with Separated Bi-Directional Cycle Facility



**Vision:** This alternative is in-line with the overall vision. Provides dedicated cycling facility addressing active transportation, maintains parking on one side of the street, narrows the travel lanes to reduce speeds, and allows street furniture.

Pedestrian space is not any wider than the existing, meaning no additional space for patios is available.

**Social Environment:** Space for street trees, improving natural environment, maintains parking on one side. Two-way traffic operations are affected by the need for curbside management (ie garbage pick up, loading, unloading)

**Traffic Operations:** Overall the two-way traffic does not perform as well as the one-way option, and is also more greatly impacted by curbside management, loading, emergency vehicles etc.

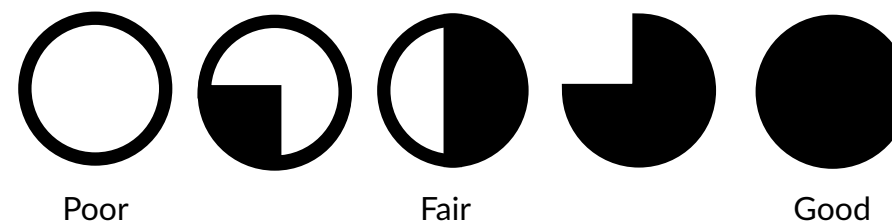
**Safety:** High level of cyclist safety as bike lanes are fully protected. Parking is also separated.

**Cost:** Slightly higher cost of maintaining bike lanes, as plows might need to pass twice to clear snow.

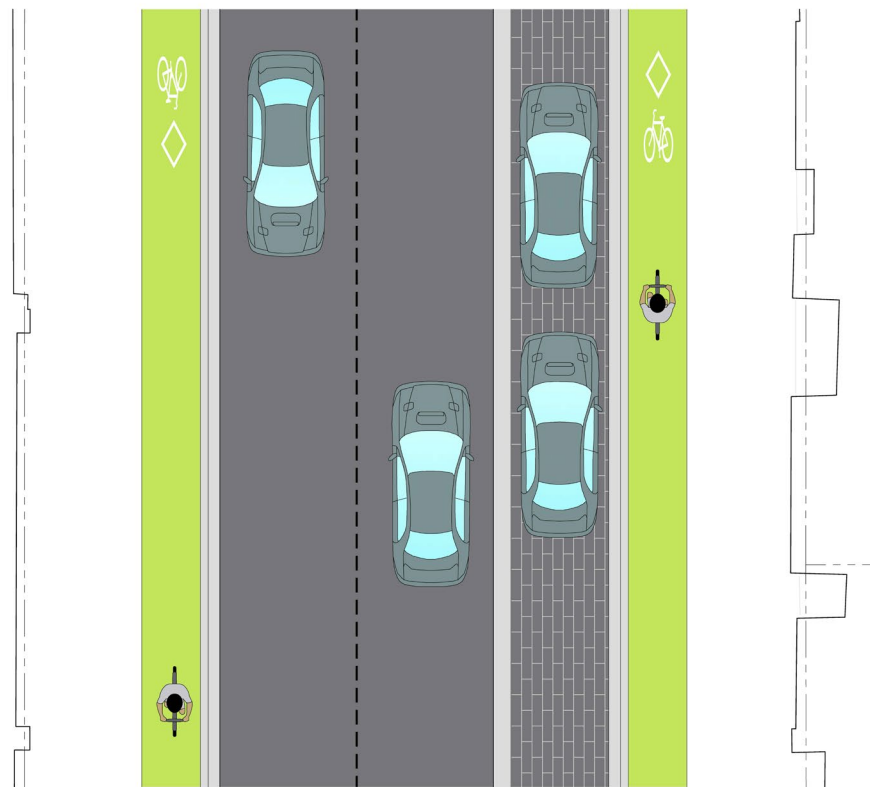
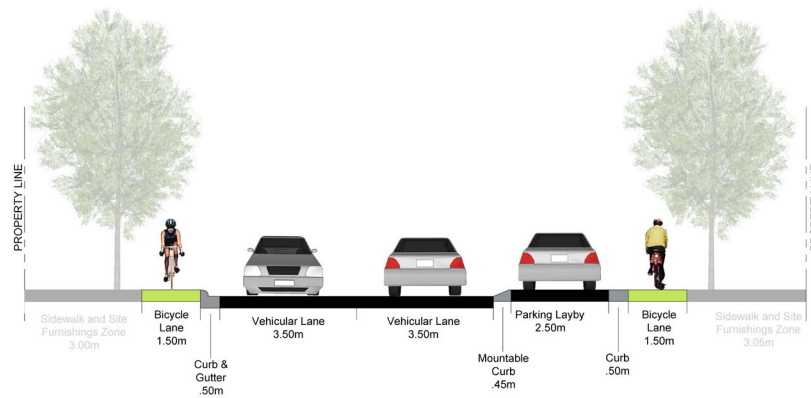
## Evaluation



### Legend



# Alternative 3: Two-Way Traffic with Separated Cycle Lanes



**Vision:** This alternative is in-line with the overall vision. Provides dedicated cycling facility addressing active transportation, maintains parking on one side of the street, narrows the travel lanes to reduce speeds, and allows street furniture.

Pedestrian space is not any wider than the existing, meaning no additional space for patios is available.

**Social Environment:** Space for street trees, improving natural environment, maintains parking on one side. Two-way traffic operations are affected by the need for curbside management (i.e. garbage pick up, loading, unloading).

**Traffic Operations:** Overall the two-way traffic does not perform as well as the one-way option, and is also more greatly impacted by curbside management, loading, emergency vehicles etc.

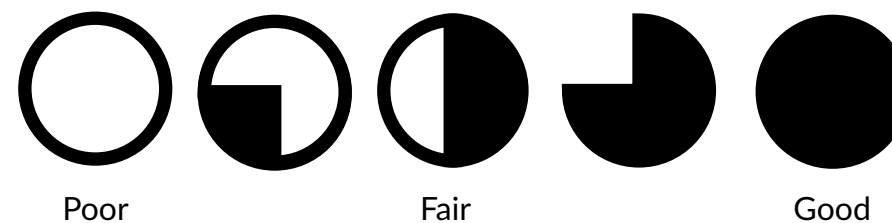
**Safety:** High level of cyclist safety as bike lanes are fully protected. Parking is also separated.

**Cost:** Slightly higher cost of maintaining bike lanes, standard sidewalk plow can clear in one pass, but plowing on both sides is required.

## Evaluation

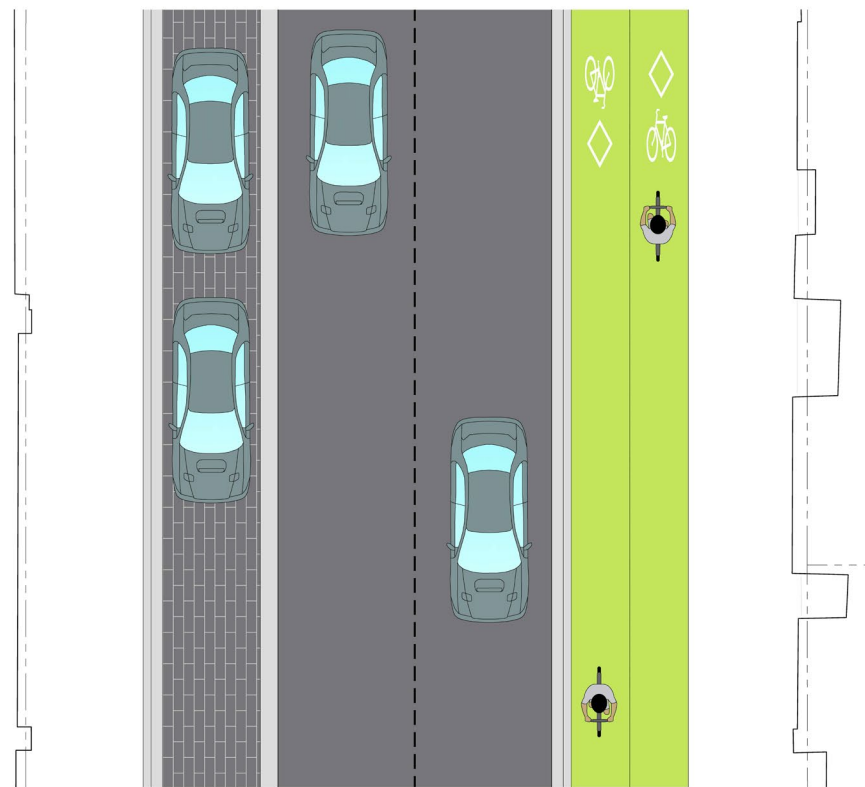
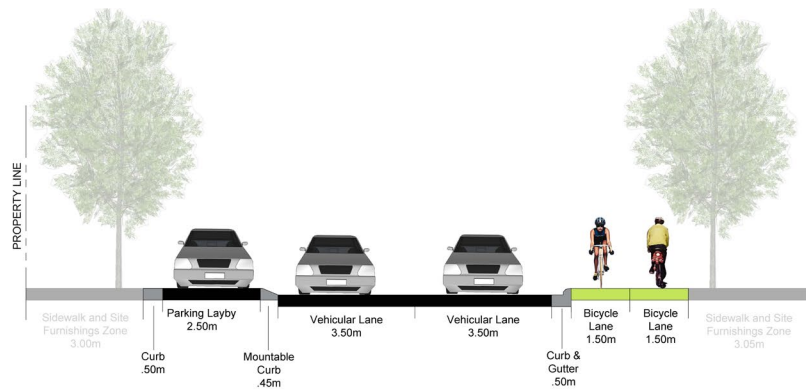


## Legend





# Alternative 4: One-Way Traffic with Separated Bi-Directional Cycle Facility



**Vision:** This alternative is in-line with the overall vision. Provides dedicated cycling facility addressing active transportation, maintains parking on one side of the street, narrows the travel lanes to reduce speeds, and allows street furniture.

With this cross section, the pedestrian space is not any wider than the existing, meaning no additional space for patios is available.

**Social Environment:** Space for street trees, improving natural environment, maintains parking on one side. Two lanes of traffic allow for curbside management (i.e. garbage pick up, loading, unloading).

**Traffic Operations:** One-way streets move traffic more efficiently.

**Safety:** High level of cyclist safety as bike lanes are fully protected. Parking is also separated.

**Cost:** Slightly higher cost of maintaining bike lanes as plows might need to pass twice to clear snow.

## Evaluation



Vision



Social Environment



Traffic Operations

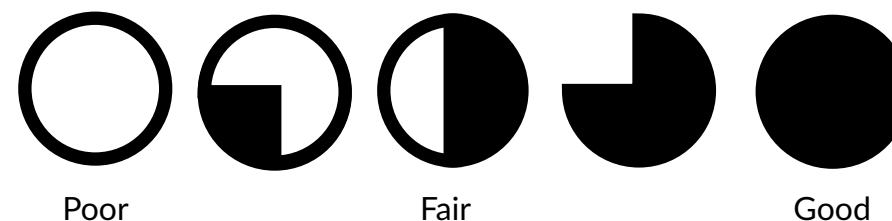


Safety

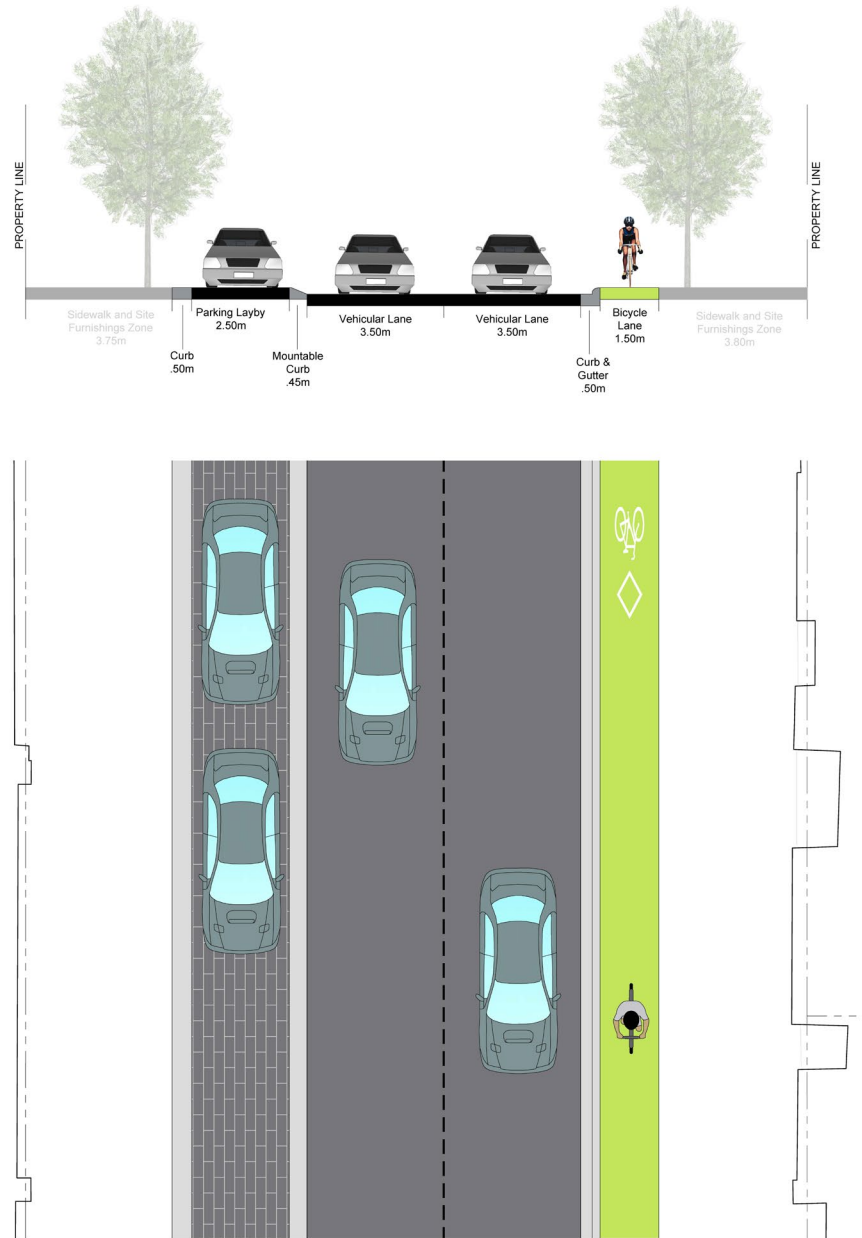


Cost

### Legend



# Alternative 5: One-Way Traffic with Separated Single Cycle Lane (Preferred)



**Vision:** This alternative is in-line with the overall vision. Provides dedicated cycling facility addressing active transportation, maintains parking on one side of the street, narrows the travel lanes to reduce speeds, and allows street furniture.

In this option, 1.5m of space is gained from only having one bike lane, which can be used for additional patio or pedestrian space.

**Social Environment:** Space for street trees, improving natural environment, maintains parking on one side. Two lanes of traffic allow for curbside management (ie garbage pick up, loading, unloading).

**Traffic Operations:** One-way streets move traffic more efficiently. Slight reduction in capacity based on 2041 projections.

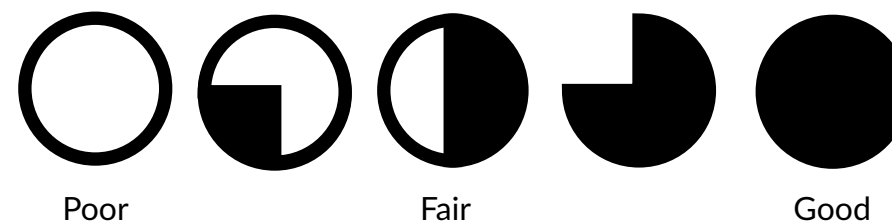
**Safety:** High level of cyclist safety as bike lanes are fully protected. Parking is also separated.

**Cost:** Slightly reduced cost of maintaining bike lanes, standard sidewalk plow can clear in one pass.

## Evaluation

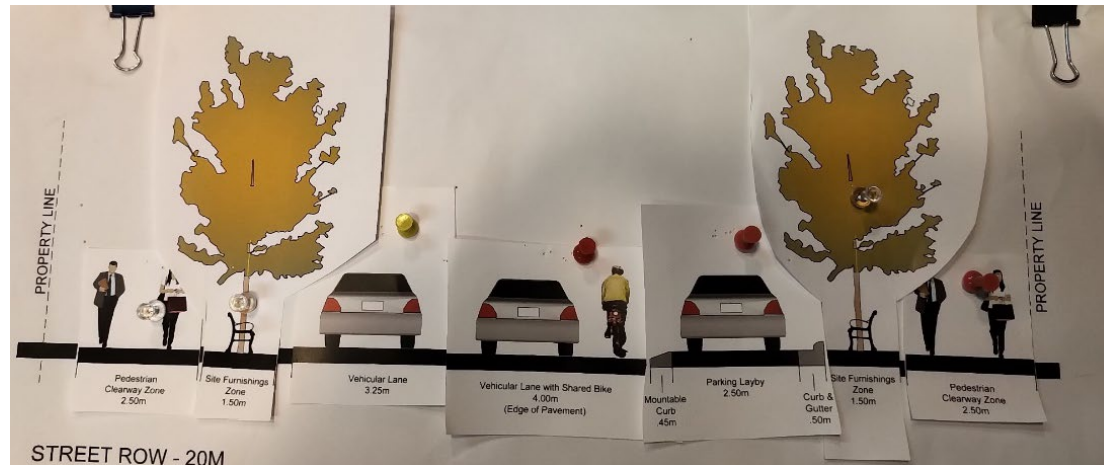


### Legend





# Preliminary Options – Screened Out



## On-Road Cycle Lanes

- Add to asphalt width, encouraging faster speed.
- Reduced cyclist safety.



## One-Way Traffic with One Lane

- Hinder traffic flow during curbside pick-up.
- Could not accommodate deliveries.

**On-road cycle lanes:** They were ruled out from a safety perspective. With on-street parking expected, creates greater number of conflict points between pedestrians and cyclists. It also gives the roadway a wider “feel”, which may encourage faster vehicular speeds

**One-way traffic with one lane:** (One on Colborne, and one on Dalhousie). Given needs for garbage collection, loading and unloading, deliveries, emergency vehicles, etc., one lane would create significant traffic issues throughout the day.

**Different treatment:** Applying different treatments to Colborne and Dalhousie. There was concern that this may create inequalities and concerns for businesses and residents. Proceeded with alternatives that apply the same cross section to both streets.





# Example – Downtown Kitchener

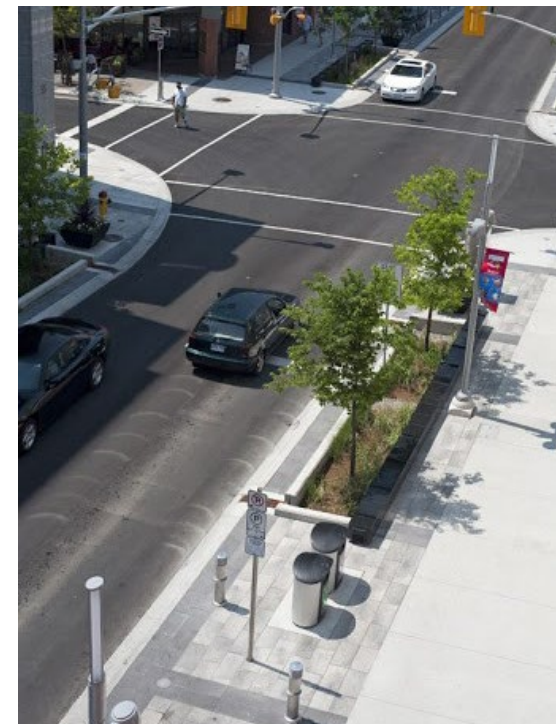
## Before

- Downtown Kitchener was used by drivers as a through street to get across the City.
- Was not pedestrian friendly, accessible.



## After

- Narrower lanes were introduced, dramatically slowing traffic.
- Introduced flexible parking. Spaces used for parking or patio depending on business preference.





# Example – Downtown Guelph

## Before

- Wide lanes.
- Narrow sidewalks.



## After

- Lane widths reduced, increased pedestrian/patio space.
- On-street parking differentiated.





# Example – Downtown Stratford

## Before

- Not pedestrian friendly.
- High vacancy rate near project area.



## After

- Lane widths reduced, increased pedestrian/patio space.
- On-street parking differentiated.





# What's Next?



Implementing safe pedestrian crossings.



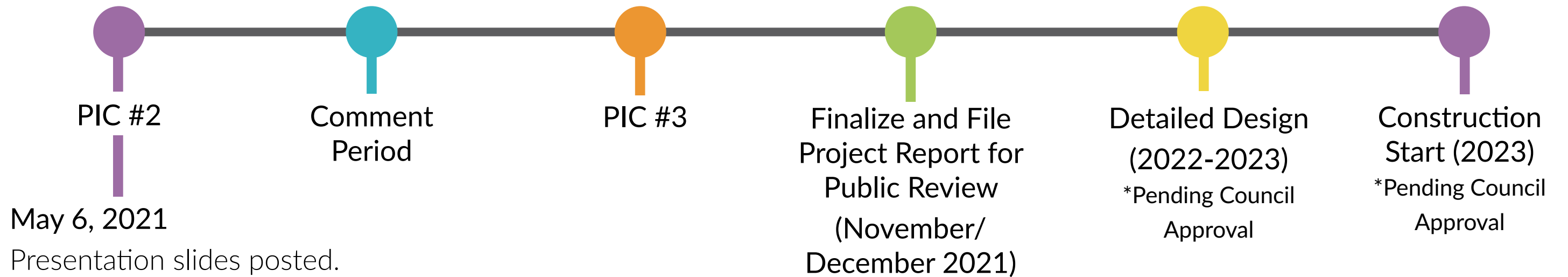
More detail about specific streetscaping elements.



Infrastructure to improve curbside management.



# Next Steps



## May 13, 2021

Live Presentation PIC – Question and Comment Period open for two weeks.

## June 3, 2021

Q/A document posted.





# Questions and Comments

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