BAYFIELD STREET TRANSPORTATION IMPROVEMENTS



Bayfield Street
Municipal Class Environmental Assessment (MCEA)
Grove Street to City Limits

Public Information Centre No. 2

September 23, 2024

Study Conducted as Schedule ‘C’ Municipal Class Environmental Assessment

- Environmental Assessments (EAs) consider the whole “environment” – not just the natural environment.
- Consideration is given to economic, social, cultural and natural environment factors.
- EA is an informed decision-making process to evaluate alternatives, assess potential effects, and identify mitigation / commitments to address effects.
- Administered by the Ontario Ministry of the Environment, Conservation and Parks (MECP).



Key Phases of Study - Schedule ‘C’ Municipal Class Environmental Assessment

Bayfield Street Transportation Improvements

Public and Stakeholder Engagement

Phase 1
Identify Challenges and Opportunities

- Study area profile
- Background review and data collection
- Communication and Engagement Plan
- Existing Conditions Traffic Study
- Begin to engage key stakeholder and residents (notification, social media, webpage, etc.)
- PIC No. 1 (March 2024)
- **Need and justification report**

Phase 2
Alternative Solutions

- Complete baseline and technical reports (noise, cultural heritage, tree inventory, natural environment, soils assessment)
- Identify and evaluate functional solutions
- Identify preliminary recommended solution
- PIC No. 2
- Stakeholder meetings
- **Identify recommended solution(s)**

We are here

Phase 3
Alternative Designs

- Develop and evaluate design alternatives for the road cross-section
- Streetscape Plan
- Noise Impact Assessment Report
- Stormwater Management Plan
- 3-D renderings
- PIC No. 3
- Stakeholder meetings
- **Identify recommended design**

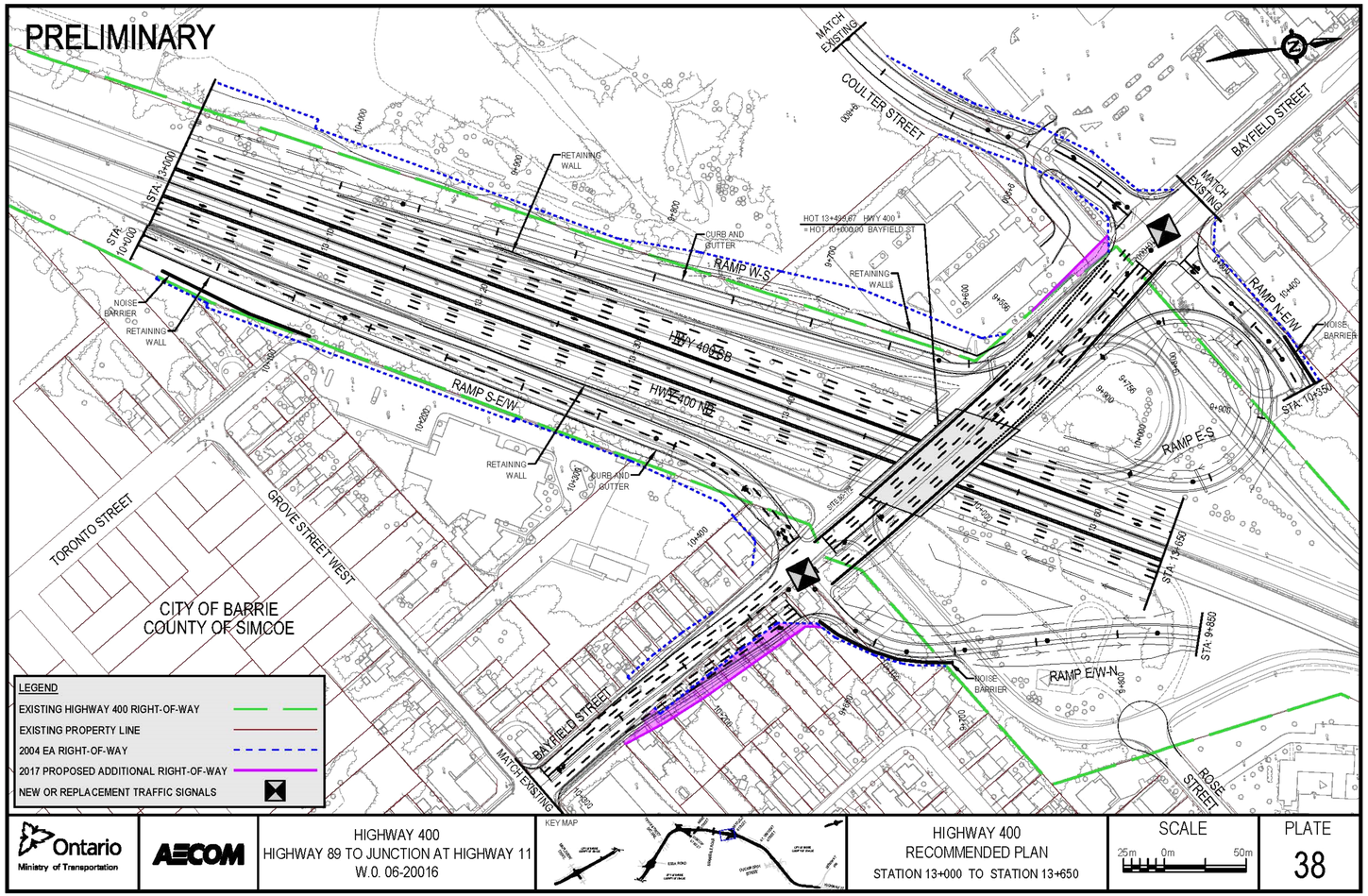
Phase 4
Documentation

- Document findings in an Environmental Study Report (ESR)
- Identify the environmental effects, mitigation measures and future commitment
- Prepare 30% preliminary design plans to include plan, profile and cross-sections, grading, and property requirements
- Identify likely permits
- **Public and stakeholder review of ESR**

At PIC #1, the Project Team presented the need for the project, the MCEA process, the existing transportation and traffic conditions, descriptions of the discipline studies, how the public can get involved in the study and the next steps for the overall study.

The Need for Transportation Improvements

- The Ministry of Transportation Ontario (MTO) will be reconstructing and widening Bayfield Street from Grove Street to Coulter Street to six lanes. The MTO detail design process for the Highway 400 and Bayfield Street project is anticipated to begin this year.
- These improvements require the City to implement transportation improvements on Bayfield Street from Coulter Street to Cundles Road in the near-term and coordinate with the MTO on including active transportation improvements within their project limits from Grove Street to Coulter Street.
- The City is studying both near-term needs and establishing a long-term vision for the corridor with consideration for all travel modes.



MTO figure illustrating the planned interchange replacement and associated Bayfield Street improvements planned by the MTO.

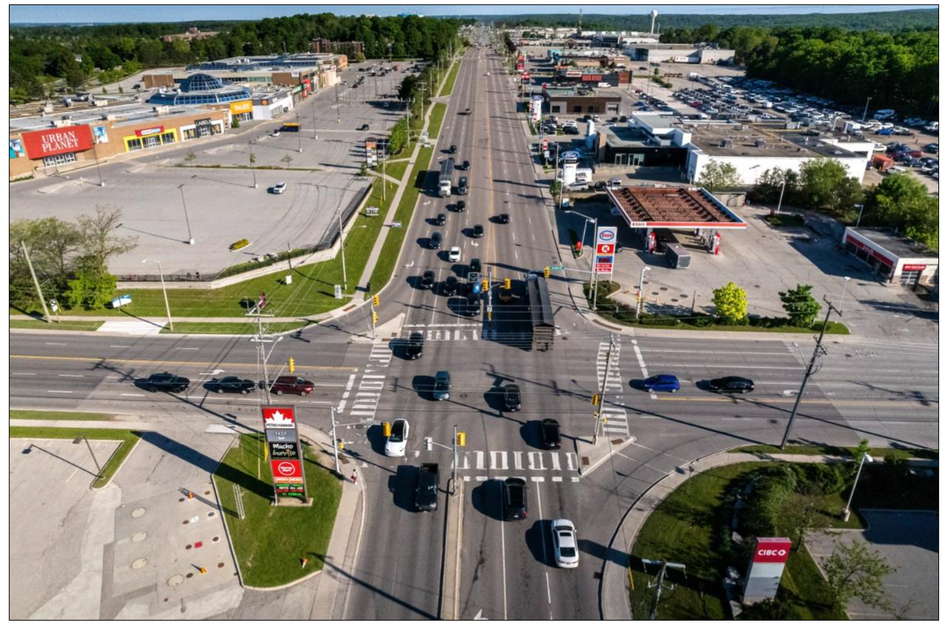
Problem and Opportunity Statement

Bayfield Street is a prominent transportation corridor that is a key gateway into the City of Barrie, a regional shopping destination, and a heavily used transportation link connecting Highway 400 and Highway 27/Highway 26.

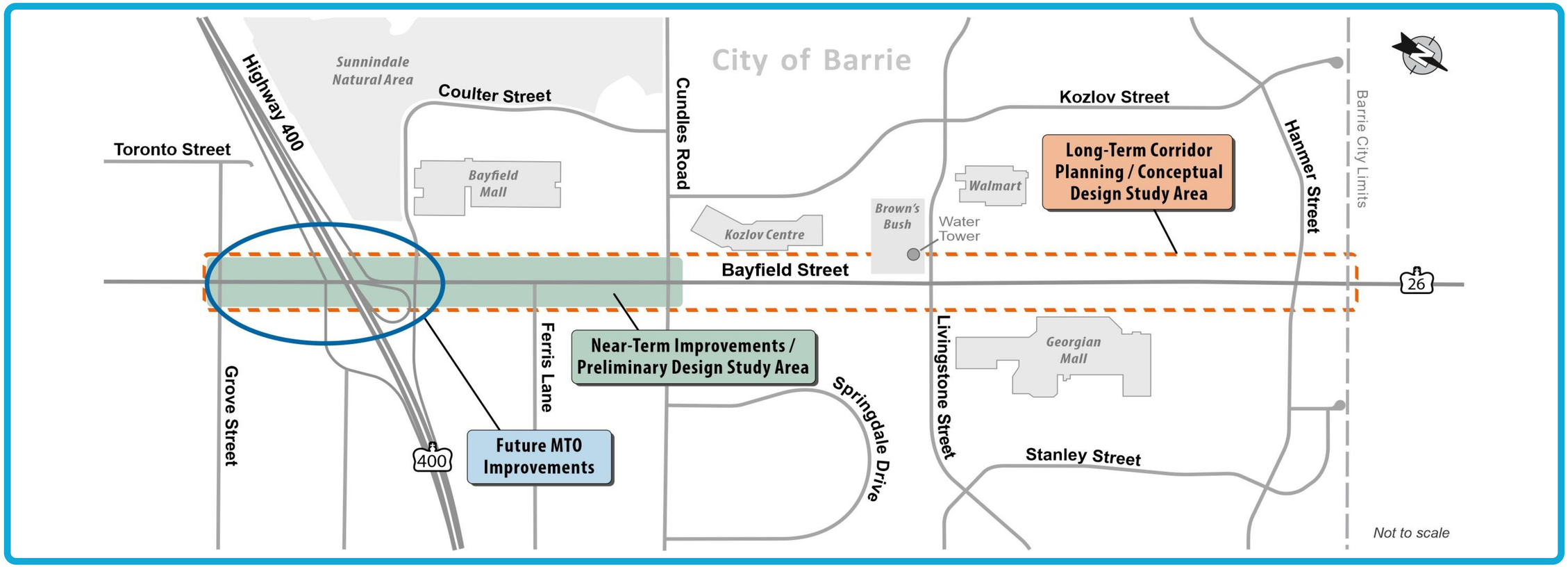
Transportation and land use evolution will be driven by several planned improvements, including:

- MTO's planned replacement of the Bayfield Street interchange and widening of Highway 400;
- Identification of Bayfield Street as an intensification corridor planned for higher-density mixed-use development;
- Recognition of the need for Bayfield Street to support active transportation; and,
- Significant transit improvements on Bayfield Street.

The current street does not meet traffic demands, has narrow sidewalks, no cycling facilities, and numerous uncontrolled private accesses that are contributing to undesirable corridor operations.



In anticipation of Bayfield Street's transformation, there is an opportunity to redesign Bayfield Street into a street that has improved safety and better supports all road users.



Study Purpose: Near-Term Improvements

1. Assessment and identification of active transportation improvements to incorporate with MTO's interchange replacement project extending from Grove Street to Coulter Street.
2. Assessment and identification of vehicle capacity and active transportation improvements extending from Coulter Street to Cundles Road.
3. Assessment and identification of interim active transportation improvements extending from Cundles Road to Hanmer Street.
4. Assessment and identification of localized intersection improvements at Bayfield Street and Grove Street.

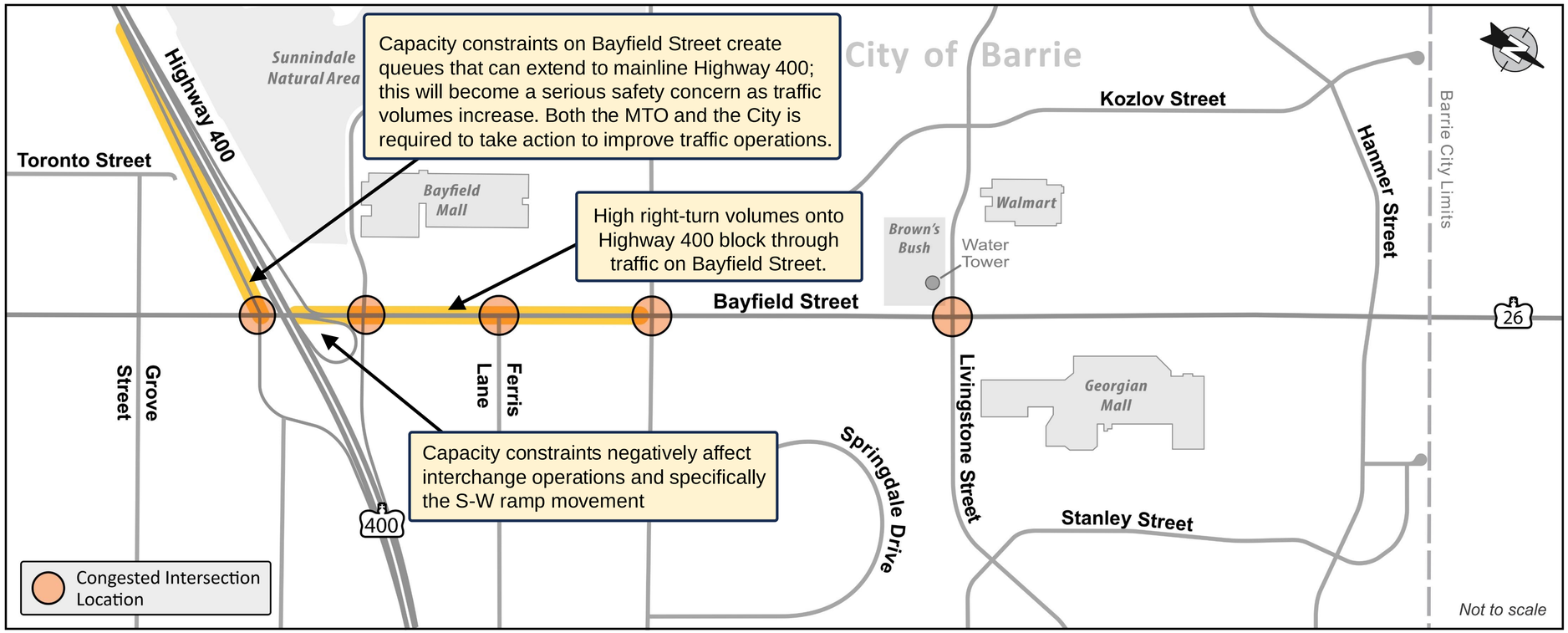
Study Purpose: Long-term Corridor Planning

Development of a long-term transformative plan to reflect planned changes in land-use that includes a mix of medium density residential and commercial uses. The plan will embrace complete street principles and aims to achieve an enhanced pedestrian and cyclist friendly realm while balancing the role this corridor plays as a regional connector.

Preliminary Traffic Analysis – Existing Conditions

Bayfield Street Transportation Improvements

Traffic Operations and Congested Intersections



There is typically significant congestion along Bayfield Street, resulting in queues that can extend onto Highway 400.

During this study, we will be looking at ways to ensure there's enough capacity on Bayfield Street to improve traffic operations, especially at those locations highlighted in yellow on the map.

Based on the preliminary traffic results completed for this study, we have identified at least five intersections along Bayfield Street - between Grove Street and Hanmer Street - that currently experience high levels of congestion or queueing.

This Study will examine various strategies and designs to address these significant pinch points and the congestion outlined on the previous slide.

Existing Conditions - Key Issues

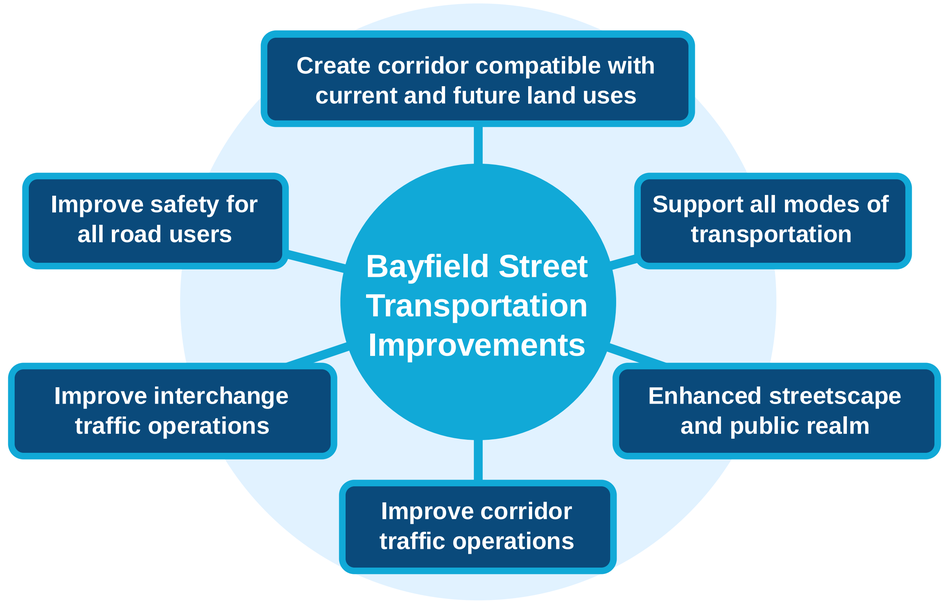
Critical Issues – Traffic Capacity and Road Safety

Highway 400 Southbound off-ramp (S-E/W ramp)	Traffic volumes exiting Highway 400 exceed Bayfield Street capacity. This causes significant queuing on the ramp, which presents a safety issue.
Vehicle capacity during peak hours	This causes traffic congestion, particularly evident during afternoon peak hours.
Uncontrolled full-move driveways (i.e., can make left and right turns in and out)	The high number of driveways with uncontrolled turning movements are resulting in numerous preventable collisions on the corridor. The most hazardous movements include left-ins and particularly left-outs.

Other Notable Issues

Lack of cycling infrastructure	The current lack of cycling infrastructure requires cyclists to travel on sidewalks, and negatively impacts transportation equity.
Lack of streetscaping	The existing corridor does not have streetscaping/plantings. The public realm is less inviting and can be uncomfortable for pedestrians due to the proximity to traffic and driveways.

Opportunities for Improvement



Existing Conditions – Road Safety

**Bayfield Street had 1,055 collisions over a 5-year period (2018 to 2022).
No collisions resulted in fatalities.**

Collisions

97%
Vehicle to Vehicle



1.4%
Vehicle to Pedestrian



1.2%
Vehicle to Cyclist



Number of Injuries

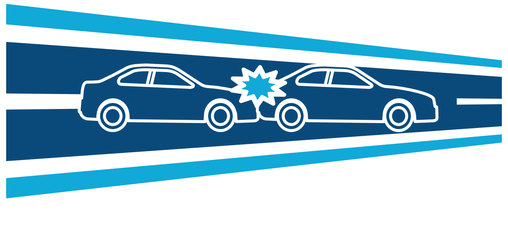
81%
Vehicle to Vehicle

12%
Vehicle to Pedestrian

7%
Vehicle to Cyclist

Mid-block Collisions

15%



Intersection Collisions

85%





The presence of numerous uncontrolled private accesses (driveways) are resulting in drivers making unsafe maneuvers contributing to a significant amount of preventable angle and sideswipe collisions. The lack of turning movement restrictions creates a less safe environment for pedestrians, precludes the ability to add cycling infrastructure, and decreases overall corridor efficiency.



Key Themes Emerged From PIC #1

Make Bayfield Street Safer and Less Congested:

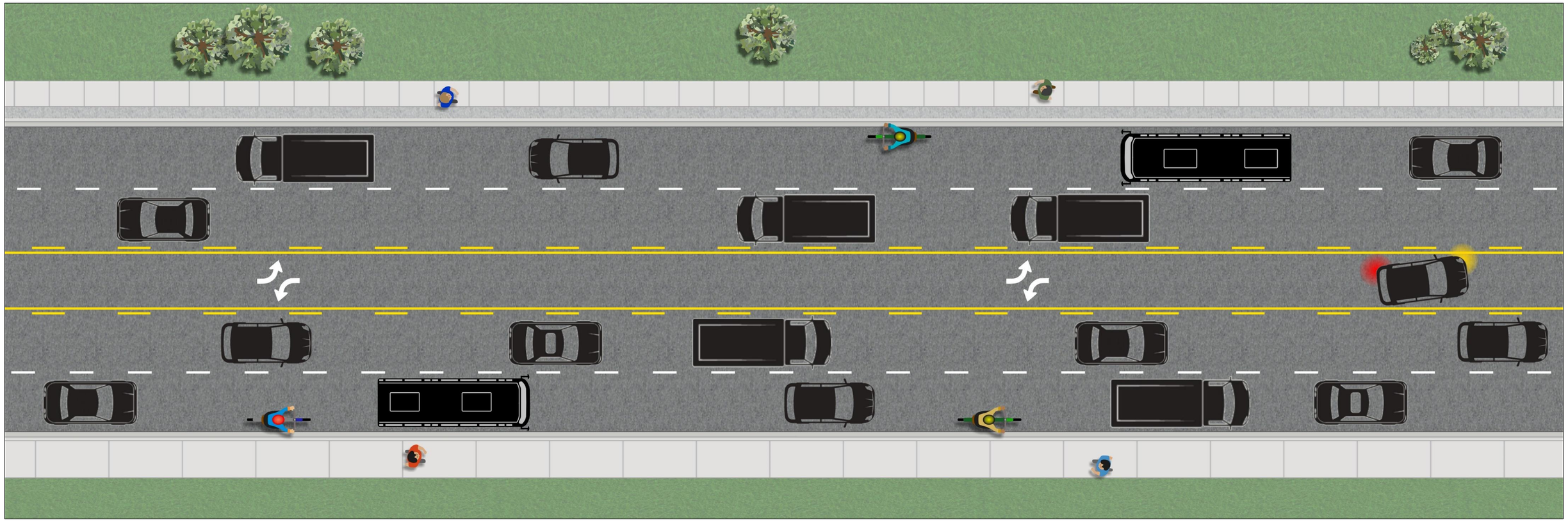
concerns about heavy traffic and issues with uncontrolled turning movements. Suggestions for improvements include restricting turning movements, adding lanes and improving intersection safety.

Provide More Active Transportation Options along Bayfield Street:

provide better infrastructure for pedestrians and include physically separated cycling facilities (i.e., wider sidewalks further from the street, cycle tracks, etc.).

Enhance Transit Opportunities along Bayfield Street:

interest in dedicated lanes, addition of shelters, and operate more frequent bus service, especially during rush hour.



Consider Design Improvements along Bayfield Street:

address the turning radii at key intersections, consider roundabouts, dedicated lanes to transition to Highway 400, other potential improvements.

Make Bayfield Street Greener and More Attractive:

provide more green space, plants and trees along Bayfield Street that enhance the streetscape.

Incorporate Smart Infrastructure:

add elements like smart traffic signals or other technologies to manage traffic.

What is the Public telling us?*

What respondents think of Bayfield Street:

Bayfield Street is seen as a congested, chaotic, and unsafe thoroughfare with heavy traffic, frequent accidents, poor infrastructure, and a lack of pedestrian-friendly features.

Key statistics from survey No. 1:

What respondents think is the most important improvement



33% Improving Road Safety



49% Adding Traffic Capacity

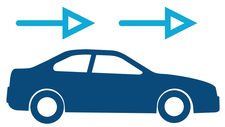


7% Improving Sidewalks



11% Adding Cycling Facilities

If respondents could change one aspect



44% Improve Traffic Flow



8% Enhance Public Transportation



38% Support Pedestrians and Cyclists



7% Add Greenery and Beautification



3% Address Social Issues

What respondents would change to reduce property required for infrastructure improvements



44% Add travel lanes only



6% Add cycling infrastructure only



13% Use design minimums to improve all modes



20% Remove centre turn lane (no left turns)



17% Other

Who is using Bayfield Street today and how?



72% Single occupant in car (driving yourself to work in a private vehicle)



18% Passenger in the car



5% Use Public Transit



2% Cycle



3% Walk

** Survey results courtesy of buildingbarrie.ca/BayfieldStudy*

Proposed Alternative Planning Solutions

Alternative solutions are potential ways to address the transportation challenges and opportunities along Bayfield Street.



Do Nothing: Maintaining the existing road network as it currently exists.



1. Support the City's On-going Transportation Demand Management Efforts: Shifting auto demand to time periods outside of rush hours, reduce auto demand by encouraging non-auto transportation modes (transit, cycling, walking, ride-share, e-mobility).



2. Add Travel Lanes: Add travel lanes to increase traffic capacity and improve level of service.



3. Improve Intersections: Improve intersection operations through the provision of turning lanes, optimizing of traffic signal timing, and implementation of smart technologies.



4. Improve Active Transportation and Infrastructure and Safety: Add cycling facilities and improve pedestrian infrastructure to support non-auto transportation modes and improve transportation equity.



5. Improve Transit: Improve transit stop infrastructure and consideration of transit specific infrastructure



6. Improve Streetscape: Create a more attractive and inviting streetscape to support active transportation modes and future land use.



7. Provide High Occupant Vehicle (HOV) Lanes: Reduce the number of solo drivers by encouraging carpooling on HOV lanes.



8. Improve Corridor Safety & Operations: Improve safety by eliminating unsafe turning movements from driveways through the provision of a raised median. Encourage access consolidations.



9. Improve Other Parallel Routes: Improve other north-south corridors.

How were the Alternative Solutions Evaluated?

Evaluation Criteria

Socio-Economic

- Community input and feedback.
- Consistency with Provincial and Municipal Planning Policies and Objectives and including the City's vision for Bayfield Street.
- Ability to enhance public realm, streetscape character with opportunities to incorporate city building and community.
- Potential impact and benefits to residences and businesses.
- Potential property impacts.
- Potential cost.

Natural Environment

- Potential for the Project's ability to be adaptable / resilient to climate change.
- Potential for climate change mitigation (i.e., reduction of GHG emissions).
- Potential for the Project to impact local air quality and the acoustic environment at nearby sensitive receptor locations.
- Potential impacts/improvements to street tree canopy, vegetation and landscaped areas.

Cultural Heritage

- Potential impacts on cultural heritage resources.
- Potential impacts to archaeological resources.

Planning and Transportation

- Consistent with Transportation Master Plan.
- Compatible to and supports the planned MTO Interchange improvements.
- Potential impacts and improvements to transit and traffic operations.
- Provisions for and quality of active transportation facilities (cycling and walking).
- Potential opportunity to improve safety and connectivity for motorists, cyclists and pedestrians.
- Impacts to utilities and municipal services.
- Impacts to emergency response.

Evaluation of Alternative Planning Solutions (1 of 3)

Bayfield Street Transportation Improvements

Criteria	Do Nothing	Alternative 1: Transportation Demand Management (TDM) *	Alternative 2: Increase Motor Vehicle Travel Lanes	Alternative 3: Improvement to Intersections
Socio-Economic	Less Preferred	Moderately Preferred	More Preferred	More Preferred
Natural Environment	Less Preferred	Moderately Preferred	More Preferred	Moderately Preferred
Cultural Environment	More Preferred	More Preferred	More Preferred	More Preferred
Planning and Transportation	Less Preferred	Less Preferred	More Preferred	Moderately Preferred
Overall Summary	• Not aligned with Bayfield Street's planning objectives and vision. Does not address community input and feedback. • Will not provide long-term benefits to residents or business owners. • No climate change action and no potential for streetscaping. • No impacts to cultural heritage resources, or archaeology although no potential for improvements. • No improvements to transit and traffic operations, safety, and connectivity. Does not support the Highway 400 improvements.	• Not aligned with Bayfield Street's planning objectives and vision. Does not address all community input and feedback. • Limited long-term benefits to residents or business owners, nor will it be a future thinking approach. • No climate change action and no potential for streetscaping.[1] • No impacts to cultural heritage resources, or archaeology although no potential for improvements. • Limited improvements to transit and traffic operations, safety, and connectivity. Does not support the Highway 400 improvements.	• Aligns with Bayfield Street's planning objectives and vision. May have property impacts. Addresses community input and feedback. • Long-term benefits for residents and businesses. • Potential for climate change action and little streetscaping opportunities. • Limited potential impacts to archaeological resources. • Significant improvements to transit and traffic operations, safety, and connectivity. Supports the Highway 400 improvements.	• Aligns with Bayfield Street's planning objectives and vision. May have property impacts. Addresses community input and feedback. • Long-term benefits for residents and businesses. • Potential for climate change action and some streetscaping opportunities. • Limited potential to impact archaeological resources. • Significant improvements to transit/traffic operations, and some safety/connectivity enhancements. Does not support the Highway 400 improvements on its own.
Recommendation	**Do Not Carry Forward**	**Do Not Carry Forward***	**Carry Forward**	**Carry Forward**

* Alternative 1 TDM is more appropriately considered as part of the City's Transportation Master Plan and through Barrie's Planning Applications.

1 No improvement to climate change resiliency in context of addressing the problem and opportunity statement for Bayfield Street. TDM does support climate change resiliency at the City-wide level.

Evaluation of Alternative Planning Solutions (2 of 3)

Bayfield Street Transportation Improvements

Criteria	Alternative 4: Provide and/or Improve Active Transportation (i.e. Pedestrian and Cycling Facilities)	Alternative 5: Provision and/or Improvement to Transit Facilities and Amenities	Alternative 6: Improvement of Public Realm for Landscaping, Streetscaping and/or Amenities
Socio-Economic	More Preferred	More Preferred	More Preferred
Natural Environment	More Preferred	Moderately Preferred	More Preferred
Cultural Environment	More Preferred	More Preferred	More Preferred
Planning and Transportation	More Preferred	Moderately Preferred	Moderately Preferred
Overall Summary	• Aligns with Bayfield Street's planning objectives and vision. May have property impacts. Addresses community input and feedback. • Long-term benefits for residents and businesses. • Good potential for climate change action and provides good potential for streetscaping improvements. • Limited potential to impact archaeological resources. • Some improvements to transit and traffic operations, and significantly enhances active transportation, safety, and connectivity. Does not support the Highway 400 improvements on its own.	• Aligns with Bayfield Street's planning objectives and vision. May have property impacts. Addresses community input and feedback. • Long-term benefits for residents and businesses. • Good potential for climate change action and provides some potential for streetscaping improvements. • Limited potential to impact archaeological resources. • Significant improvements to transit and traffic operations, with potential enhancements to safety and connectivity. This alternative supports improvements to automobile safety improvements. Does not support the Highway 400 improvements on its own.	• Aligns with Bayfield Street's planning objectives and vision. May have property impacts. Addresses community input and feedback. • Long-term benefits for residents and businesses. • Good potential for climate change action and provides excellent streetscaping improvements. • Limited potential to impact archaeological resources. • Will not enhance transit and traffic operations but will provide complementary improvements to active transportation, safety, and connectivity. Does not support the Highway 400 improvements on its own.
Recommendation	**Carry Forward**	**Being Carried Forward as part of the Transportation Master Plan Update**	**Carry Forward**

Evaluation of Alternative Planning Solutions (3 of 3)

Bayfield Street Transportation Improvements

Criteria	Alternative 7: Provision of High Occupancy Vehicle (HOV) Lanes	Alternative 8: Corridor Safety & Operational Improvements (i.e. Add Median)	Alternative 9: Improvements to the Overall Transportation Network
Socio-Economic	Moderately Preferred	More Preferred	Less Preferred
Natural Environment	Moderately Preferred	Moderately Preferred	Moderately Preferred
Cultural Environment	More Preferred	More Preferred	Moderately Preferred
Planning and Transportation	More Preferred	More Preferred	Less Preferred
Overall Summary	• Aligns with Bayfield Street's planning objectives and vision. May have property impacts. Somewhat addresses community input and feedback. • Some benefits for residents, few benefits to businesses. • Good potential for climate change action and provides few streetscaping opportunities. • Limited potential to impact archaeological resources if widening occurs between Coulter Street and Ferris Lane. • Significant improvements transit and traffic operations significantly. Some improvements in safety and connectivity to save travel time. Does not support Highway 400 improvements on its own	• Aligns with Bayfield Street's planning objectives and vision. Addresses community input and feedback. • Long-term benefits for residents and businesses. • Good climate change resiliency potential and provides good streetscaping opportunities. • No impacts to archaeological resources. • Significantly improve safety and connectivity for transit and traffic operations, as well as safety for cyclists and pedestrians by introducing controlled turn movements. Supports Highway 400 improvements.	• Not aligned with Bayfield Street's planning objectives and vision. Does not address community input and feedback.[2] • No benefits for residents and businesses.[2] • No climate change resiliency potential and provides no streetscaping opportunities.[2] • No impacts to archaeological resources.[2] • Does not improve transit and traffic operations. Does not improve active transportation, safety, or connectivity. Does not support Highway 400 improvements.[2]
Recommendation	**Carry Forward**	**Carry Forward**	**Do Not Carry Forward**

2 In the context of the problem and opportunity statement for Bayfield Street and improvements implementation on Bayfield Street.

Recommended Planning Solution

Bayfield Street Transportation Improvements

The recommended planning solution consists of the following elements:

	Planning Solution	Explanation	Rationale
	**Improve Corridor Safety and Operations, through a raised median**	Improve corridor safety by restricting turning movements from private accesses (driveways) to right-in and right-out only using a raised median.	The numerous uncontrolled driveways on Bayfield Street is a significant factor in the high number of preventable collisions on the corridor. A raised median will restrict turning movements to simply right-in and right-out. This could reduce auto collisions and improve safety for all road users.
	**Improve Intersections***	Improve intersection operations, including through the provision of turning lanes, optimizing of traffic signal timing, implementation of smart technologies, etc.	Improving intersections provide an opportunity to improve traffic operations and road safety.
	**Reconfiguring and/or Adding Travel Lanes***	Add one travel lane per direction. This new infrastructure will require the City to acquire private property as additional travel lanes cannot fit within the existing right-of-way.	Adding one-lane of traffic per direction increases the capacity of the roadway by approximately 50%. This additional capacity is required to accommodate existing demand and planned growth. The additional travel lanes will improve level of service and travel time.
	**Improve Transit Infrastructure***	Improve transit system efficiency and reliability by introducing transit priority measures such as transit priority lanes, transit queue jump lanes and/or transit shelters. Depending on the improvement type, it may require the City to acquire private property.	Improving transit system efficiency and reliability reduces automobile reliance and encourages active transportation. On its own, this alternative does not address the overall traffic capacity needs; however, it supports the improvement of non-auto modes of transportation.
	**Add Cycling Facilities and Improve Sidewalks***	Add cycling facilities and widen sidewalk to meet AODA standards. This new/improved infrastructure will require the City to acquire private property as the new/improved infrastructure cannot fit within the existing right-of-way.	Adding safe, connected and comfortable cycling facilities and improving pedestrian facilities reduces automobile reliance and encourages active transportation. On its own, this alternative does not address the overall traffic capacity needs; however, it supports the improvement of non-auto modes of transportation.
	**Improve Streetscaping, Landscaping and/or Amenities ***	Include trees or landscape plantings. Note – this inclusion may not be possible or limited due to corridor width constraints.	Trees and landscape plantings create a streetscape that is more attractive and friendly public realm. They also help to create a more urban streetscape that aligns with future land use.



*** Improvements that require additional property will be assessed and prioritized in terms of impact to address immediate corridor needs. Some elements may need to be planned for long-term implementation.**

Barrie

Recommended Planning Solution: Key Changes – Raised Median – Access

Bayfield Street Transportation Improvements

A raised median is being considered for the alternative design concepts to <u>improve safety</u> on the corridor.

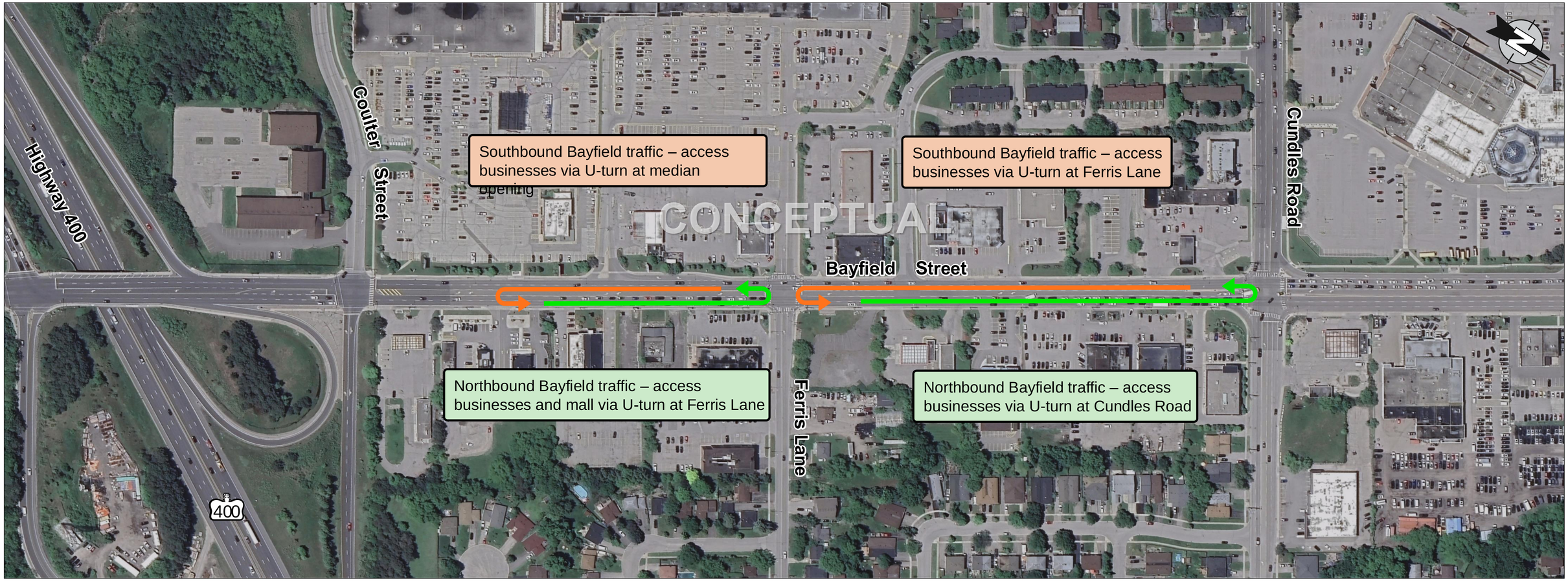
- The use of medians on multi-lane arterial streets is very common. New development and redevelopment on Bayfield Street are presently required to construct their entrance to only allow right-in and right-out turning movements to provide the same function and safety improvement that a median provides.

Safety Countermeasures to Midblock and Intersection Collisions

- Install a raised median to reduce mid-block collisions → Mid-block collisions could be reduced by **71%.**
- Increase time between yellow and red lights and add pedestrian countdowns → Intersection collisions could be reduced by **15%.**
- Safety improvements to Bayfield Street could reduce at least **50** collisions per year. Based on a social impact assessment, this could save over **$5M** in societal costs in the next 5-year period.



Recommended Planning Solution: Raised Median – Business Access (Conceptual)



Through the development of the alternative design concepts, the creation of sufficient space to allow passenger vehicles to make U-turns is under study. Businesses could be accessed by U-turns at intersections, specific median openings and through private owner agreements allowing cross-access between properties.

Raised Medians and Protected Intersections

A **centre median** is commonly used on multi-lane arterial roads of 4 to 6 lanes to reduce conflict points by restricting access, thus improving the overall safety of the roadway.

A **protected intersection*** prioritizes the safety and comfort of pedestrians and cyclists, using a combination of geometric and signalization measures to reduce and/or eliminate potential for conflict.

Cornwall Road, Oakville, ON – Centre Median



Highway 15 & Gore Road, Kingston, ON – Protected Intersection



Highway 7, Markham, ON – Centre Median



Dundas & Colborne Street, London, ON – Protected Intersection



*** Improvements that require additional property will be assessed and prioritized in terms of impact to address immediate corridor needs. Some elements may need to be planned for long-term implementation.**

Environmental Investigations and Studies

Several technical analyses have been or will be completed as part of this study. The results of the impact assessment and mitigation measures proposed will be used to evaluate the alternative design concepts.



Cultural Heritage



Soil Contamination



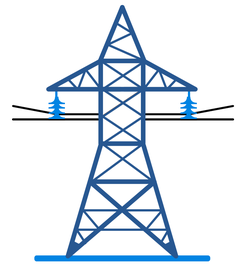
Drainage



Traffic



Archaeology



Utilities



Noise



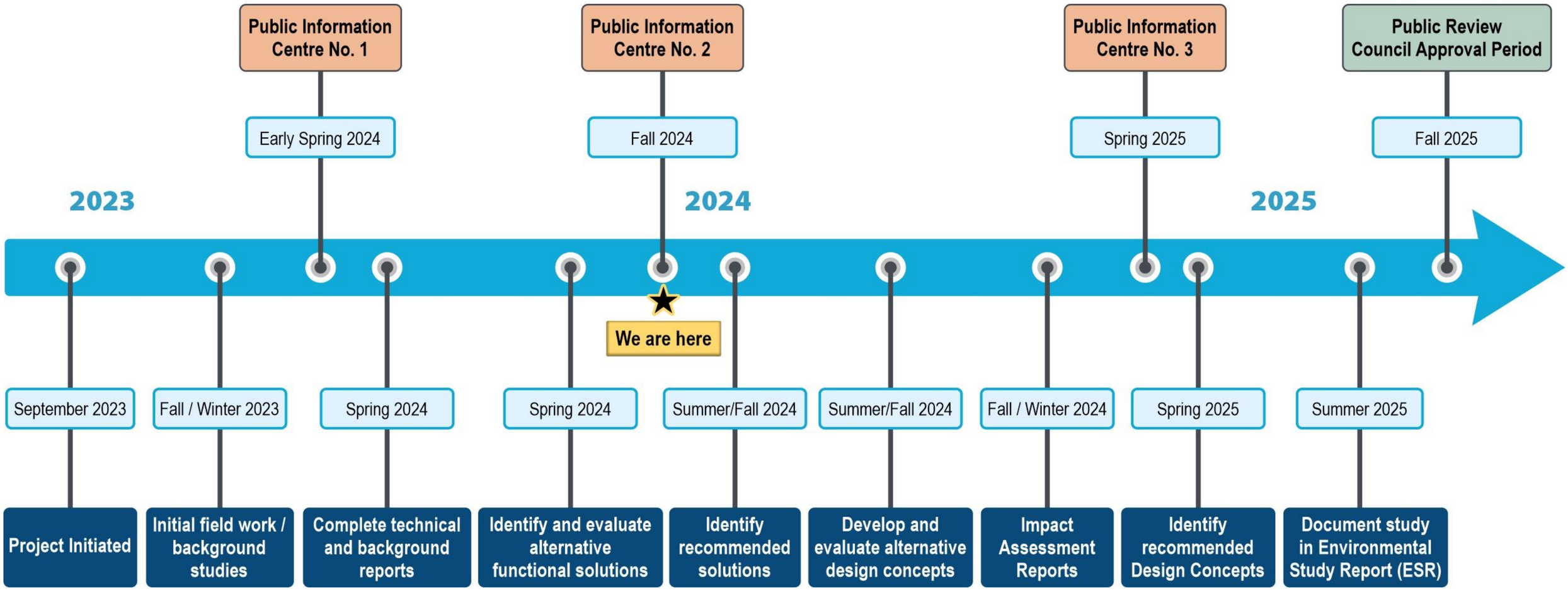
Natural Environment



Air Quality

Schedule of Key Milestones

Bayfield Street Transportation Improvements



The key next step is to confirm the recommended solution and begin to develop and evaluate alternative design concepts.

"What could the near-term solutions along Bayfield Street look like?"

How Can Residents and Stakeholders Participate?

- Please go to our *Building Barrie* webpage at **www.buildingbarrie.ca/bayfieldstreet** to:
  - Provide formal project comments.
  - Subscribe for electronic project updates.
  - Review important and updated information about the study.
  - Access key documents and reports.
  - Participate in interactive surveys and mapping exercises relevant to the study.



- Three Public Information Centres (PICs) at key milestones – PIC No. 3 scheduled in the spring of 2025

- Stakeholder meetings and interviews (future meetings with property owners and businesses planned for Fall 2024 / Winter 2025)





Thank you for your time!

Please stay engaged with the ongoings of the Project and provide your valued input, we want to hear from you!

For more information and to participate in an important survey, please visit us at:

www.buildingbarrie.ca/bayfieldstreet