LaSalle
Ontario, Canada

TRANSPORTATION MASTER PLAN

Prepared for: Town of LaSalle | January 2020
FINAL

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EXECUTIVE SUMMARY

1.0 Introduction

The Town of LaSalle is embarking on a Transportation Master Plan (TMP) to enhance the existing quality of life and to plan for future generations by planning for a transportation network that accommodates all modes of travel for users of all ages and abilities. A TMP is a document used to shape, integrate, and guide both decision-making and strategic transportation affairs; it is a communication tool that strives to create a long-term vision complete with goals and guidelines to help shape a community.

The purpose of this TMP is to serve as a guide for future transportation investment and development. Building upon the Town's goals and visions, the TMP aspires to:

- Proactively plan for all modes of travel;
- Provide accessible streets for all ages and abilities in established and new neighbourhoods;
- Encourage seamless multi-modal travel and transfers across different transportation modes including pedestrians, cyclists, transit users, and motorists;
- Support goals for a vibrant and connected community;
- Enhance the quality of life for people who live, work, and play in the Town;
- Provide options for how people get around;
- Maintain and enhance the quality of life through a well-integrated transportation system;
- Promote active lifestyles by providing safe and comfortable facilities for walking and cycling; and
- Accommodate future generation needs.

LaSalle's TMP was conducted under the requirements of the Municipal Class Environmental Assessment (MCEA) process for master plans. The TMP addressed both Phase 1 (opportunity statement) and Phase 2 (assessment of alternatives) of the MCEA process, and included a comprehensive public consultation and stakeholder engagement program to obtain feedback from the Town's residents, key Town staff stakeholders and other relevant technical agencies.

2.0 Existing Conditions

The first step to developing a future transportation network plan is to understand where LaSalle is today. Existing conditions were reviewed to determine the current transportation-related challenges and opportunities. This included the review of relevant provincial, regional and local policies, the community structure, land uses, population and employment, travel behaviours and patterns, and the transportation network infrastructure.

LaSalle is currently the second largest community in the County with a population of approximately 30,200 residents in 2016, which is expected to grow to 35,470 by 2031. While LaSalle is accessible by a variety of transportation modes including walking, cycling, public transit and private automobile, according to Statistics Canada, 92% of the labour force use a private vehicle to travel.

3.0 Vision And Stakeholder Engagement

The vision for this TMP, stated below, reflects the four guiding principles that will aid in the decision-making process to strategically prepare for the Town's growth. The vision statement noted below (Phase 1 of the MCEA process) was developed based on the understanding of the study objectives, existing conditions, and existing Town, County and Provincial policies.

> *"The Town of LaSalle envisions an **accessible, well-connected, age-friendly** transportation network that supports **sustainable** and **multimodal travel** for pedestrians, cyclists, transit users and motorists. Planning, designing, constructing and maintaining the network acknowledges the **mobility needs** of numerous users of **all ages and abilities**, meeting the needs of today and tomorrow."*

Two rounds of public consultation and engagement opportunities were offered throughout the development of this TMP. These events were promoted on various avenues including a project website, postcards, newspaper ads and social media. All comments, input and feedback received from stakeholders and the public were collected, mapped and assessed to help inform the future recommended transportation network.

The focus of the first engagement round, which occurred from June to July 2018, was to introduce the project, identify key issues, and opportunities, and gain sample set of data on demographic profiles of LaSalle residents. The second engagement round was held in March 2019 to gain feedback on the proposed networks for active transportation, transit and roads to refine the details of the network and also to provide exposure to recommended policies and its contents.

A summary of the engagement opportunities and the feedback received from various participants and stakeholders can be found in Chapter 3 of this report. These comments provided context and informed the challenges and opportunities present in LaSalle to help shape the recommendations in this TMP.

4.0 Multimodal Transportation Assessment

A holistic approach to transportation planning that considers all transportation users and all modes of travel was utilized to develop the Town's first TMP. This involved planning for the most vulnerable users (pedestrians and cyclists) first, followed by transit and private vehicles. All input received from the public outreach and consultation events were considered and combined with technical analyses, staff knowledge, and best practices to create tailor-made solutions for the Town of LaSalle. An overview of the approach used to assess and evaluate potential improvements for each mode of transportation is provided below with a summary of recommendations provided in the next chapter.

4.1 Active Transportation

The network development process builds on previous plans and guidelines that identify active transportation routes and considerations. This is coupled with ground-truthing and knowledge gathered from conversations with Town staff, local stakeholders and the public, to refine the network, shape key outcomes and provide guidance on design and application of active

transportation facilities in LaSalle. The following six-step process was used to identify and confirm the preferred routes and facility types:

1. **Identify and Map Existing Conditions**
2. **Identify Candidate Routes**
3. **Undertake Field Work**
4. **Confirm Active Transportation Network**
5. **Identify Facility Types**
6. **Develop Implementation Strategy**

The existing and proposed active transportation network by facility types is summarized **Table I** and illustrated in **Figure I**. Approximately 129 kilometres of active transportation routes are proposed to be added to the existing 162 kilometres, making up approximately 164 kilometres of active transportation facilities within LaSalle.

Table I: Proposed cycling facilities

Facility Type	Town Total KM[1]	Town Routes KM	CWATS Network			ERCA KM	Developer KM	Total KM
			Town KM	County Connecting Links KM	County KM			
Off-Road Recreational Trail	**23.9**	23.9	0	0	0	0.1	0	**24.0**
In-Boulevard Pathway	**25.6**	20.7	3.6	1.3	1.7	0	18.1	**45.4**
Separated Bike Labe	**3.3**	0	0	3.3	4.6	0	0	**7.8**
Bike Lane	**2.6**	2.6	0	0	0	0	9.2	**11.7**
Buffered Paved Shoulder	**0**	0	0	0	12.1	0	0	**12.1**
Paved Shoulder	**13.7**	11.9	1.8	0.0	7.3	0	0	**20.9**
Signed Route with Edgeline	**1.5**	1.5	0	0	0	0	0	**1.5**
Signed Route	**5.2**	3.2	2.0	0	0.1	0	0	**5.4**
Total	**75.8**	63.8	7.4	4.5	25.7	0.1	27.3	**128.9**

Note:
1. Total Town length = Town routes (63.8 km) + Town routes within the CWATS network (7.4 km) + County Connecting links within the CWATS network (4.5 km).

4.2 Transit

The transit planning work was undertaken to identify a preferred option for future transit expansion. The existing network constraints were reviewed and future development was considered to develop three future route alternatives that connect to major destinations and areas of interest, provide frequent services, and decrease travel time.

The three alternatives developed were: Do-Nothing Scenario, North-South Circuits, and East-West Circuit. These three alternative options were evaluated based on the following criteria:

- Operating frequencies (headways);
- Availability of connections to other routes;
- Connectivity to destinations;
- Travel times;
- Potential to increase ridership;
- Operating costs; and
- The ability to serve future development.

The preferred alternative, North and South Circuits, was selected and is supported by enhancements for transit, as well as a discussion on emerging trends that should be considered as the transit system evolves. The preferred alternative splits the existing route 25 into north and south branches, allowing for transfers along Front Road, the Civic Centre and at St. Clair College; thus achieving more flexibility and connection to other routes, and better accommodation to destination and new development areas. The preferred transit alternative is illustrated in **Figure II**.

4.3 Road Network

LaSalle's road network assessment and roads improvements strategy were developed through a multi-step process building upon the existing conditions analysis and the input received during the public consultation events. The Town's Official Plan, Environmental Assessments and Secondary Plans of specific districts were also accounted for in the development of the proposed future alternatives. The following three scenarios were developed for the 2031 horizon:

1. **Do Nothing:** existing road network, no expansion of arterial/collector roads;
2. **Alternative Option 2:** utilizing the current alignments and providing east-west connections along Reaume Road, Golfview Drive, and Martin Lane. Improving north-south routes along Dunkirk Avenue and Tenth Street and filling the gaps along Mayfair Avenue; and
3. **Alternative Option 3:** providing connections through an integrated arterial and collector road network.

The evaluation framework used to determine the preferred road network alternative included the following criteria:

- **Active transportation**: Ability to support pedestrian and cycling infrastructure and facilities;
- **Complete streets**: Ability to support Complete Streets;
- **Transit**: Ability to support Transit within arterial/collector road network;
- **Placemaking**: Ability to support placemaking and community-oriented destinations;

- **Rural to Urban**: ability to enhance connectivity with rural areas and improve/upgrade rural roadways;
- **New Development Areas**: Ability to support opportunities to serve new development districts within the existing urban boundary of LaSalle;
- **Environmental Impact**: Minimize impact on environmentally sensitive areas;
- **Financial Cost**: Estimated build-out cost implications; and
- **Goodes Movement**: Ability to support movement of consumer goods to commercial zones.

Based on the quantitative, screenline and qualitative analysis, Alternative option 3 (shown in **Figure III**) was selected as the preferred future road network alternative as it supports active transportation and transit facilities, as well as maximizes opportunities to connect to new development areas. This alternative also proposes a Front Road revitalization project as a complementary strategy to help enhance the Waterfront District by providing a balance of transportation options, supporting local businesses and creating a sense of place and destination along this corridor.

5.0 Implementation Strategy

The implementation of the Town of LaSalle's TMP networks is organized into three phases: short term (2019-2024), medium term (2025-2031), and long term (2032 and beyond). The proposed phasing is meant to be used to inform future decision-making and prioritization of the recommended projects. It is meant to compliment and support all modes of transportation in its timelines to ensure efficient and cost-effective implementation for the Town and its partners. The implementation strategy provides an overview of the proposed phasing plan, how it was developed, and estimated high-level costs associated with implementation, maintenance and other supportive tools and resources to support initiatives identified in the TMP.

The recommended improvements by short, medium and long term are shown in **Table II**.

6.0 Summary of Recommendations

Active Transportation

- Apply and adapt as necessary the prioritization criteria and associated scoring assumptions to inform the phasing of active transportation routes.
- Adopt the proposed phasing as a guide for staff and partners when moving forward to implement the active transportation network.
- Continue working with the County and the CWATS Committee to ensure any revisions to the CWATS network and cost-sharing strategy are reflected in future-decision making and used to inform the implementation of active transportation routes in the Town of LaSalle.
- Manage and update the network management tools on an on-going basis and use the tools to assist in the implementation and management of active transportation infrastructure.
- Review annual budgets to ensure the amount allocated for implementation and operations of the active transportation is sufficient.
- Use the AT Network Database and Costing as a reference to track future implementation, budgeting and costing of the proposed active transportation network.

- Use the estimated capital costs as the preliminary costing to inform future budgeting decisions on an annual basis. As needed, the costing should be updated to reflect more accurate estimates based on inflation and other external factors.
- Report to Council on an annual basis to provide an update on the implementation of new infrastructure and to provide Council with an outlook for anticipated projects to be completed in the following year.
- Continue to explore external funding sources and partnerships to help fund implementation of active transportation infrastructure and initiatives.

Transit

- Based on the evaluation criteria, transit frequency, network connectivity, travel time, operating cost and ability to serve future demands, implement transit route Option 2, North and South Circuits, as the preferred option. The Option 2 splits the route into north and south branches, allowing for transfers along Front Road, the Civic Centre and at St. Clair College.
- Conduct a Transit Needs Study to assess transit demand and underserved areas to further develop an implementation plan.
- To enhance the transit experience, provide additional amenities such as schedule information screens where multiple routes merge.
- Keep up with the emerging trends for transit by providing alternative services.
- Consider cross-municipal boundary travel to areas of interest such as University of Windsor, St. Clair College, VIA Rail station, employment districts in Windsor to provide further connectivity locally and regionally.
- Continue to promote fare reduction during high-profile events can increase exposure to LaSalle's transit services and increase ridership.

Road

- Based on the quantitative, screenline and qualitative analysis, implement Alternative #3 as the preferred road network option. The road network alternative #3 provides connections through an integrated arterial and collector road network. Alternative #3 supports active transportation and transit facilities as well as this alternative maximizes opportunities to connect new development areas with the existing network of main collector and arterial roads.
- Consider implementing as a limited time pilot project the Front Road revitalization as a complementary strategy to help revitalize the Waterfront District. The reduction to three lanes of vehicular traffic would be expected to result in lower vehicle speeds and provide space to accommodate separated walking and cycling facilities to encourage walking or biking between shops or other destinations.

Road Design Standards

- Update the road design standards to enhance a multi-modal and complete streets approach. The integration of the complete streets approach allows for a cohesive road network within the available right-of-way and connectivity throughout the Town's network.
- Update the design standards with four additional sections for each road classification: pedestrian, cyclist, transit, and goods movement.
- Update the Development Standards cross-sections to:
    - Providing as much physical separation between the cyclists and vehicles with facilities like cycling tracks or buffered bike lanes;
    - Providing pedestrian facilities on both sides;
    - Providing parking lanes on both sides for commercial roads wherever possible;
    - Minimum bike lanes are at 1.5 metre as per OTM book 18;
    - Minimum travel lane of 3.25 metres; and
    - Minimum parking lane of 2.5 metres for residential roads, and 3.0 metres for commercial roads.

Emerging Trends and Autonomous Vehicles

- Develop an ITS strategic plan to identify any gaps or opportunities for the Town to act upon to better position the Town to benefit from these systems.
- Consider how alternative transportation methods such as ridesharing can provide potential options for residents.
- Continue to install electric vehicle charging stations to promote environmentally friendly travel options.
- Continue the expansion and maintenance of active transportation infrastructure to help with the first and last mile concerns.
- Engage Essex County to keep abreast with the developments of the MACAVO and consider any actions to be taken to facilitate AV implementation.

Travel Demand Management

- Develop a plan for implementing Travel Demand Management as a sustainable and effective way to manage congestion and enhance the multimodal transportation network without widening and adding new roads. A well-planned guideline includes TDM measures, implementation plan, monitoring strategies and long-term goals to ensure effective and resilient solution.

Traffic Calming

- Implement LaSalle's first Traffic Calming Policy to address speed and volume concerns in the residential areas to help maintain safety of all road users.
- Utilize the Traffic Calming Policy flowchart, which clearly outlines the procedure from initiation to implementation and a warrant system to determine appropriate measures to be considered for each location.

Table II: Recommendations by phases

	Short Term (2019-2024)	Medium Term (2025-2031)	Long Term (2032 and beyond)
Active Transportation	▸ Approximately 30 km of active transportation facilities are proposed on the new collector roads ○ 16km of in-boulevard pathway ○ 3 km of separated bike lanes ○ 9 km of bike lanes ▸ Incorporate separated bike lanes as a part of the Front Road revitalization project	▸ Over 80 km of proposed active transportation facilities are proposed on existing and proposed roads including approximately: ○ 18 km of off-road trail; ○ 25 km of in-boulevard pathway; ○ 5km of buffered paved shoulder; ○ 5 km of separated bike lanes; ○ 20 km of paved shoulder; ○ 5 km of bike lanes; and ○ 8 k of signed routes.	▸ Over 25 km of proposed active transportation facilities are proposed on existing and proposed roads including approximately: ○ 10 km of off-road trail; ○ 8 km of in-boulevard pathway; and ○ 8 km of buffered shoulders.
Transit	▸ Review the recommendations of the Transit Windsor Service Review to determine the impacts to the existing LaSalle 25 route, including fleet implications, and future connections to Transit Windsor routes; ▸ Undertake detailed public consultation discussing potential changes to the transit service and ongoing commentary of the service, including in-bus surveying; ▸ Undertake a detailed business case for expansion of the service; ▸ As subdivisions are planned, ensure that roadway geometries on collector roadways are conducive to conventional transit vehicle route alignments and that there is sufficient boulevard real estate for future bus stop pads, along with access opportunities such as sidewalks; ▸ Review ridership volumes of revenue operations annually on the LaSalle 25, including daily counts; ▸ Complete a travel demand survey to see where riders on the LaSalle 25 are originating and their destinations; and ▸ Ensure that development applications include forecasts for transit volumes and geometries for transit vehicles as well as active transportation infrastructure to support first and last mile travel.	▸ Review opportunities for on-demand transit (for example, alternative service delivery options) for riders past 7 p.m. and on Sundays; ▸ Complete dynamic testing along the proposed routes to gauge vehicle running times and simulate fixed-route operations; ▸ Invest in a new, or used, transit vehicle compatible with the Transit Windsor fleet; ▸ Implement, with modifications as required, the Option 2 preferred transit network, barring any additional recommendations from the Transit Windsor Service Review report to ensure that developments have transit service upon units closing; ▸ Ensure that bus stop pads, markers and amenities are available for riders; and ▸ Re-evaluate and adjust the transit service as necessary, on the basis of ridership volumes, transit operations and delays. Review after one year of revenue operations.	
Roads	▸ Construct new collector roads to fill the gaps in residential areas, in particular the Mayfair Avenue Extension; ▸ Continue to work with developers to expand new residential developments to accommodate the expected future growth such as Leptis Magna Drive and LaSalle Woods Extension; ▸ Implement corridor projects to enhance the transportation and overall experience such as the Front Road Lane Revitalization Project and Malden Road enhancement EA.	▸ Widen Laurier Parkway from two lanes to four lanes to increase the capacity of the road and to provide better connectivity between the west and east side of the town and to Highway 401; and ▸ Continue to drive the establishment of the proposed collector roads on the east side of Malden Road	▸ Build additional capacity and connectivity in rural areas through improving Martin Lane and Kelly Road; and ▸ Develop eastern area of the Town to expand residential developments. ▸

Figure I: Proposed active transportation routes

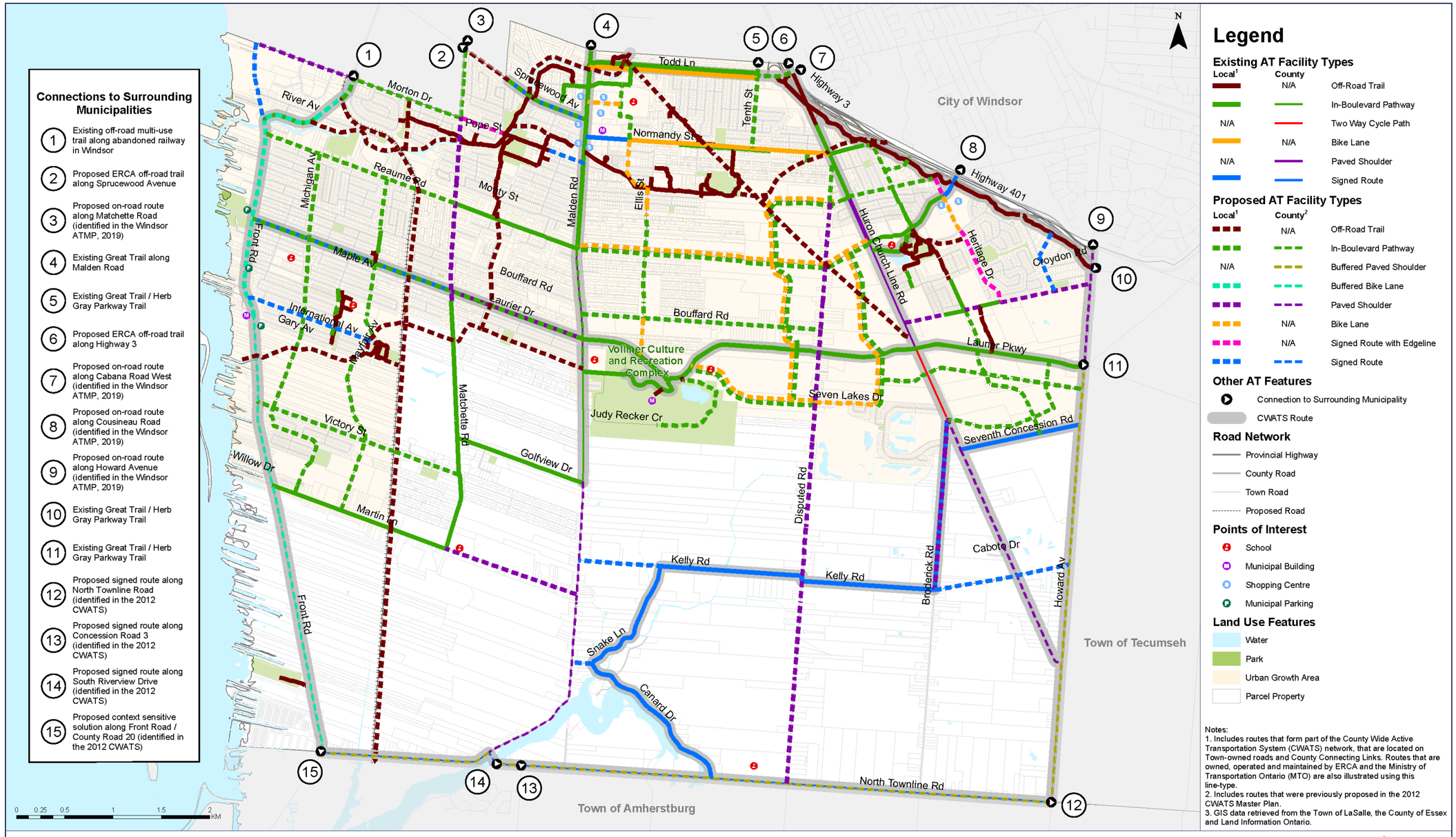
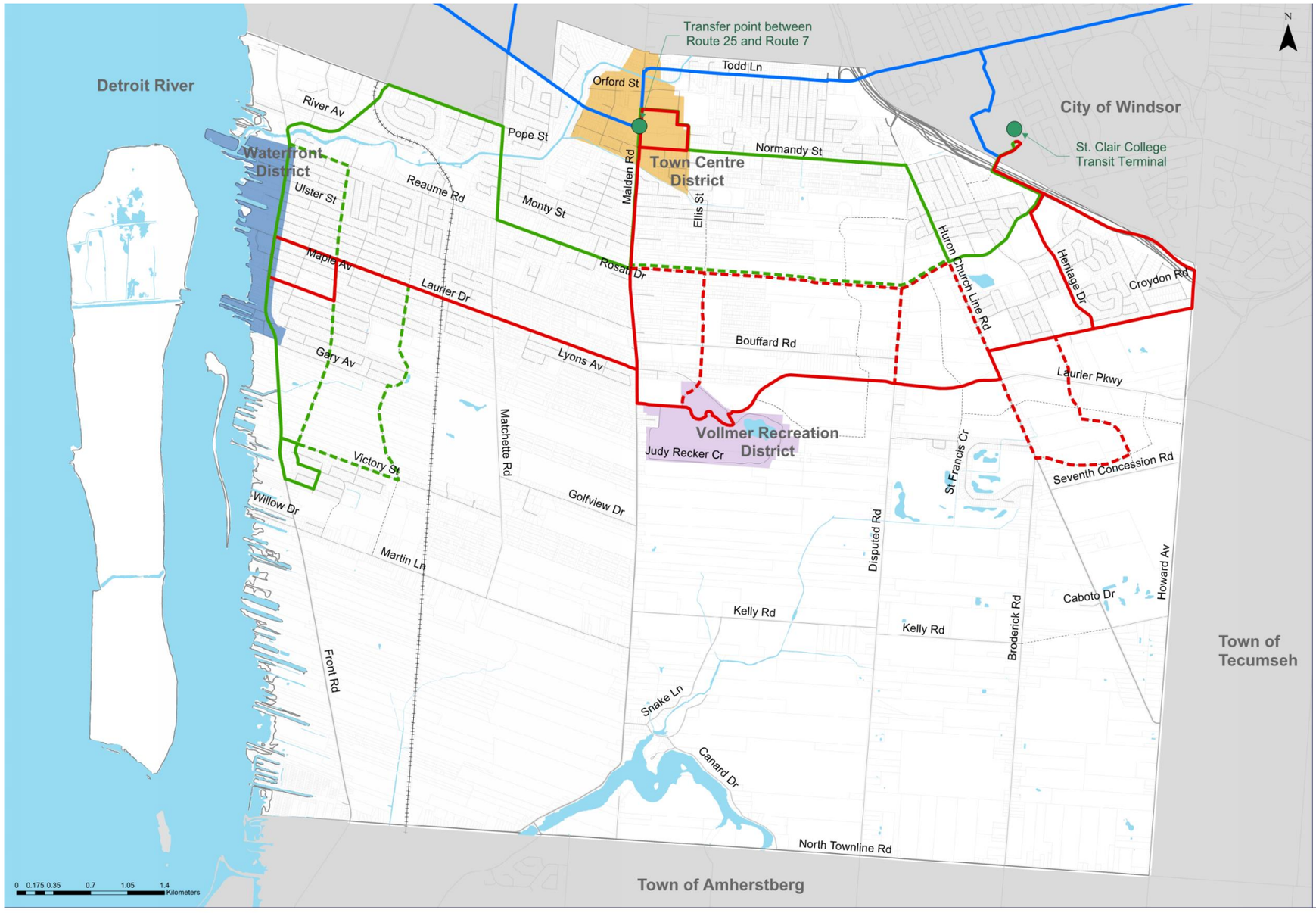


Figure II: Proposed transit routes – Alternative Option 2



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Our Next Move

Figure III: Proposed road network – Alternative Option 3

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1.0 Introduction

The Town of LaSalle is embarking on a Transportation Master Plan (TMP) to enhance the existing quality of life and to plan for future generations. The TMP will plan for a transportation network that accommodates all modes of travel and all users for all ages and abilities to provide a balanced lifestyle in healthy, vibrant and caring community.

This introductory chapter outlines what a TMP is, describes the TMP purpose and objectives, states the context of the plan through the Municipal Class Environmental Assessment process, highlights the consultation process undertaken, and presents an overview of the contents of this report.

1.1 What is a TMP?

A Transportation Master Plan (TMP) is a document used to shape, integrate, and guide both decision-making and strategic transportation affairs. A TMP includes a strategy that services multiple modes of transportation and integrates facilities and infrastructure. It is a communication tool that strives to create a long-term vision complete with goals and guidelines to help shape a community. It serves as an opportunity to improve or increase collaboration with existing and future partners. Finally, a TMP serves as a strategy or plan for goal implementation.

A TMP is usually updated every five years to adapt to and address new policy priorities, mobility trends, and social and economic patterns. A strong transportation master plan aligns with local community plans in addition to broader regional and provincial plans and initiatives to successfully reach its goals. With that said, this TMP will provide improvements in the future to further adapt to any changes LaSalle will experience in years to come.

1.2 Study Purpose

The purpose of this Transportation Master Plan is to serve as a guide for future transportation investment and development. The TMP incorporates a toolkit of policies, goals, and recommendations to achieve the community vision of an accessible, well-connected, and age-friendly transportation network that supports sustainable and multimodal travel.

Building upon the Town's goals and visions, the Town of LaSalle's TMP aspires to:

- Proactively plan for all modes of travel;
- Provide accessible streets for all ages and abilities in established and new neighbourhoods;
- Encourage seamless multi-modal travel and transfers across different transportation modes including pedestrians, cyclists, transit users, and motorists;
- Support goals for a vibrant and connected community;
- Enhance the quality of life for people who live, work, and play in the Town;
- Provide options for how people get around;
- Maintain and enhance the quality of life through a well-integrated transportation system;
- Promote active lifestyles by providing safe and comfortable facilities for walking and cycling; and
- Accommodate future generation needs.

1.3 Study Objectives

The main objective of this study is to continue to develop an accessible, well-connected, and age-friendly active transportation plan that is integrated into a transportation network that considers all modes of travel. This two-pronged approach will result in a transportation network that provides viable alternatives for how people travel. The remaining objectives have been divided into the active transportation component and the road network component.

1.3.1 Active Transportation Objectives

Developing an age-friendly active transportation plan results in improvements and enhancements of safety, convenience, and comprehensiveness of both pedestrian and cycling networks. The goal of these improvements is that residents of all ages and abilities will be able to travel to/from places Town-wide. Specific objectives include:

- Analyze and assess existing conditions to understand the current situation;
- Identify gaps in the network along with network connection opportunities with neighbouring municipalities;
- Determine facility types and design guidelines that the Town can follow throughout development and construction of the future network;
- Calculate financial costs and find funding sources;
- Review and provide best practices on maintenance of active transportation facilities through both summer and winter months; and
- Develops a prioritized implementation strategy for the short, medium and long term phases.

1.3.2 Road Network Objectives

Assessing current infrastructure, facilities, and natural assets will help with the understanding of where improvements can be made to promote multimodal travel. The objective is to review the existing network to provide improvements to accommodate all users of all ages and abilities. Road network objectives for the TMP include:

- Analyze existing conditions and gaps in the network;
- Assess the Town's future road needs and transit needs that can improve the network and be able to accommodate for expected population and employment growth;
- Develop road and trail design standards in accordance with the current industry standards and best practices to accommodate all users within the right-of-way;
- Incorporate multi-modal policy recommendations; and
- Prepare cost-effective implementation strategy in which actions will be categorized based on priority.

1.4 The Municipal Class Environmental Assessment Process (MCEA)

LaSalle's Transportation Master Plan was conducted under the requirements of the Municipal Class Environmental Assessment process (October 2000, last amended in October 2015), which sets out a methodology in accordance with the Environmental Assessment (EA) Act for municipal infrastructure projects. This study consistently complies with Phases 1 and 2 of the MCEA process, which entail the completion of the following key components:

Phase 1	✓ Identification of a problem or opportunity statement.
Phase 2	✓ Assessment of alternatives/solutions to address the problem or opportunity statement considering the local context and stakeholders input. ✓ Evaluation of alternatives and identification of a preferred solution and recommendations. ✓ Selection of preferred alternative and recommendations.
Public Consultation	✓ Engagement throughout Phases 1 and 2 with public representatives and stakeholders on preferred solution and recommendations.

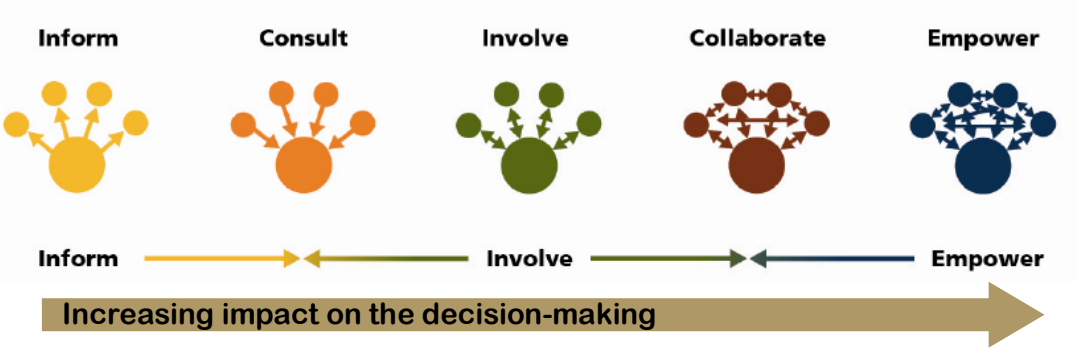
1.5 Consultation and Stakeholder Engagement Overview

Public consultation is an integral component of the Municipal Class Environmental Assessment (MCEA) process in Transportation Master Plans. To meet this requirement, a comprehensive public consultation and stakeholder engagement program was designed to obtain feedback from the Town's residents, key Town staff stakeholders and other relevant technical agencies. The feedback that was collected during three engagement rounds steered the recommendations of the TMP to provide an inclusive and well-rounded plan that caters to the needs of all users. Involving stakeholders at an early stage helped to build consensus on key topics and empowered stakeholders to commit to the plan's desired outcomes. This section provides and overview of the approach, methods, stakeholders engaged and milestones from the rounds of public engagement that were conducted throughout the duration of the project.

1.5.1 Approach

The Town of LaSalle adopted an audience-focused consultation approach to maximize the collaboration and feedback provided by stakeholders. The level of participation is based on the International Association of Public Participation (IAP2) Spectrum, which is becoming an international standard (see **Figure**). This standard has been used to guide the methods adopted and develop the correct strategy to provide ample in-person and online engagement opportunities throughout the study.

Figure 1: Public participation spectrum by IAP2

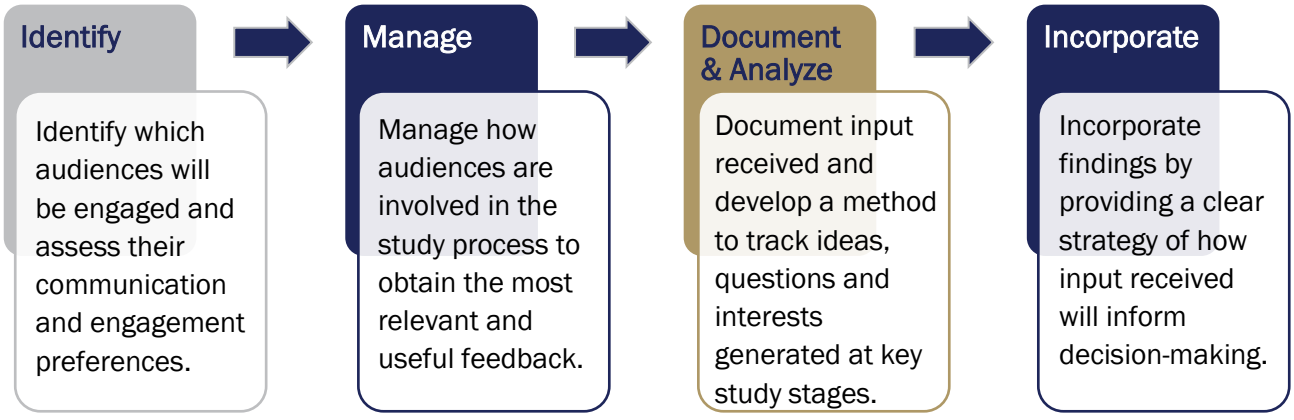


1.5.2 Methods

A process of four main stages was adopted as part of the public consultation and engagement strategy. These steps are vital for the process as they help to understand which audiences to engage (Identify), the proper mechanisms to manage and deliver and receive information (Manage), the procedure to document, process and analyze the input (Document and Analyze), and finally incorporate findings in recommendations (Incorporate).

Figure 2 summarizes the steps of the consultation methods adopted for LaSalle's TMP.

Figure 2: Consultation methods



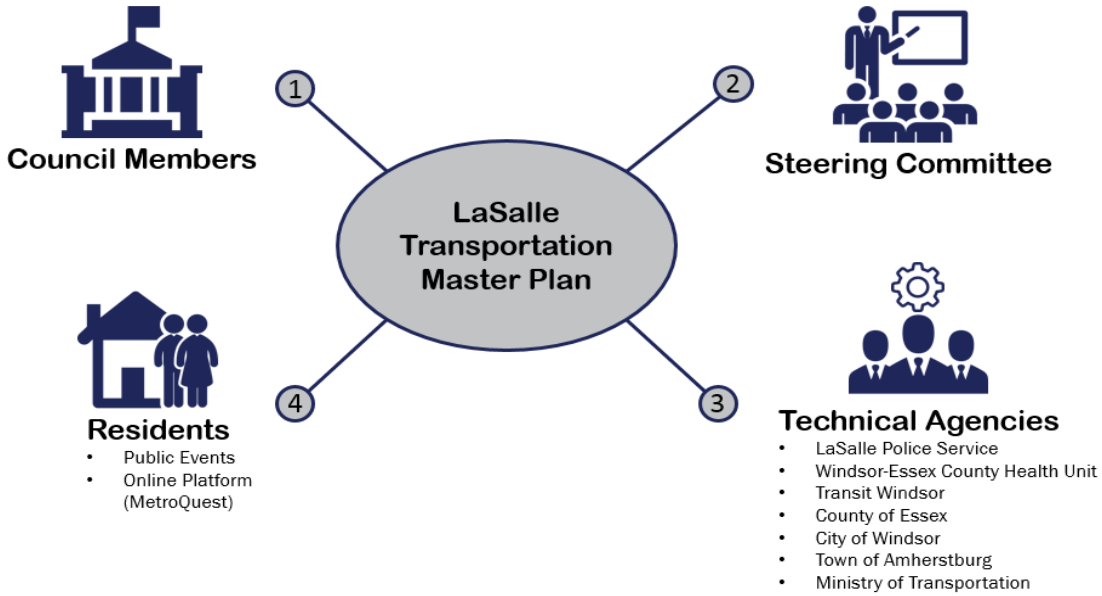
1.5.3 Stakeholders Engaged

Throughout the TMP process, numerous stakeholders were empowered and continually involved so that they could become committed to the plan's desired outcome. The strategy identified three key audiences that were invited to collaborate:

- Residents and visitors: People who live and work in the Town of LaSalle. Visitors who commute or visit the Town are also included.
- Advisory stakeholders: Technical agencies who play a direct or indirect role in advising, enforcing or collaborating in LaSalle's transportation matters.
- Town Staff and local decision makers: Councillors and Town staff responsible for the implementation, maintenance and monitoring of the transportation master plan.

Figure 3 depicts a detailed list of the stakeholders who were engaged during the whole TMP process.

Figure 3: Stakeholders engaged during TMP development



1.5.4 Milestones

The consultation and engagement process included various opportunities for participation. Each engagement round was designed to inform individual stages of the TMP process and had specific objectives. **Table 1** provides a summary of the consultation strategy programmed for the length of the study, with the primary objectives and engagement opportunities.

Table 1: TMP milestones

	Objectives	Engagement Opportunities
Engagement Round 1 **June – July 2018**	▶ Introduce TMP objectives and main goals ▶ Draft a "Vision Statement" for LaSalle's future transportation network ▶ Identify transportation challenges and opportunities in the road network, transit, active transportation, parking and other areas ▶ Understand existing conditions and travel patterns ▶ Identify potential strategies and solutions related to multi-modal transportation planning	▶ Notice of Study Commencement ▶ Stakeholder Bike Tour of LaSalle ▶ Steering Committee Workshop with Town Staff #1 ▶ Technical Advisory Committee #1 ▶ Public Information Centre #1 ▶ Public Event at Night Market ▶ Online MetroQuest Survey #1
	Objectives	**Engagement Opportunities**
Engagement Round 2 **March – April 2019**	▶ Summarize findings from Engagement Round 1 ▶ Refine the working "Vision Statement" ▶ Present TMP recommendations for active transportation, transit, road network, and other supporting policies ▶ Receive input from stakeholders on how to improve proposed recommendations	▶ Public Information Centre #2 ▶ Technical Advisory Committee #2 ▶ Steering Committee Workshop with Town Staff #2
	Objectives	**Engagement Opportunities**
Engagement Round 3 **April – June 2019**	▶ Analyze and summarize findings from previous consultation rounds and integrate feedback ▶ Present the TMP draft report with revised recommendations ▶ Incorporate any additional feedback from Council, stakeholders and the public	▶ Council Presentation ▶ Public Review

1.6 Organization of the Report

The Town of LaSalle's Transportation Master Plan is organized into six chapters, each summarized in **Table .**

Table 1: Chapter structure of LaSalle Transportation Master Plan

INTRODUCTION	**CHAPTER I** Introduces the TMP's purpose, objectives, transportation planning framework, public consultation approach, engagement methods, and key study milestones.
EXISTING CONDITIONS	**CHAPTER II** Summarizes existing planning policies that frame LaSalle's TMP followed by an assessment of land use, the socio-economic profile, existing mobility patterns, and current transportation network (including active transportation). This chapter also outlines current multi-modal operations and recent transportation initiatives.
VISION AND STAKEHOLDER ENGAGEMENT	**CHAPTER III** States the vision and guiding principles that shape the recommendations as well as a summary of the feedback received at the stakeholder and public engagement events.
RECOMMENDATIONS	**CHAPTER IV** Offers strategic recommendations regarding active transportation, transit, and road transportation network improvements and analyzes relevant policies. This chapter includes the assessment of current active transportation, transit, and road networks in addition to new proposed alternatives and an analytical process to select a preferred future transportation network. This chapter also provides recommendations for design and maintenance standards, emerging trends such as autonomous vehicles, and travel demand management.
IMPLEMENTATION STRATEGY	**CHAPTER V** Specifies the plan to implement the preferred future multi-modal transportation network using a phasing guide that separates steps into short, medium, and long-term horizons. This chapter also outlines maintenance guidelines, costs, and funding opportunities.
CONCLUSION	**CHAPTER VI** Summarizes the recommendations listed throughout the TMP and identifies next steps.

2.0 EXISTING CONDITIONS

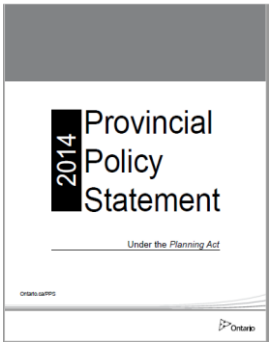
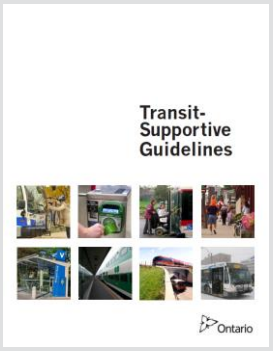
2.1 Chapter Overview

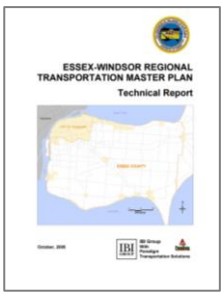
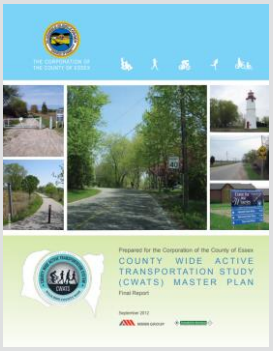
This chapter introduces the existing conditions of elements related to LaSalle's transportation network. To begin, the most relevant provincial, regional and local policies are summarized. This provides a framework for recommendations in the report. Next, the key socio-demographic context of the Town is reviewed to understand the unique characteristics. Lastly, mobility patterns and the existing active transportation, road and transit networks are also examined. This chapter is meant to provide an overview of the existing challenges and opportunities that will influence the Town when making decisions regarding the transportation network in this TMP.

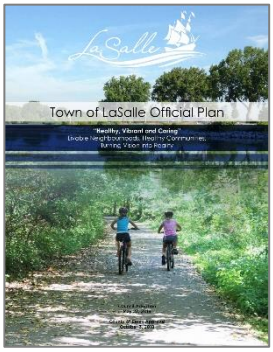
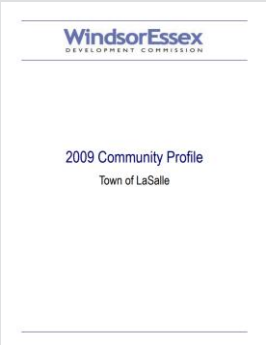
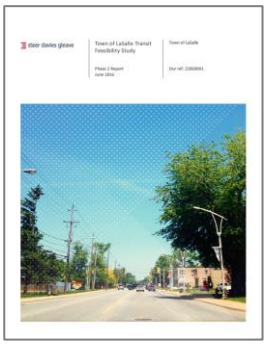
2.2 Policy Context

The LaSalle Transportation Master Plan is supported by various policies at all levels of the government. In this section, relevant Provincial, County and Town documents are briefly described along with their relevance to this TMP. A summary of the policy framework is illustrated in **Table 2**. A more detailed explanation of these policies and additional federal documents that support the development of this plan can be found in **APPENDIX A.**

Table 2: Relevant policy review summary

	Policy	Description	Relevance to TMP
PROVINCIAL	**Provincial Policy Statement (2014)** 	The Provincial Policy Statement (PPS) outlines the land use and development regulations within Ontario, promoting transportation choices that facilitate pedestrian and cycling mobility as well as other modes of transportation.	"Transportation systems" are defined as systems that consist of corridor and right-of-way used for the movement of people and goods as well as the related infrastructure. The PPS specifically guides municipalities to create healthy and active communities that are supportive of active transportation and transit services.
	Transit Supportive Guidelines (2012) 	The Transit Supportive Guidelines were created by the Ministry of Transportation as a framework for developing transit-friendly land use and urban design, including more compact communities. The document also supports the development of pedestrian and cycling connections throughout urban and rural communities to help enhance transit infrastructure and usage.	The guidelines provide direction on how to integrate all modes of transportation to create complete streets and support active transportation, including specific strategies on how to incorporate a complete street approach.
	Ontario Cycling Strategy #CycleON (2013) 	This 20-year strategy acknowledges the importance of developing cycling facilities and provides guidelines on how to ensure that cycling is promoted throughout municipalities. It is currently on its second phase, *Action Plan 2.0*, which focuses on consultations with the Advisory Panel to provide recommendations on the next phase of development.	Key elements of this plan are to work with municipalities to ensure active transportation policies are included in their official plans and to continue promoting cycling safety and awareness.

	Policy	Description	Relevance to TMP
COUNTY	**Essex County Official Plan (2014)** 	The County Official Plan (OP) creates a policy framework to the year 2031, including how to manage growth, provide infrastructure, make land use decisions and coordinate between municipalities within the County.	As one of the local municipalities in Essex County, LaSalle is guided by the policies outlined in the OP. One of the County's main goals is to invest in a county-wide transportation system, together with the road network, public transit and active transportation.
	Essex-Windsor Regional Transportation Master Plan (2005) 	This TMP addresses the transportation needs region-wide up to the year 2021.The primary focus is to increase the capabilities of the existing transportation system so that the Region can accommodate the anticipated growth between Windsor and Essex County.	LaSalle is heavily influenced by the development in Windsor because of their proximity. The Regional TMP identifies opportunities for the expansion of Transit Windsor into LaSalle as well as a focus on active transportation to reduce the private vehicle demand and congestion that is currently experienced in the Town.
	Essex County Wide Active Transportation Study Master Plan (2012) 	Building on the County TMP, the County Wide Active Transportation Study (CWATS) promotes more pedestrian and bicycle friendly facilities, including a proposed county cycling network identified through public and stakeholder feedback.	CWATS identified route selection criteria that can be adopted in LaSalle. This will be used to find on and off-road candidate routes.

	Policy	Description	Relevance to TMP
TOWN	**Town of LaSalle Official Plan (2018)** 	The local OP provides the strategic direction for growth and development within a 20-year horizon. Secondary plans, such as the Bouffard and Howard Planning Districts Secondary Plan, are discussed in this document.	The OP's strategy focuses on the intensification and growth of the urban areas that accommodate all modes of transportation. The OP establishes the vision for the TMP to provide a connected network for all users.
	Town of LaSalle Community Profile (2006) 	From the Windsor Essex County Development Commission, the profile summarizes the history of LaSalle. It also identifies past trends based on the patterns of growth in the population and industries.	One of the sections in the document discusses the travel patterns in LaSalle. The Commission identified from census data that active transportation and transit modes are the minority compared to private vehicle use.
	Town of LaSalle Transit Feasibility Study (2016) 	Phase 1 of the Transit Feasibility Study focused on the feasibility of investing in a new transit services, while Phase 2 reviews service designs and implementation strategies.	The study identified that there is a need for a town-wide transit network and that there is enough support to implement it. There is especially interest from the youth, seniors and people without access to cars.

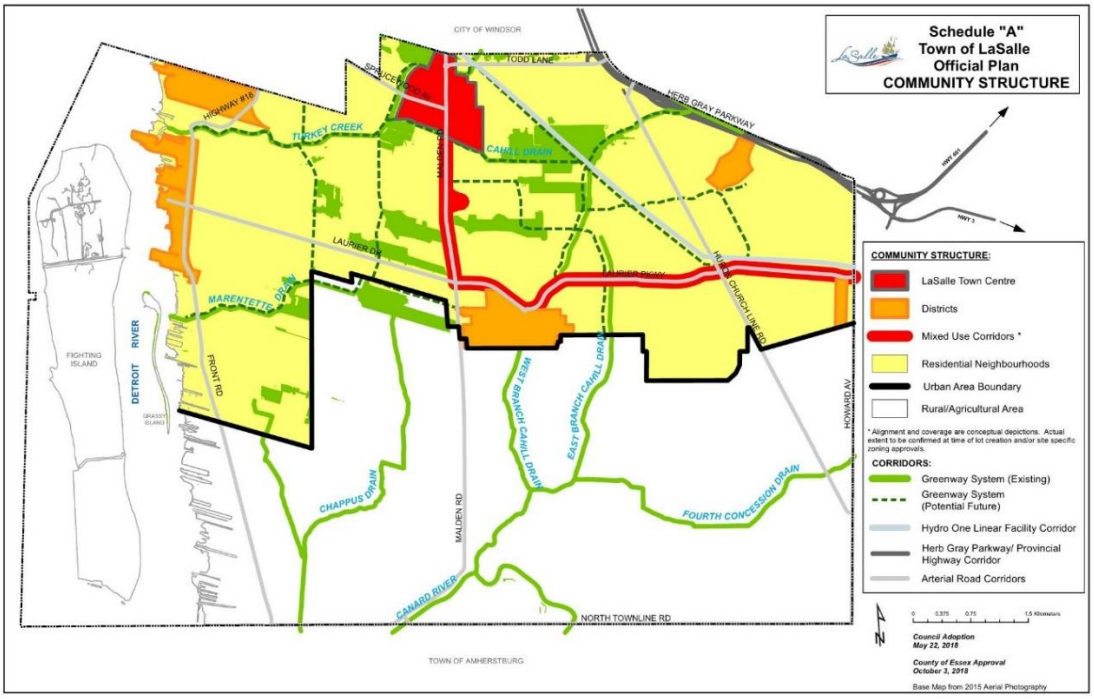
2.3 Town Context

LaSalle is located within the County of Essex, the upper tier municipality that also governs the Town of Tecumseh, Town of Lakeshore, Town of Amherstburg, Town of Essex, Town of Kingsville, and Municipality of Leamington. Although the City of Windsor is surrounded by Essex County, it is a separated city and is not part of the two-tiered County government. Along the borders of LaSalle are Amherstburg to the south, Tecumseh to the east, Windsor to the north and the Detroit River to the west.

2.3.1 Community Structure

The Town's Official Plan identifies and designates corridors, urban areas and rural or agricultural areas, as shown in **Figure 4**. Urban areas include the Town Centre, Residential Neighbourhoods, Mixed Use Corridors and various districts. This structure is used to devise economic and population growth strategies targeted for each area. The Urban Area is the focus for growth, including and increase in density and developments to ensure a healthy and sustainable town.

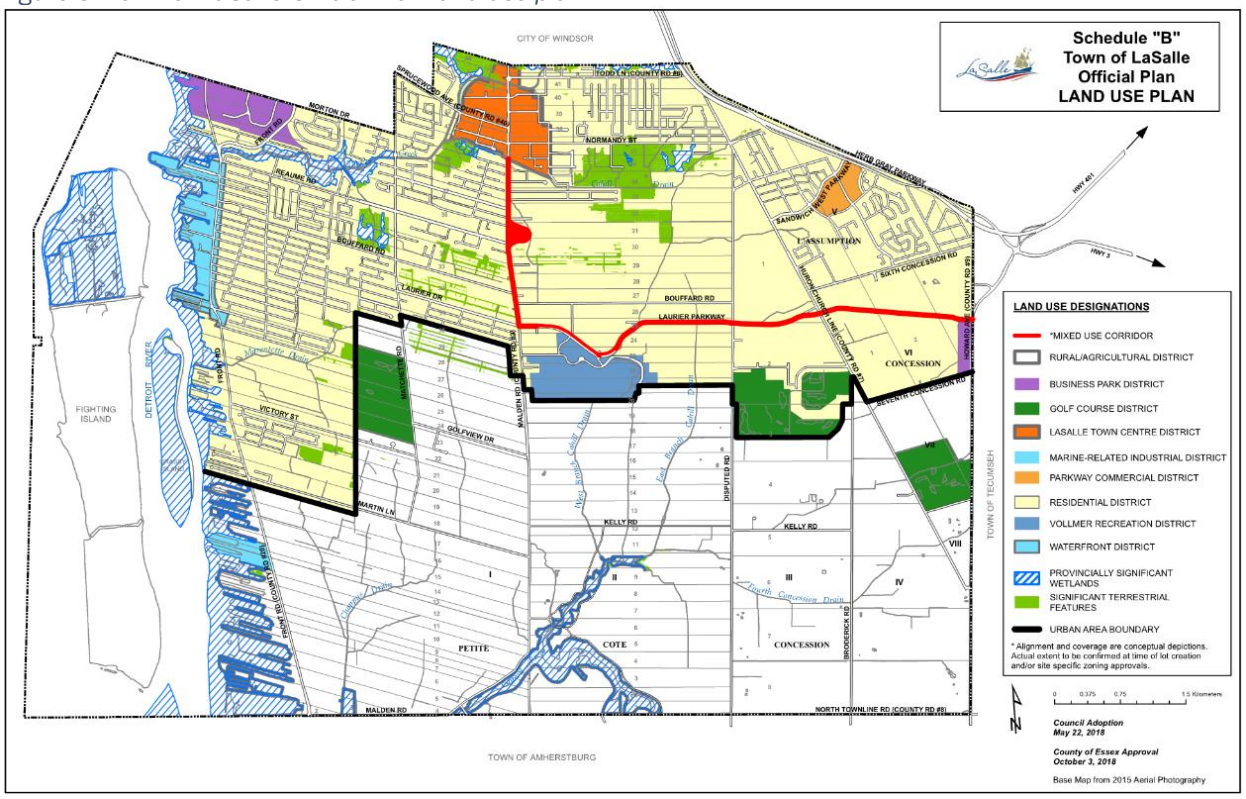
Figure 4: Official Plan Schedule A - Community Structure



2.4 Land Use

The 6,500 hectares of land in LaSalle is comprised of both urban and rural land uses that support growth and development and food production. The Official Plan identifies 11 land use designations, as shown in the Land Use Plan in **Figure 5**, that include increased residential, commercial, industrial and recreational opportunities. These designations are encompassed under urban areas, agricultural areas and employment areas.

Figure 5: Town of LaSalle Official Plan land use plan



2.4.1 Urban Areas

Urban land uses make up about half of LaSalle's total land area as shown in **Figure 5**. The land use designations within the urban area include: LaSalle Town Centre District, Residential District, Mixed Use Corridor, Waterfront District, Parkway Commercial District, and Vollmer Recreation District. Given that household sizes are decreasing, there is an increasing demand and advocacy for a variety of housing types and tenures to accommodate increased growth, smaller family sizes and increasing aging population[1]. In order to meet the expected growth for the twenty-year planning horizon, the Town will need approximately 410 to 780 hectares of residentially-designated land. The urban areas of LaSalle provide a variety of services to the community including recreational activities and open spaces, community centres, schools and commercial areas for employment, services and shops. Although LaSalle's development and connectivity is more dispersed than larger, denser cities, most destinations are accessible by car or public transit. Walking and cycling facilities within urban areas are predominately integrated and used for recreational use, and for short trips to and from schools, to the Vollmer Centre and to the LaSalle Civic Centre Complex.

2.4.2 Agricultural Areas

LaSalle also has a large proportion of rural lands which provides land for cash-crop farming and agriculture as well as rural residences for people to live. It is important to preserve the rich agricultural lands of LaSalle to help support farm practices in the community, minimize conflicts in land use and maximize existing infrastructure and services by reducing development and fragmentation within the agricultural and rural areas. This is largely made up of Rural/Agricultural District land use and a smaller proportion designated as Golf Course District (see **Figure 5**). Within the agricultural areas, there is also a significant amount of natural heritage areas established in the approved Official Plan under Provincially Significant Wetlands or Significant Terrestrial Features. These natural heritage areas consist of Carolinian forests, tall grass prairie communities, and provincially significant wet land areas.

2.4.3 Employment Areas

There are various designated areas that support employment and commercial uses (see **Figure 5**). The Official Plan identifies the north-west area outlined by Morton Drive to the north, Old Front Road to the west, and Highway 18 to the east as a designated employment district. There is also employment from the new industrial park on the west side of Howard Avenue, the new Mixed Use Corridors along Malden Road and Laurier Parkway and the Waterfront District, the Town Centre District, and the Parkway District. These areas provide places where employment is available and goods and services are available to existing and future LaSalle residents. Industries and businesses in the community are responding to changes in the economy, lifestyles and community design. As a result, office-based businesses are continuing to be attracted to higher-density, mixed use areas to better meet the needs of their employees. LaSalle has a highly skilled labour force and the Windsor-Essex Region is internationally recognized as a leader in the tool, die and mold making industry.

[1] Town of LaSalle Official Plan (2018)

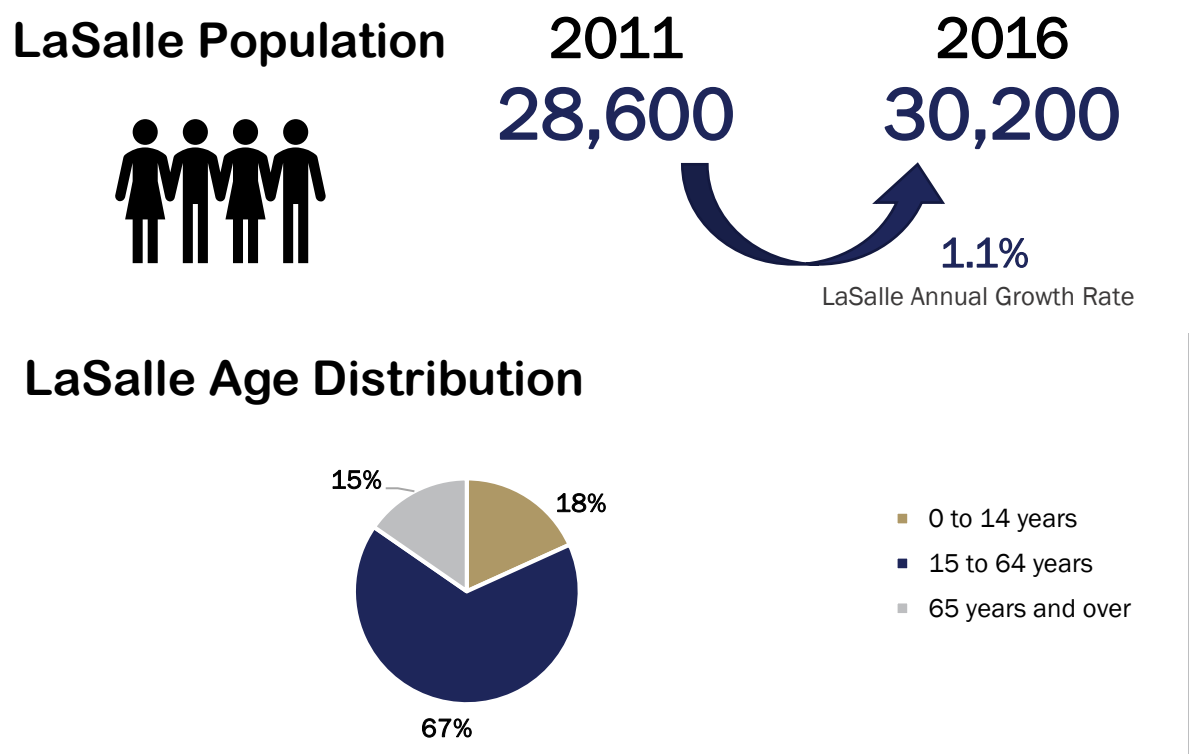
2.5 Community

In order to plan and accommodate for the people of LaSalle, understanding of the population and employment characteristics is important. Depending on their age, occupation and other factors, the destinations and travel patterns may vary and it is important that the transportation facilities and network are supporting those needs.

2.5.1 Population

The Town of LaSalle continues to experience steady population growth. Based on the Statistics Canada Census, between 2011 and 2016, LaSalle saw a population increase of 5.4%, which is higher than the Ontario rate of 4.6%. Approximately 15% of the population is 65 years and older, while 18% are children ages 0-14 (see **Figure 6**). Despite this upward trend in population growth, average household size continues to decline. A variety of social and economic factors contribute to this trend and is expected to continue as the population continues to age. With over 30,000 residents, LaSalle is today the second largest community in the County. According to Statistics Canada historical data LaSalle's population has been steadily increasing with substantial growth occuring from the 1970's to mid 2010's. This increase in population has also increased development and investment in the area to accommodate social and economic changes. It is important to consider the existing conditions of the Town to better plan for the projected future growth of the community so that people of all ages and abilities can live, work and play.

Figure 6: LaSalle population summary

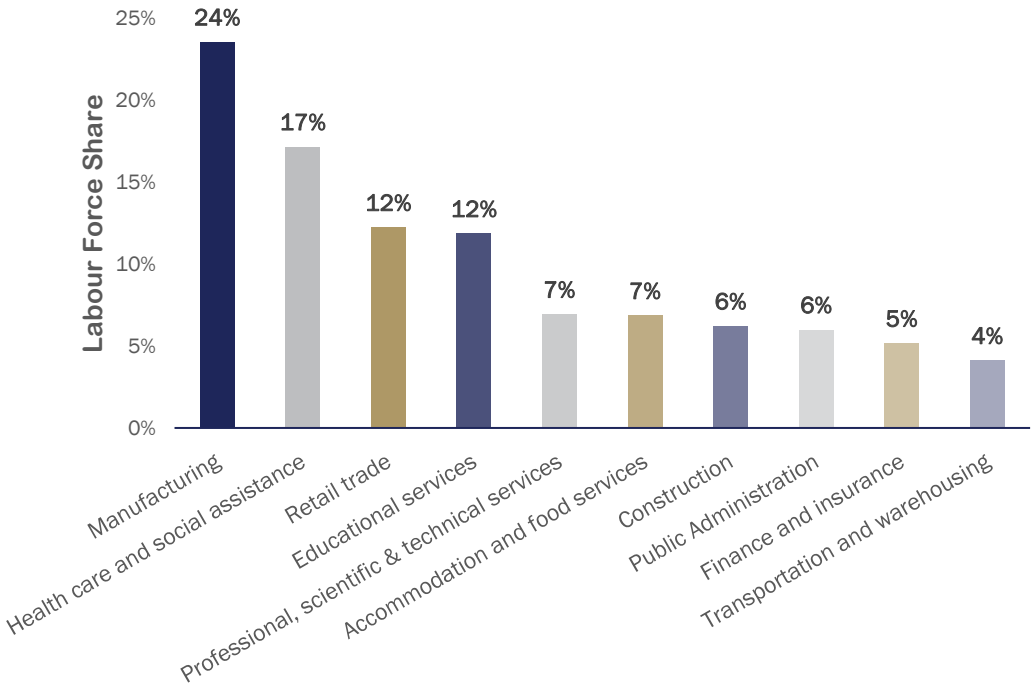


The population is projected to grow to 35,470 people by 2031, making it the fastest growth rate in Essex County. With the anticipated population growth, more pressure will be put on existing infrastructure and services in order to support the lifestyles of residents including providing places to live work and play in addition to supporting various modes of transportation to help people of all ages and abilities get around Town.

2.5.2 Employment

LaSalle has one of the lowest unemployment rates in Ontario at less than 4%, which is significantly lower than elsewhere in the Province. With its proximity to Windsor and Metropolitan Detroit, it is not surprising that the categories with the largest share of the labour force are manufacturing, and health care, as seen in **Figure 7**.

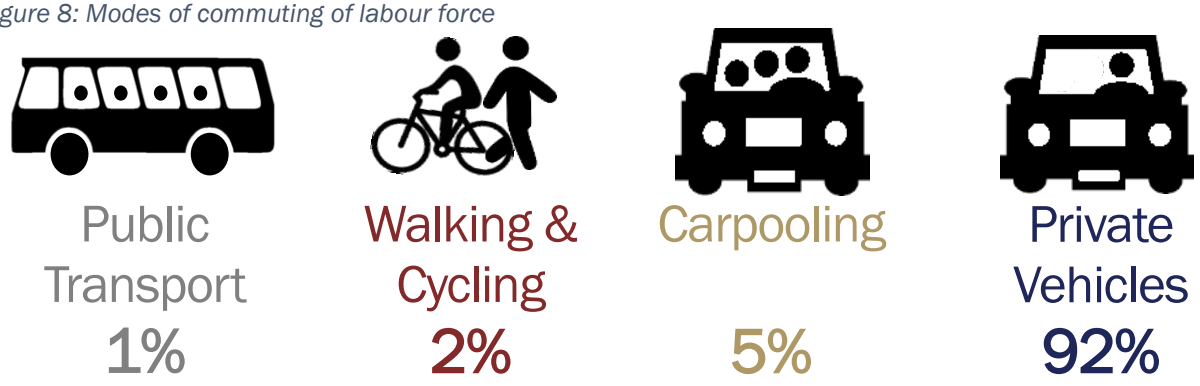
Figure 7: Labour force share by employment industries



2.6 Mobility Patterns

LaSalle is accessible by a variety of transportation modes including car, public transit, cycling and walking. According to Statistics Canada, 92% of the labour force drive to get around as either a driver or a passenger in a vehicle (see **Figure 8**). Transit operates Monday to Saturday from 7:00am to 7:00pm, which provides more sustainable transportation options for those who may not drive and/or who may be looking for more economical travel options. While few people use walking as their main mode of transportation to travel to and from work, more people walk or bike than take transit for short trips within the community and for recreational purposes.

Figure 8: Modes of commuting of labour force



2.7 Transportation Network and Operations

2.7.1 Active Transportation

Active transportation is strongly encouraged by the Town of LaSalle as part of building "age-friendly" infrastructure and to provide an alternative to private automobiles. The Town has spent significant resources in developing its current system of trails and within the right-of-way facilities. The pedestrian network is connected to attractions such as schools, open spaces and commercial locations, as a result they are considered as integral parts of residential developments. Numerous bike lanes, in-boulevard multi-use paths and off-road trails currently are available in the Town. The connectivity between key destination locations, residential developments, and natural environments provides opportunities for healthy lifestyle for young and aging population. Planned corridors for the bikeway and linear trail system travel throughout the urban area boundary. The County-Wide Active Transportation (CWATS) Study discusses the existing conditions of the overall active transportation network along with a proposed network that will undergo public consultations prior to implementation.

The cycling network in LaSalle also connects in some places to the City of Windsor. The Herb Gray Parkway Trail connection in LaSalle is an important link in the Trans Canada Trail. This trail has a total length of 4.04 kilometres and links the western end of Tecumseh to the southern portion of Windsor. Bike racks are also provided on LaSalle Transit busses in order to facilitate more first and last-mile active transportation.

Figure 9 illustrates existing cycling facilities and **Figure 10** illustrates existing pedestrian facilities in LaSalle. Together, these facilities make up the Town's existing active transportation network.

Figure 9: Existing cycling and multi-use facilities in LaSalle

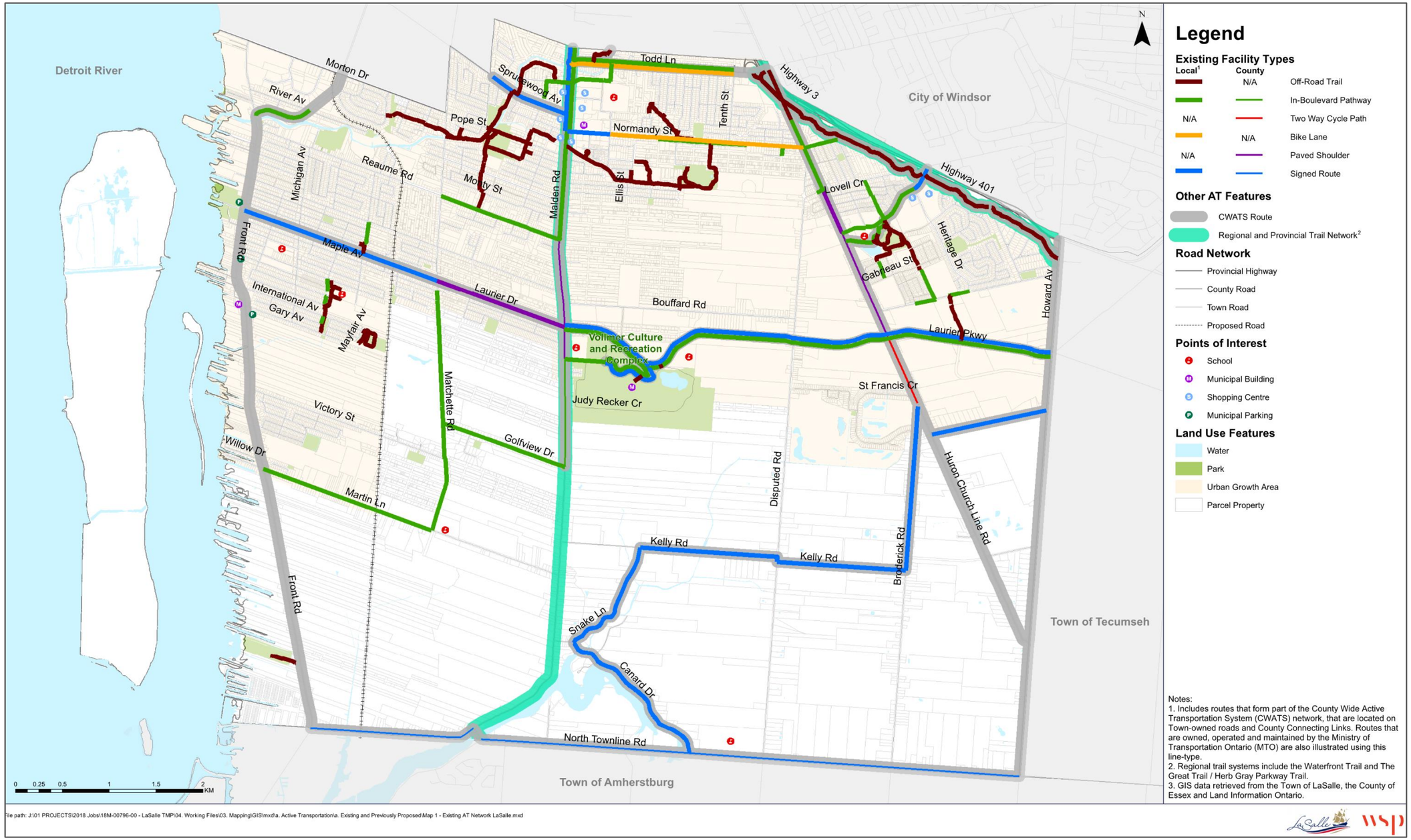
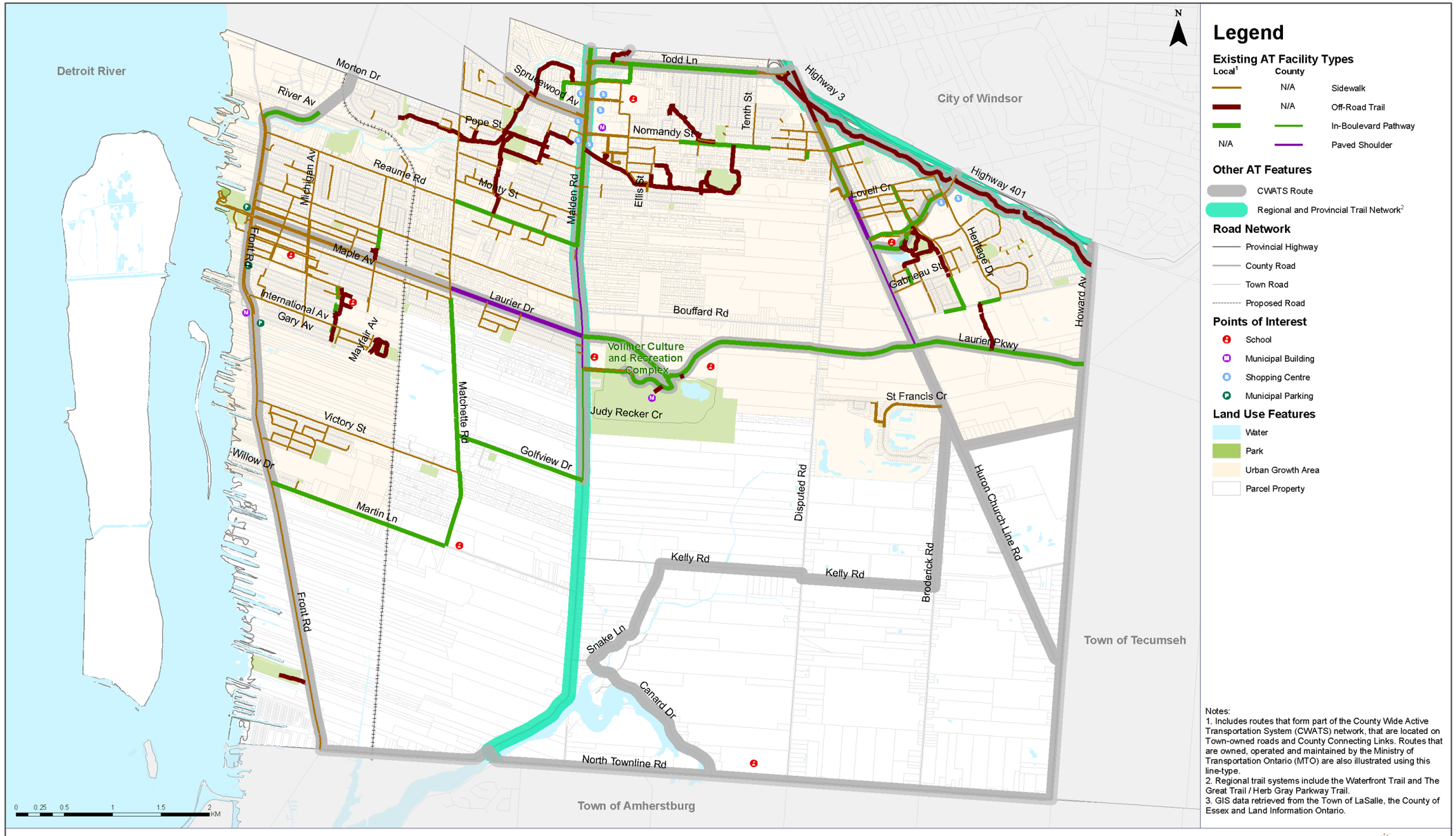


Figure 10: Existing pedestrian and multi-use facilities in LaSalle



LaSalle has an extensive network of existing active transportation facilities. There are a total of 164 kilometres of existing active transportation facilities in LaSalle. Of this, 147 kilometres are owned and maintained by the Town, 12 kilometres are owned and maintained by the County of Essex and 4 kilometres and maintained by the Province of Ontario. **Table 3** provides an overview of the total lengths by facility type.

Table 3: Existing active transportation lengths by facility type

Facility Type	Town Total KM[1]	Town Routes KM	CWATS Network			MTO KM	Total KM
			Town KM	County Connecting Links KM	County KM		
Off-Road Recreational Trail	15.1	14.2	0.3	0.6	0	4.0[2]	**19.1**
In-Boulevard Pathway	25.2	12.7	7.3	5.2	1.2	0	**26.4**
Two-Way Cycle Path	0	0	0	0	0.8	0	**0.8**
Bike Lane	3.8	2.1	0	1.7	0	0	**3.8**
Paved Shoulder	2.0	0	1.5	0.5	2.5	0	**4.5**
Signed Route	20.0	0.5	17.7	1.8	7.5	0	**27.5**
Sidewalk	81.3	81.3	0	0	0	0.30	**81.6**
Total	**147.4**	**110.8**	**26.8**	**9.8**	**12.0**	**4.3**	**163.7**

Note:

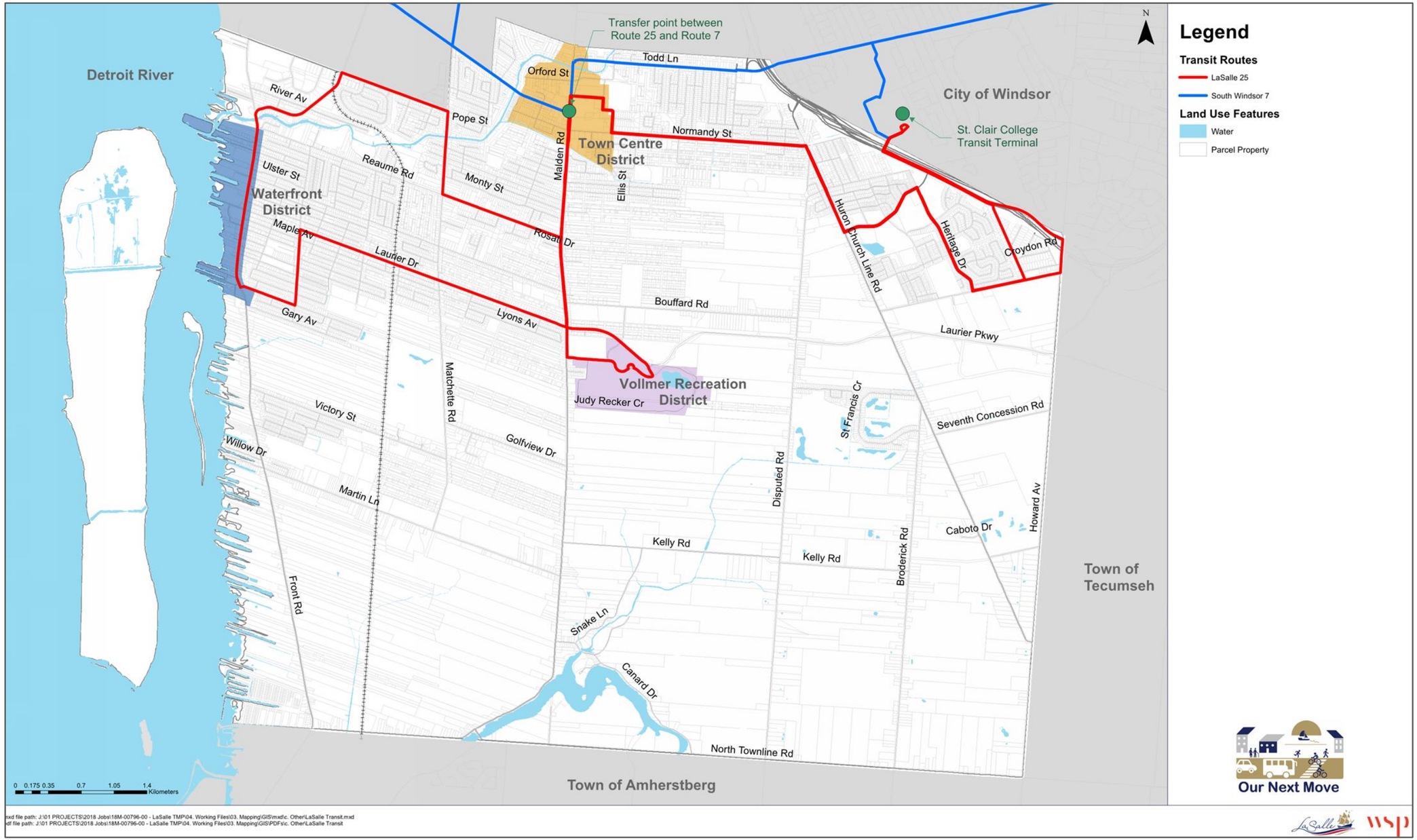
1. Total Town length = Town routes (110.8 km) + Town routes within the CWATS network (26.8 km) + County Connecting Links within the CWATS network (9.8 km).
2. 4.04 kilometres of the Herb Gray Parkway Trail are located within the Town of LaSalle.

2.7.2 Transit

On September 5, 2017 the Town commenced a new public transit service. For cost-efficiency reasons and to provide a seamless customer experience, the Town entered into a contract with Transit Windsor to operate this new service. This new service is known locally as Route 25 and it operates Monday to Saturday from 7:00 a.m. to 7:00 p.m. at a minimum frequency of 45 minutes. During weekday morning and afternoon peak hours, there is an additional bus that operates along the route. This route operates for most of its length in a one-way loop **Figure 11** visualizes the approximately 45-minute long route. In addition to Route 25, Route 7 South Windsor passes through the northern portion of LaSalle and provides a connection at St. Clair College. This route is paid by the City of Windsor, and travels through LaSalle for operational reasons that benefit Transit Windsor. Fares and operations on these routes are co-ordinated between the Town of LaSalle and Transit Windsor, to create one seamless service for transit users. Two buses were purchased exclusively for the Route 25 LaSalle service and are paid for by the Town. Within LaSalle, there are no transit terminals however, within the Town Centre District, riders can transfer between Route 25 and 7.

The Town conducted a Transit Feasibility Study in 2015 and identified that there is a strong support for a town-wide public transportation system. Phase 2 of the report, released in June of 2016, discusses the development and implementation feasibility of a separate transportation system. Out of the three options for possible service route design, the option of a one-way loop servicing the west side of the town and a two-way route for the rest of the town was chosen. This provides good coverage of LaSalle with moderate travel times and can accommodate route expansions with additional buses. The results of this transit feasibility study culminated in the commencement of Route 25. Recent developments by Transit Windsor include the development of a sophisticated Computer Aided Dispatch (CAD) and Automated Vehicle Locating (AVL) system, which allows the system to actively track headways, schedule adherence, and other operating details on a near real-time basis. The system has the ability to track passenger loads on a real-time basis, which promotes the most efficient use of scarce transit resources. Furthermore, all transit buses are equipped with bicycle racks to promote first and last mile travel.

Figure 11: Existing transit services



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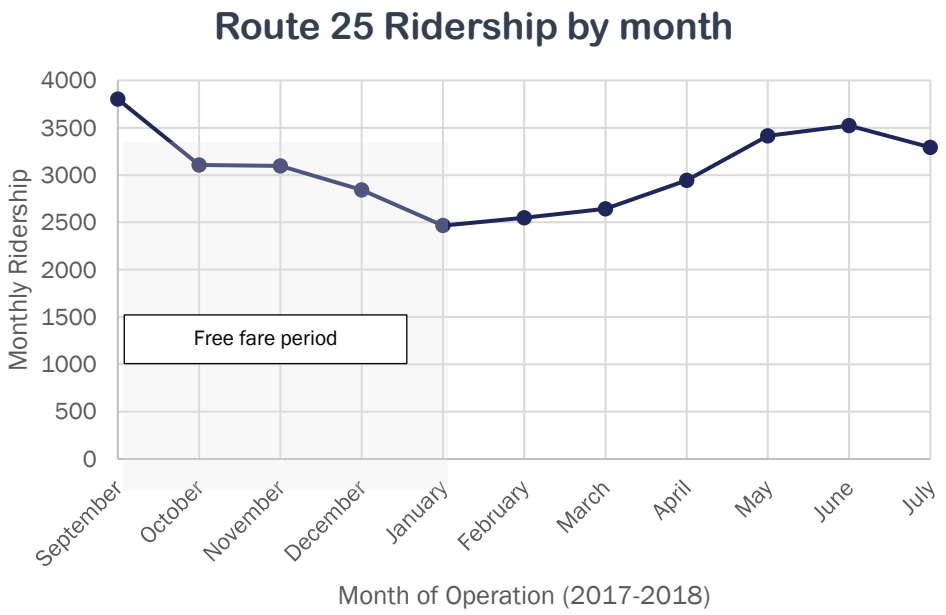
Fares on the system consist of multiple types, including the conventional cash fare, tickets, and passes. A $3 standard fare allows for free transfers to Transit Windsor services. Passes are offered on a daily basis, half-monthly, as well as a monthly basis. Discounts are available for the monthly pass as part of transportation demand management measures, where bulk-purchased corporate passes are less expensive than the regular fare table. Additional discounts are also available as part of an Affordable Pass Program. A slightly more expensive fare allows users to use the Tunnel Bus, which enables travel to Detroit, Michigan. Conventional fare products are eligible for a two-hour transfer which permits users to travel in any direction and complete as many trips as they like within the two hours.

Data regarding the ridership for the LaSalle 25 route was provided to WSP from Transit Windsor. Route data was also provided for Route 7; however, it is unclear how many riders originate or complete their trips within the Town of LaSalle from Route 7.

Figure 12: LaSalle 25 ridership curve



The monthly ridership data (**Figure 12**) illustrates the overall use of Route 25 is steadily increasing at a rate of 0.1%. Based on the available data, daily ridership fluctuates between 91 to 136 riders, which equates to about 7 to 10 riders per trip. Based on the number of average trips, the monthly revenue/cost ratio is 26%, based on the hourly fees paid to the City of Windsor (and not including capital costs). This is below the Ontario average (60% in 2017) but not too far from the Windsor revenue/cost ratio of 48% in 2017. This is relatively high for a new start-up service where there is a significant start-up curve as people become acclimatized to the service.

Handi-Transit, Transit Windsor's paratransit system, operates fully within the boundaries of Windsor and LaSalle. This service is an on-demand service and appointments must be made prior to the trip. Appointments can be made up to three weeks in advance and cancelled up to two hours before the trip.

2.7.3 Rail

There is one railway that runs through the Town of LaSalle and is managed by the Essex Terminal Railway (ETR). This railway is a switching or short line railway that is primarily used for freight movement for industries such as lumber, agriculture and steel. The freight train runs daily to Amherstburg. The ETR rail connects to other rail carriers including Canadian National Railway and Canadian Pacific Railway.

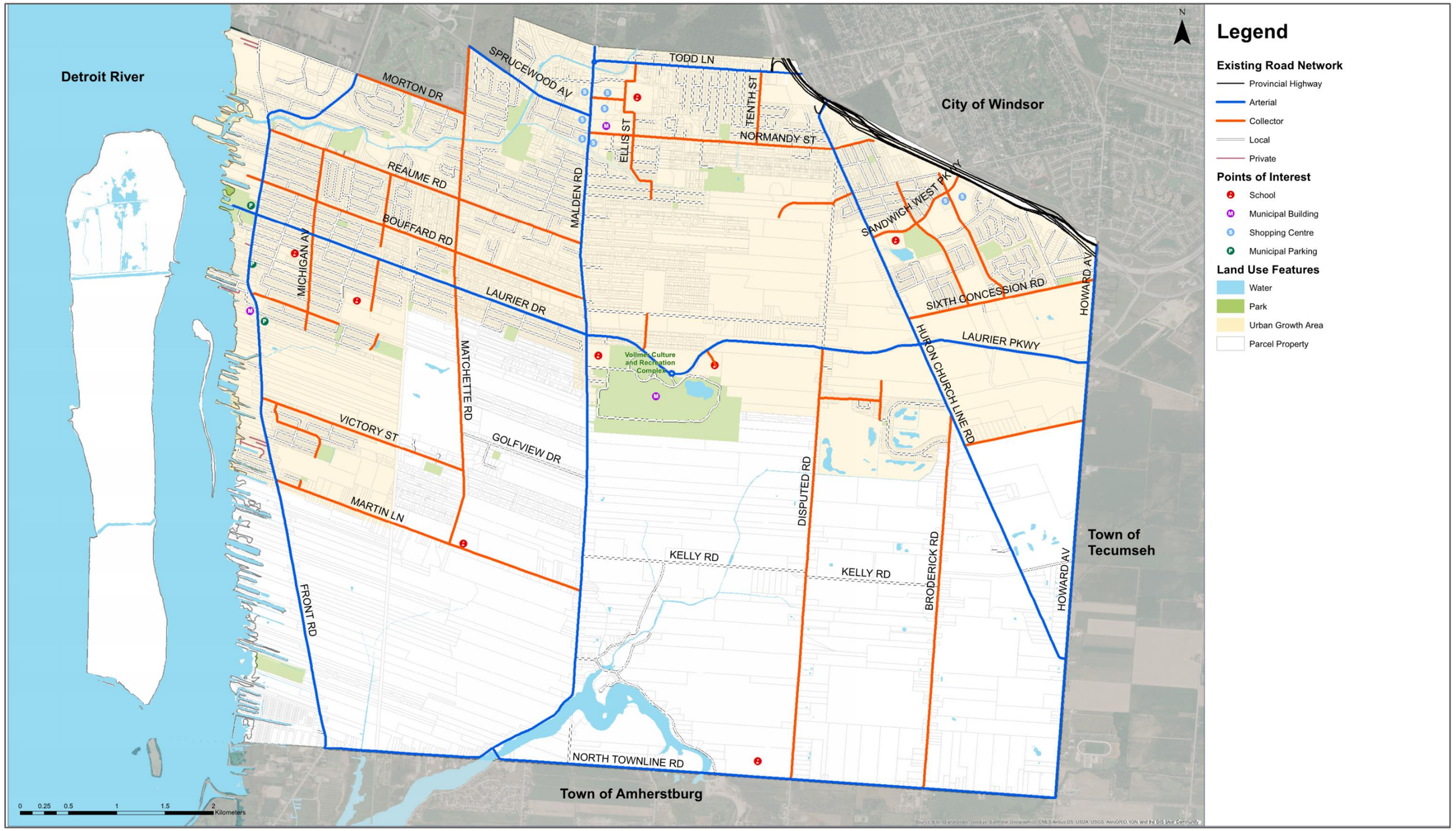
2.7.4 Roads

The road network in LaSalle includes a hierarchy of arterial, collector and local roads which determine the design and function of the roadway. This serves as a guide regarding traffic movement, vehicular volume and property access in accordance with other transportation systems. Under the approved 2018 Official Plan, the roadway classifications are described as:

- Arterial: provide for high volume passenger and commercial traffic, including major public transportation, and provides for inter-urban travel. Road speeds are moderate, providing access to individual properties. The right-of-way is generally within 26.2 to 30.5 metres.
- Collector: provide for moderate amounts of traffic volumes between local and arterial roads. Road speeds are low to moderate, providing access to individual properties. Collector roads can be further classified into major and minor collectors. The right-of-way is generally within 22.0 to 26.1 metres.
- Local: provide direct access to residential areas and other abutting land uses. Speeds and volumes are low. The right-of-way has a maximum width of 20.1 metres.

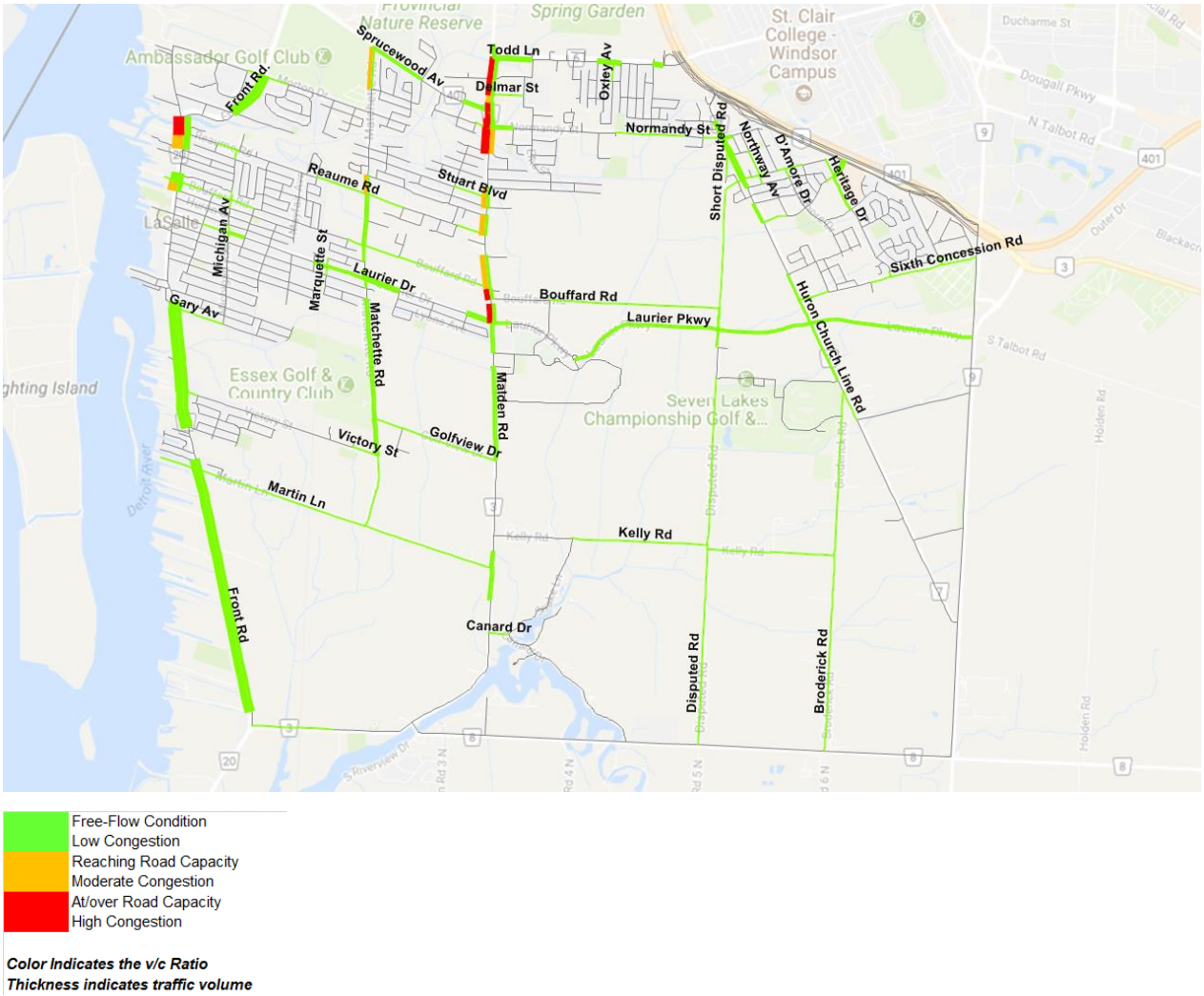
In addition to these transportation corridors, LaSalle benefits from a portion of Highway 401 and Highway 3 which transverses the Town's north eastern boundary. These highway corridors provide direct connections to the international crossings and to other parts of Ontario. A map of the existing roadway network is presented in **Figure 13**.

Figure 13: Existing roadway network



The existing road network has sufficient capacity in most locations, with some congestion experienced in the peak travel hours on relatively small sections of Malden Road, Front Road and Matchette Road. This congestion is "tidal" and largely related to commuting patterns, with congestion northbound toward Windsor in the a.m. peak hour and southbound from Windsor in the p.m. peak hour. A plot of the existing road network volumes compared to the capacity (v/c ratio) of the roads in the network is shown in **Figure 14**. Green represents free-flow conditions, orange represents conditions that are approaching a moderate level of congestion and red indicates road links with congestion and resulting vehicle delay.

Figure 14: Existing road network volume to capacity



3.0 VISION AND STAKEHOLDER ENGAGEMENT

3.1 Chapter Overview

This chapter presents the "vision statement" and the principles of the vision for the TMP. A summary of the engagement opportunities and the feedback received from various participants and stakeholders are included in this section. These comments provided context and informed the challenges and opportunities present in LaSalle to help shape the recommendations in this TMP. As part of the Municipal Class Environmental Assessment (MCEA), this section highlights how LaSalle's TMP was prepared using a collaborative and participatory approach to increase the impact decision making on the transportation network.

3.2 Vision Statement

LaSalle's vision for the future of their transportation network is informed by the feedback from stakeholders who are impacted or interested in the TMP. The vision reflects the four guiding principles that will aid in the decision-making process and strategically prepare for the Town's growth. The development of a vision statement meets the requirements for Phase 1 of the MCEA process for master plans.

> *"The Town of LaSalle envisions an **accessible, well-connected, age-friendly** transportation network that supports **sustainable** and **multimodal travel** for pedestrians, cyclists, transit users and motorists. Planning, designing, constructing and maintaining the network acknowledges the **mobility needs** of numerous users of **all ages and abilities**, meeting the needs of today and tomorrow."*

3.3 Principles of The Vision

Four key principles are established as part of the vision statement, as seen in **Figure 15.** These principles are aligned with the goals of the TMP and aid in creating a healthy, integrated and accessible multi-modal transportation network.

Figure 15: Key principles of the LaSalle transportation vision.

Promote active lifestyles by providing safe and comfortable facilities for walking and cycling

Encourage seamless multi-modal travel and transfers across different transportation modes

Provide accessible streets for all ages and abilities in established and new neighbourhoods

Maintain and enhance the quality of life through a well-integrated transportation system

3.4 Consultation and Engagement Summary

The following subsections summarize the feedback received by the aforementioned stakeholders throughout the consultation process. This input was key to identify key challenges and opportunities for the active transportation and roads network. For detailed supporting documentation and input received during this phase, please refer to **APPENDIX B.**

3.4.1 Project Launch

The TMP was formally launched in June 2018 through a Notice of Study Commencement that was published online through the Town's website (www.lasalle.ca/tmp) and in the local newspaper. The notice included an overview of the study's objectives as well as the formal invitation to the first public information event held on June 19, 2018. A second set of notices were sent out, which included the second public information event on March 7, 2019. The names and contact information of the project managers were listed to invite stakeholders and the public to follow-up with questions or comments about the TMP process.

3.4.2 Promotional Tools

Various promotional tools were used throughout the first consultation round to raise awareness and invite the public to collaborate in the TMP study. These tools were used consistently with a unique project branding and promotional slogan of "Our Next Move" to empower residents and stakeholders to feel as part of the transportation future that involves everyone. Some of the communication and promotional instruments included:

Project Website: The online address www.lasalle.ca/tmp was developed as a central hub for information and updates on the project. This was embedded into the Town's website offering access to the material presented at the Public Information Centre and to the first online survey.

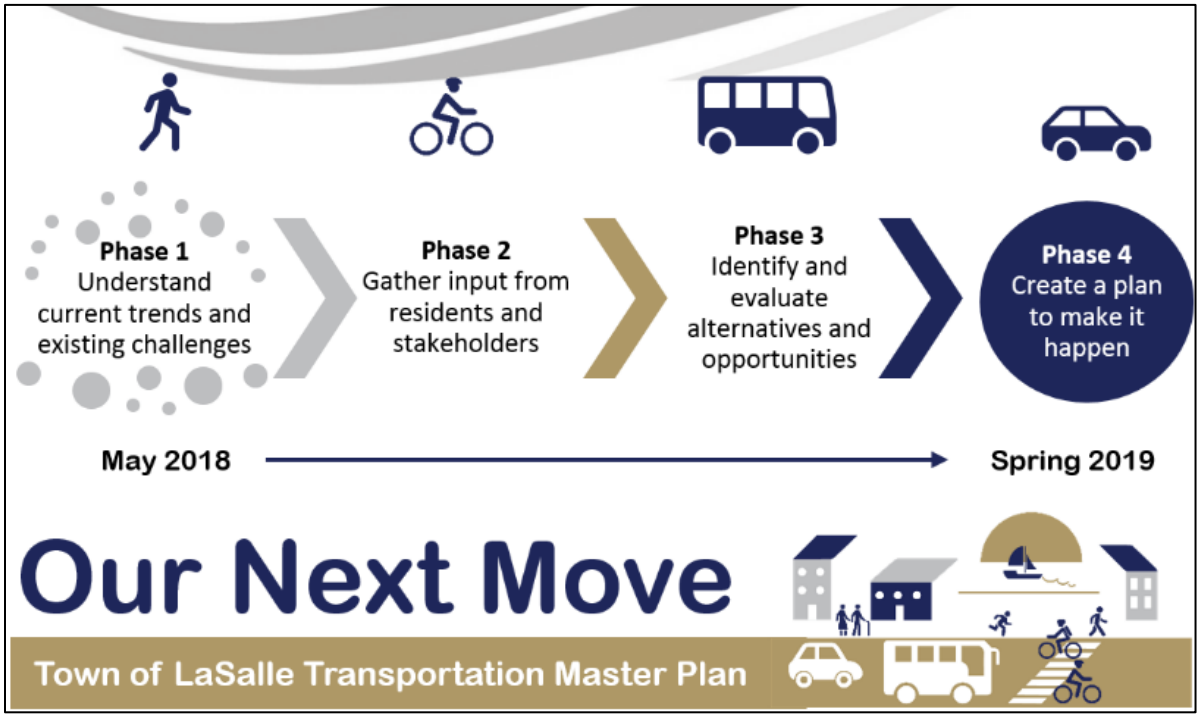
Postcards: Physical postcards were handed out at public events and Town venues inviting people to know more about the project timeline and the mechanisms to getting involved. A reduced version of the postcard used is depicted in **Figure 16.**

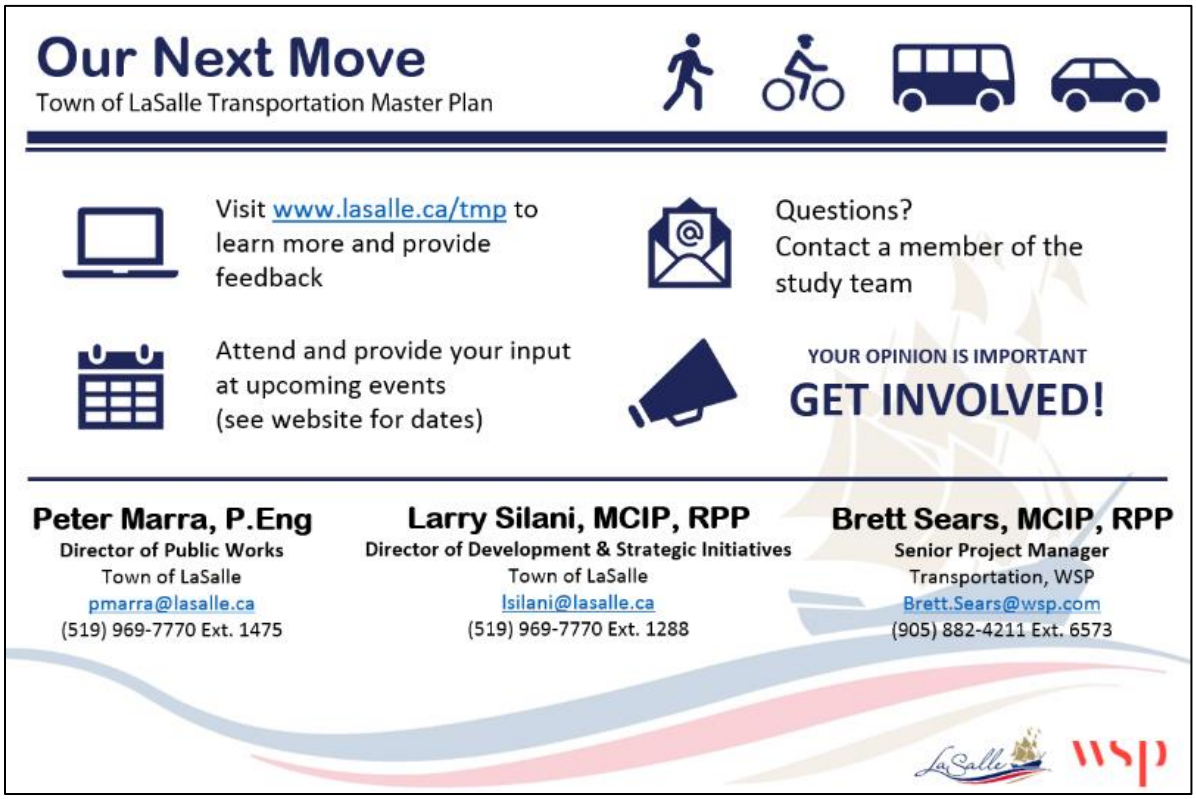
Project Team Member Contact Information: The contact information of the project team was included on the webpage and all consultation material provided to cater for questions or feedback on the TMP process.

Newspaper Ad: An advertisement was published in the LaSalle Post for both public meetings. The ad included background information regarding the project, details of the PIC, the contact information, and the project website address.

Social Media: The Town used their Facebook and Twitter accounts to promote the engagement opportunities and to increase the awareness pf the TMP project.

Figure 16: Promotional postcard for LaSalle's TMP





3.5 Public Engagement Round 1 Summary

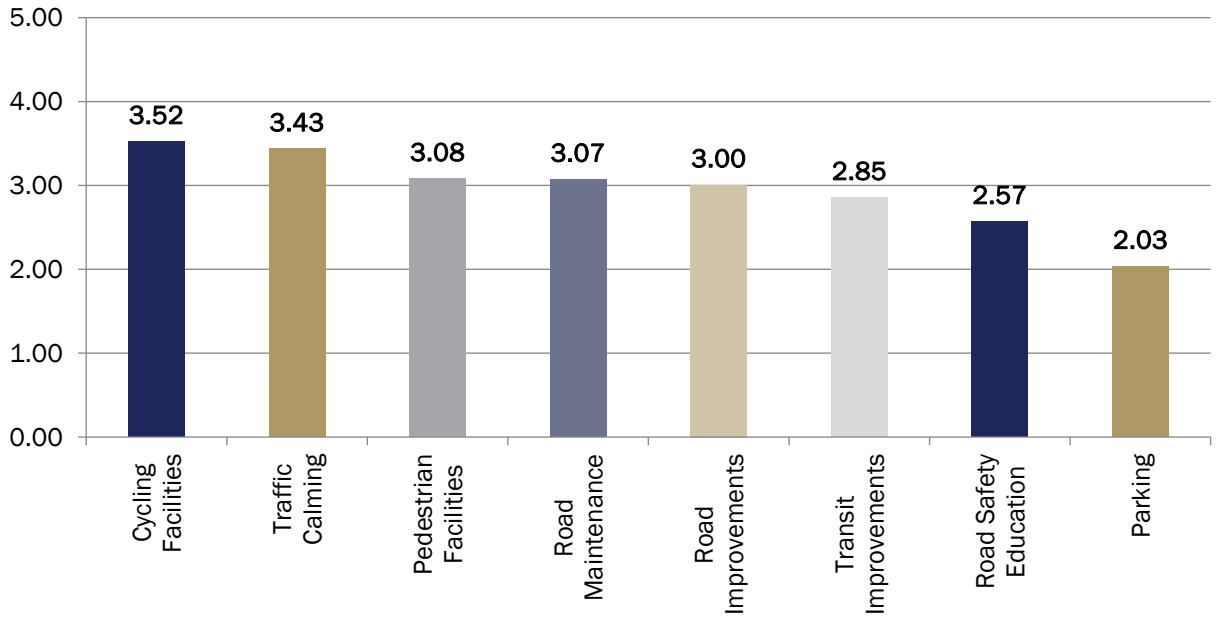
The first round of engagement was held between June to July 2018, including a bike tour and a workshop with technical stakeholders, a Public Information Centre, outreach at a Town-sponsored Night Market, as well as an online interactive survey made available for a 30-day period. Approximately 4,070 data points were collected during this engagement round, including around 800 written comments and 750 geo-referenced ones. The written comments were analyzed through a "word cloud" (see **Figure 17**) designed to capture the most prevalent themes that are frequently repeated. This can be an effective method to identify key issues and opportunities that were voiced during the consultation process. The most prevalent themes revolve around "traffic", "bikes", "need", "roads", "lanes", "lights", "cycling", and "trails". Roads that were frequently mentioned included Malden Road, Front Road, Matchette Road and Laurier Drive.

Figure 17: Word cloud of key themes processed from almost 800 written comments

3.5.1 Ranking Priorities

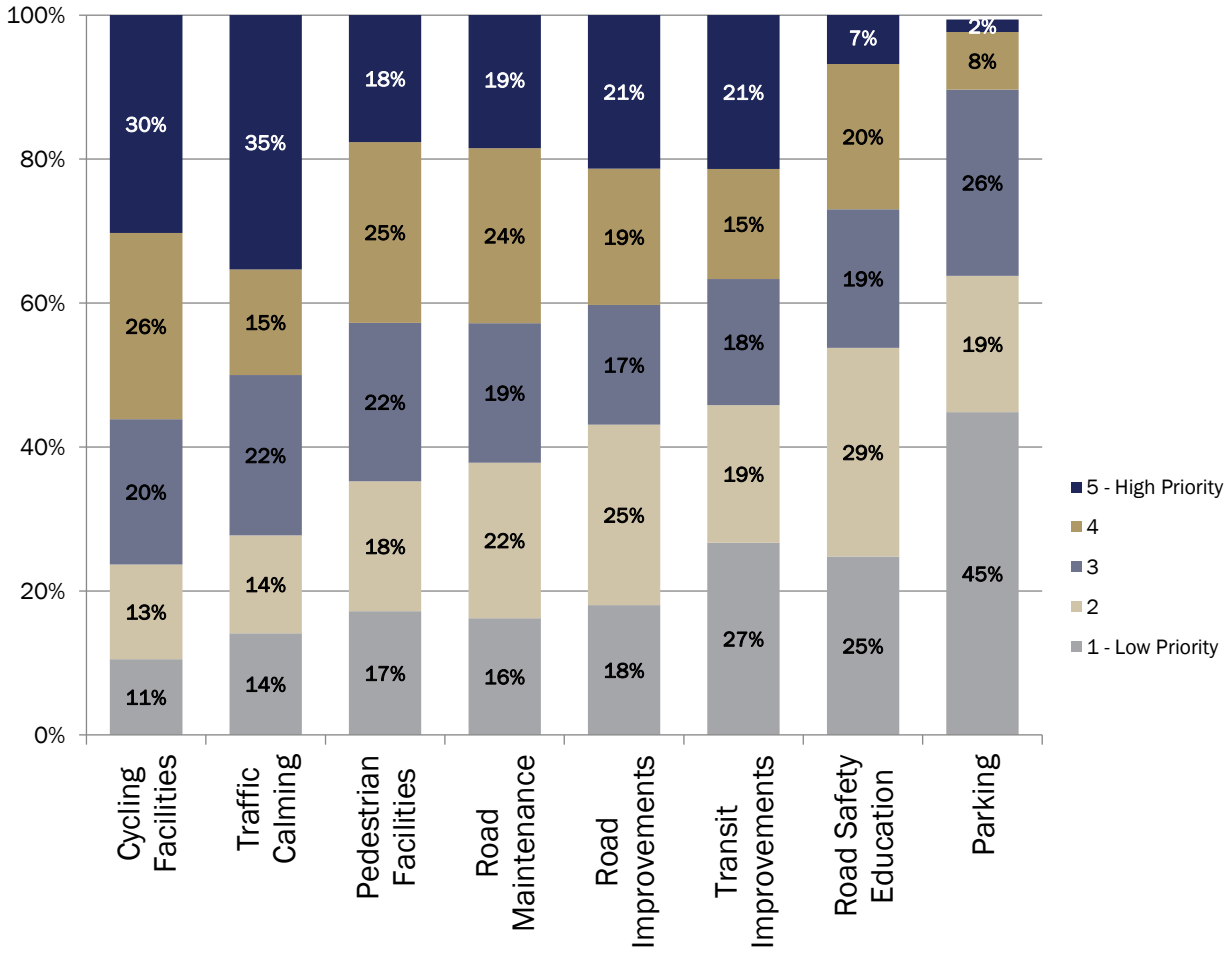
This engagement activity provided a list of eight different transportation topics where participants had to choose the top five and rank them in order of what they deemed more urgent to address. These eight topics included: cycling facilities, parking, pedestrian facilities, road improvements, road maintenance, traffic calming and transit improvements. Over 1,370 data points were recorded from this exercise. The results were processed using weighted means to give more "weight" to the topics that were considered higher priorities. **Figure 18** summarizes these findings per transportation topic ranked on a scale of 1 to 5, with 5 representing the highest priority. Cycling facilities and traffic calming were ranked as the two highest transportation priorities with 3.52 and 3.43 weighted means, respectively, while parking was ranked as a relatively low priority (2.03).

Figure 18: Weighted average of priority ranking



Similarly, for each individual theme that was ranked, the percentage distribution of rankings with relation to its total frequency is depicted in **Figure 19.** Approximately 56 percent of the data points collected for cycling facilities (n=228) were ranked 4 or 5 (high priority). Similarly, 50 percent of the data points collected for traffic calming (n=184) were also ranked 4 or 5. Interestingly, more data points were collected for pedestrian facilities (n = 227) but only 43 percent of these were ranked as high priority (4 – 5), suggesting that more people selected them as part of the top 5, but received a relative lower priority ranking than traffic calming. Parking data points were the least often chosen among the top 5 priorities (n=58), and the times they were, 45 percent of these were marked as a lower priority (1). Both road improvements and road maintenance collected a frequency of approximately 215 data points each, with approximately 40% of each ranked as high (4 – 5). The overall data of **Figure 18** and **Figure 19** suggest a clear preference of respondents to consider active transportation and traffic calming as more urgent priorities for the Town of LaSalle.

Figure 19: Ranking distribution per issue



3.5.2 Mapping Challenges and Opportunities

Using a road base map of the Town with active transportation and transit routes shown, participants were asked to identify at least three of the following comment types: barriers, congestion zones, gaps, opportunities, safety issues and/or other. Approximately 750 location points were mapped and further classified into the different modes of transportation that their comments alluded to – driving, active transportation, transit and other. If no mode of transportation was alluded to, the mode was identified "Not Available" (n/a). The statistics of these geo-referenced comments and related modes of transportation are summarized in **Figure 20** and **Table 4**. Visual summary maps showing the locations of the markers are found in **Figure 21** to **Figure 24.**

Figure 20: Number of comments by types and related modes of transportation (n=747)

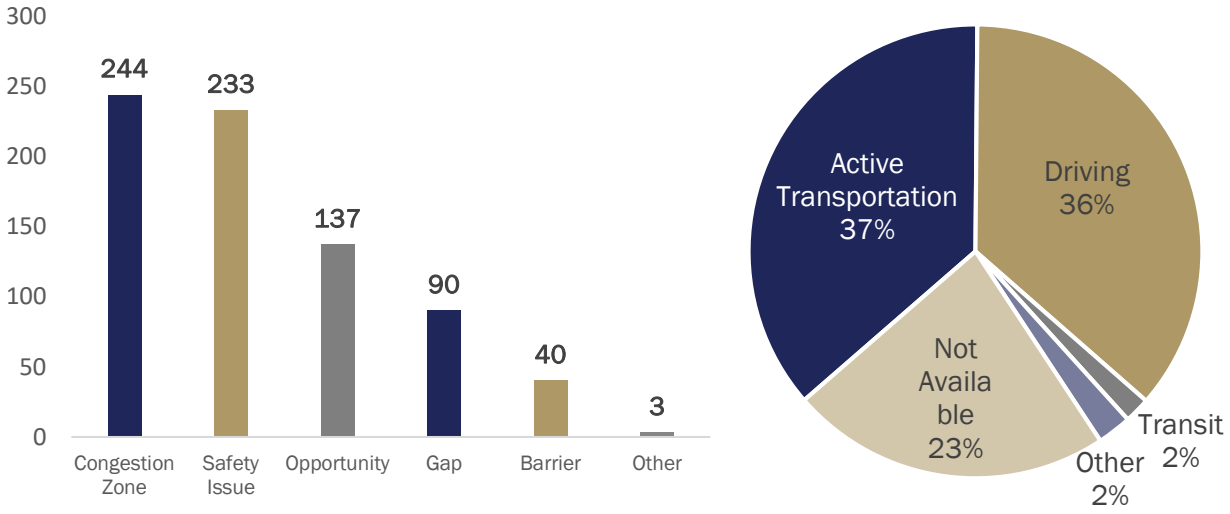
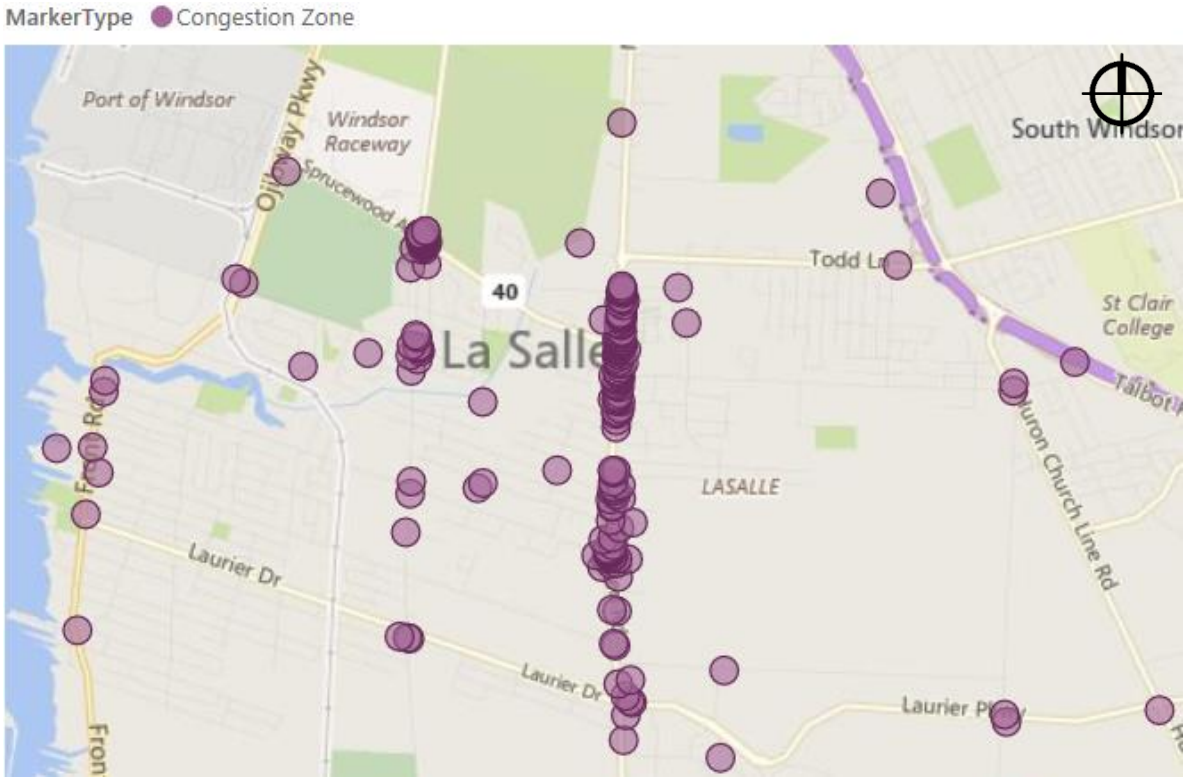


Table 4: Summary matrix of geo-referenced comments by marker type and mode of transportation

	Driving	Active Transportation	Transit	Other	N/A	Total
Barrier	9	23	1	0	7	40
Congestion Zone	124	7	0	1	112	244
Gap	1	60	8	2	19	90
Opportunity	31	63	7	15	21	137
Safety Issue	94	103	1	2	33	233
Other	2	0	0	1	0	3
Total	**261**	**256**	**17**	**21**	**192**	**747**

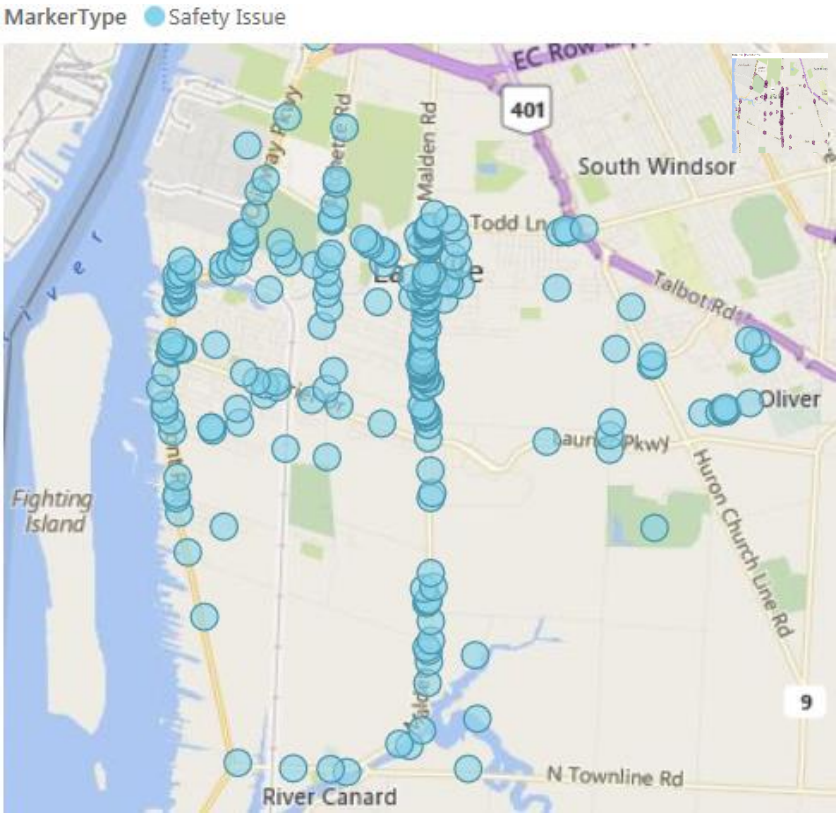
About a third (33 percent) of the geo-referenced data points collected marked congestions zones (**Figure 21**). Most were identified on Malden Road, mainly between Orford Street and Morton Drive. Un-signalized intersections with issues such as congestion and difficulty making left-turns (especially during peak commute times) were commonly marked on Malden Road and Stuart Boulevard; Malden Road and Reaume Road; Malden Road and Bouffard Road; Morton Drive and Matchette Road; and Sprucewood Avenue and Matchette Road.

Figure 21: Location of comments regarding congestion zones



Furthermore, 31 percent of geo-referenced data points related to safety issues (**Figure 22**). Of these, approximately 44 percent were associated to active transportation, another 41 percent to driving, 1 percent to transit and the remaining 14 percent did not reference a particular mode of transportation. A strong correlation is visible between the safety issues and congestion zones on Malden Road, principally from Todd Lane south to North Townline Road. Other road corridors with identified active transportation safety and speeding issues include: Front Road (north of Victory Street) north to Ojibway Parkway and Sprucewood Avenue; Laurier Drive (Front Road to Malden Road); Matchette Road (north of Sprucewood Avenue to Laurier Drive), and 6th Concession Road. Additional identified safety hot spots for cyclists and pedestrians include zones around Morton Drive and Malden Road, Reaume Road and Malden Road, Front Road and Reaume Road, Front Road and Riverview Avenue, and Front Road and Laurier Drive.

Figure 22: Location of comments regarding safety issues



Gaps and barriers accounted together about 17 percent of collected data points, and opportunities around 18 percent (**Figure 23** and **Figure 24**). Of the points marked as gaps and barriers, around 64 percent referenced active transportation facilities. Numerous comments conveyed a necessity to link existing AT infrastructure to the Windsor network of trails, overcoming barriers along Highway 401, and opportunities to connect the recreational trails with main roads such as Malden Road, Matchette Road, Laurier Drive, and Front Road. A need to provide more pedestrian access and facilities was identified on Malden Road (between Golfview Drive and Martin Lane) and also along the commercial area of Front Road north of Victory Street.

Figure 23: Location of comments regarding gaps and barriers

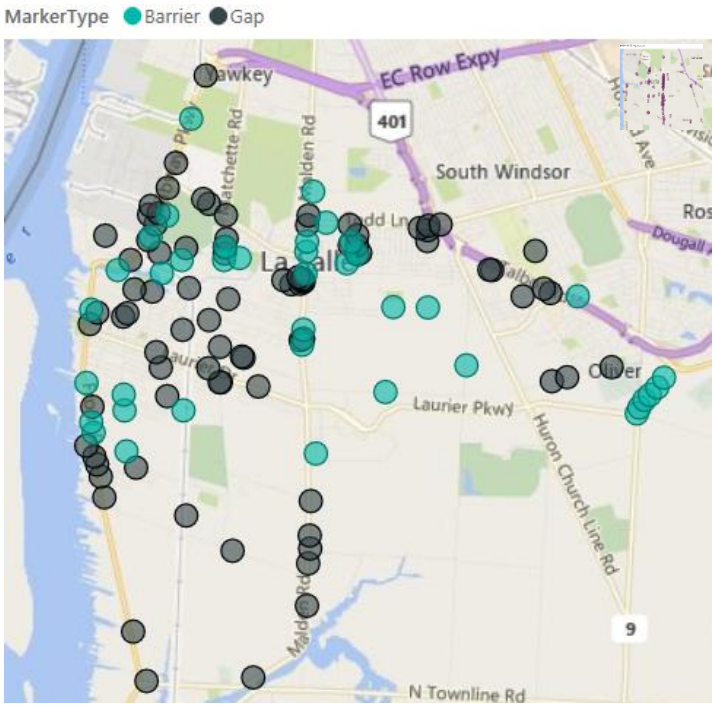
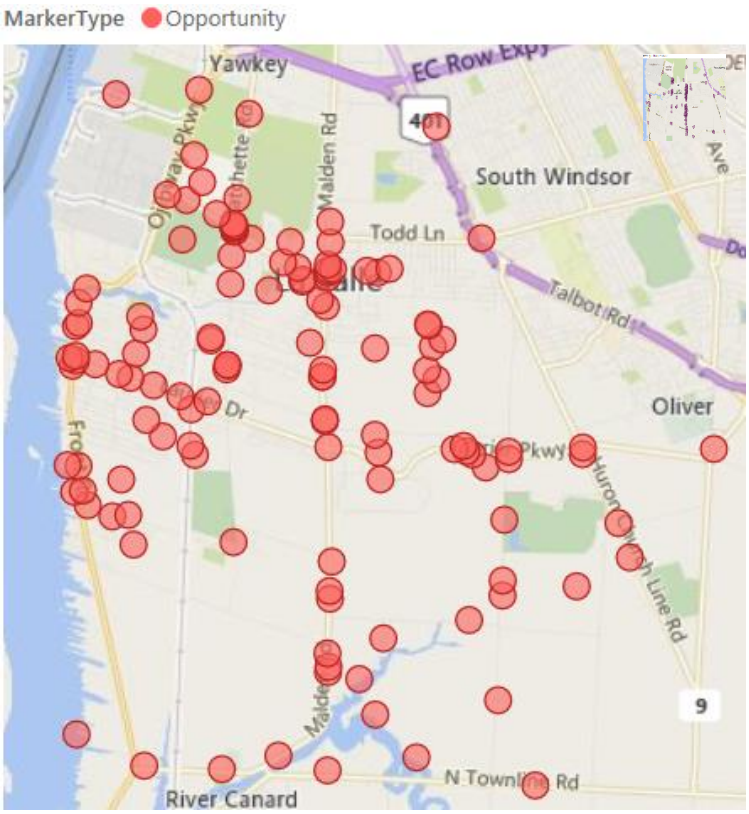


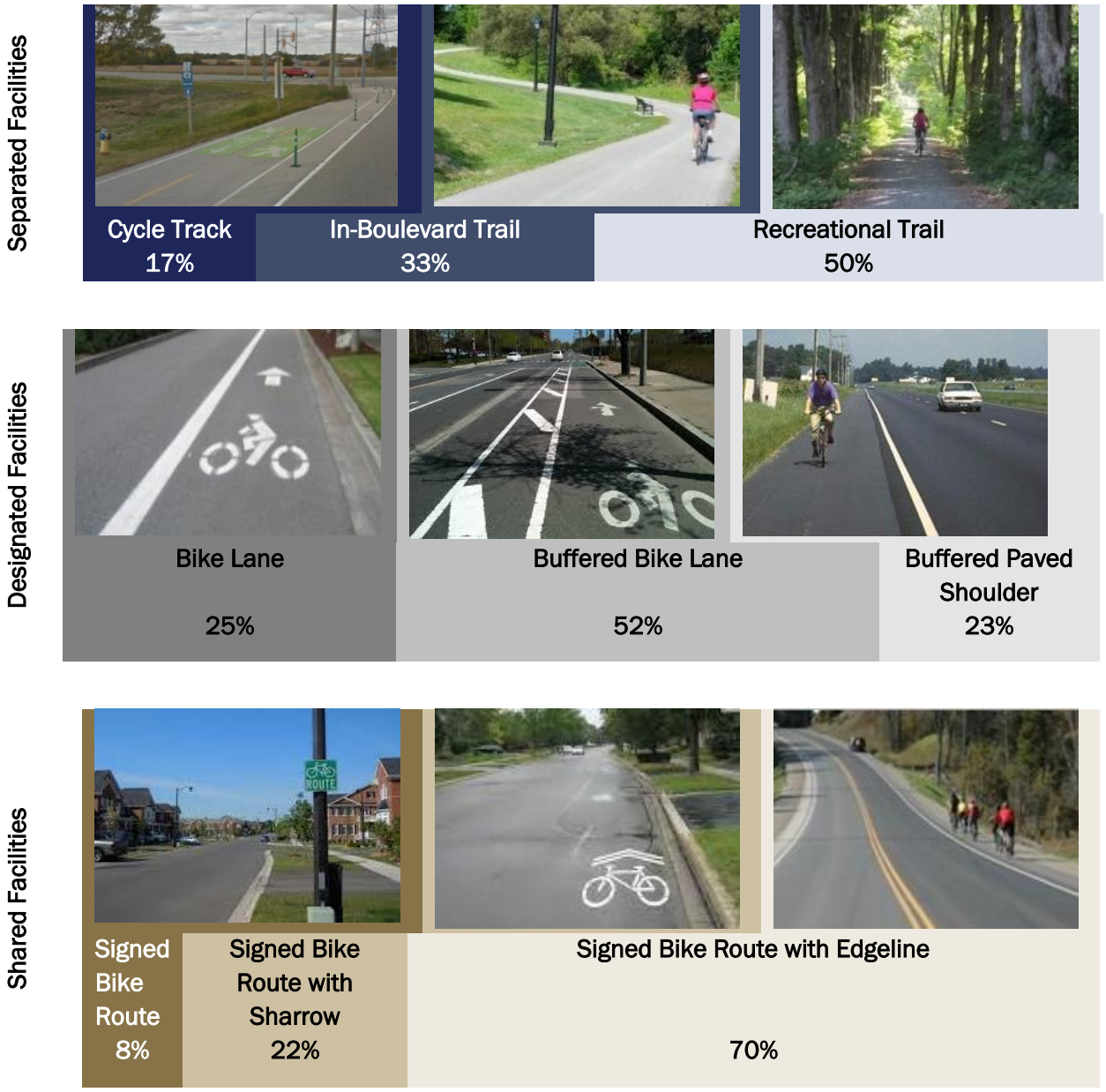
Figure 24: Location of comments regarding opportunities



3.5.3 Cycling Facility Preferences

The last engagement activity asked participants to choose their preferred cycling facility from each of the three facility classes: separated, designated and shared facilities. The distribution of the preferences is depicted in **Figure 25.** Recreational trails, buffered bike lanes and signed bike routes with edgelines where the preferred facility types according to their respective classes, suggesting that greater separation from motorists on the roadway is preferred by cyclists.

Figure 25: Distribution of cycling facility preferences (n=667)

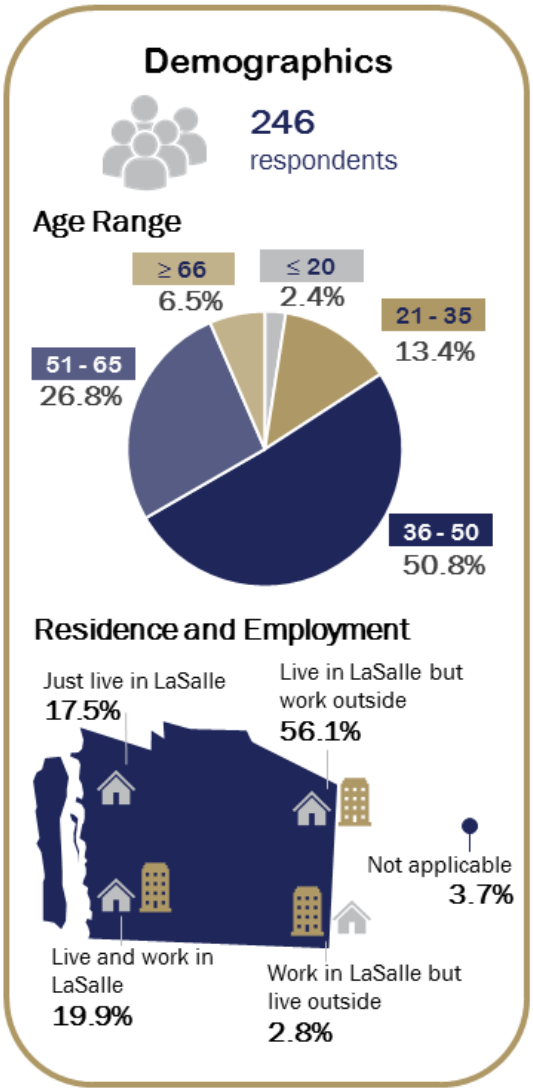


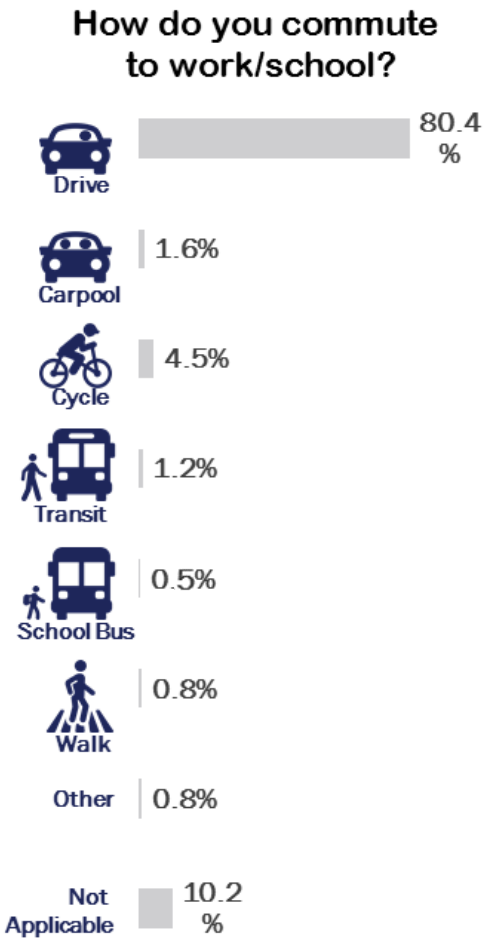
3.5.4 Demographic Profile of Respondents

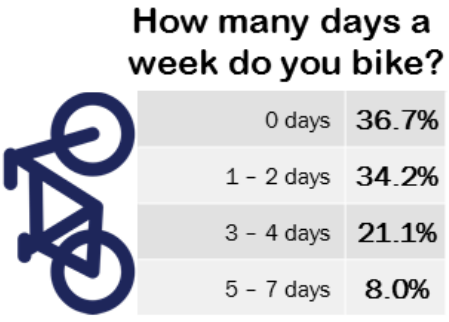
Most of the data collected from the first engagement round was through the online survey, which was available to the public from June to July of 2018. The online survey provided a convenient option for people to provide feedback if they were not available to attend the public events. A total of 360 people participated in the online survey, and approximately 250 of these provided demographic and mobility patterns information. The summary of the latter is depicted in an infographic in **Figure 26.**

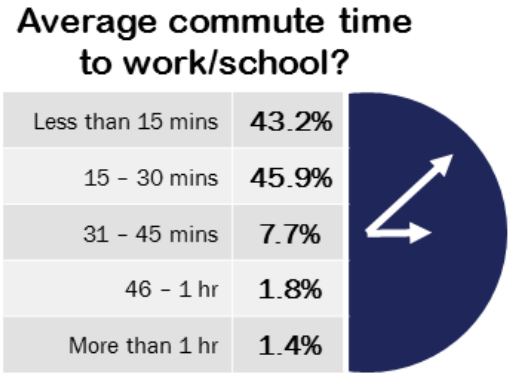
It can be observed that over half of respondents were between 36-50 years old and living in LaSalle but working outside the Town. Most respondents (~80 percent) still rely heavily on single occupancy vehicles to commute, but an important percentage (4.5 percent) prefer cycling over carpooling (1.6 percent) or riding transit (1.2 percent). Interestingly, average commuting for 43 percent of respondents is less than 15 minutes while another 46 percent is between 15 - 30 minutes. This is consistent with the last 2016 commuting time Census data where 87 percent of the employed labour force indicated commuting for half hour or less. Although the vast majority rely on private vehicles to commute, about one third of respondents still ride their bikes 1-2 days a week and another 21 percent use it 3 – 4 times. Most respondents (60 percent) who ride their bikes 1-2 days a week are 36-50 years old, and 48 percent of the people who ride their bike 3-4 days also correspond to this age group.

Figure 26: Online survey #1 statistics (n= 246)









3.6 Public Engagement Round 2 Summary

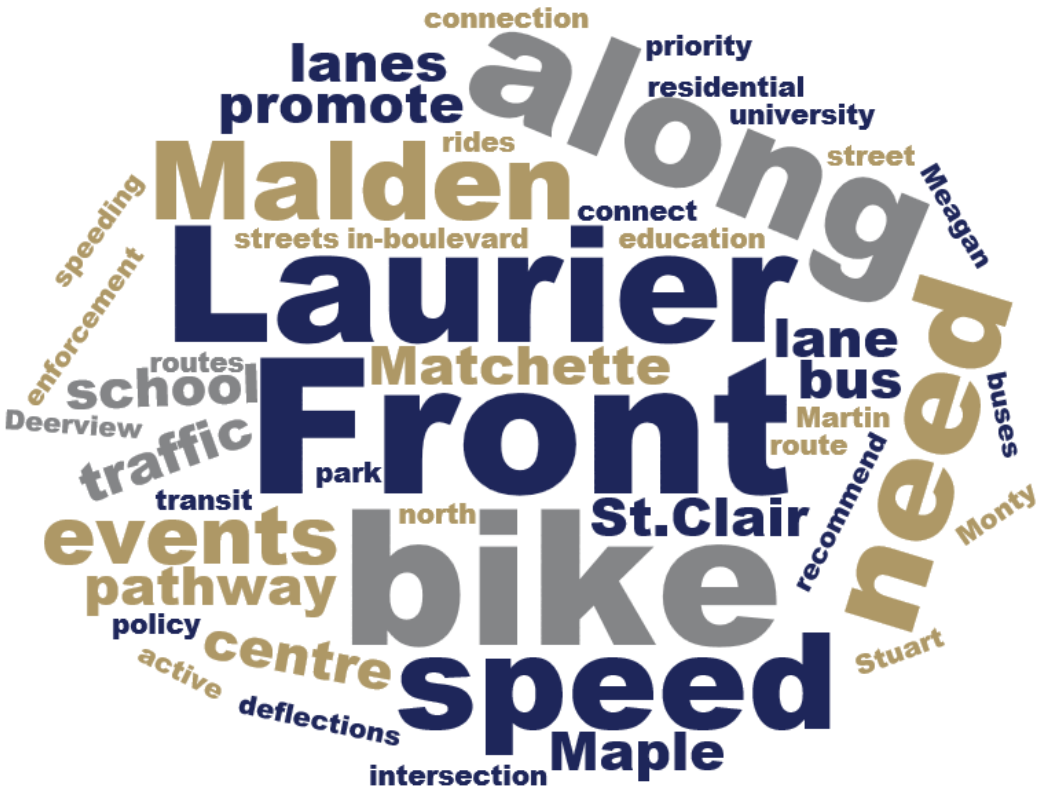
The second round of engagement took place on March 7, 2019 and was separated into two sections. The first part was a workshop with technical stakeholders in the afternoon to gain technical feedback for network refinement. The second part was a Public Information Centre in the evening which was open to the public for their input and feedback. An online survey will be used when the first draft of the TMP is complete in order to gain further comments on the refined draft of the proposed multimodal transportation network. Waiting until the draft report is released will allow the reader to understand the context better of the recommendations being made as the reader will be able to read the TMP report, which will provide the rationale for the recommendations.

The purpose of the second round of engagement was to gain a better understanding of the proposed networks for active transportation, transit and roads to refine the details of the network and also to provide exposure to recommended policies and its contents. The display boards included:

- Project Overview & Timeline
- Engagement Round 1 Summary
    - Cycling facility preference
    - Investment priorities
    - Challenges & opportunities
- Draft Recommendations
    - Proposed network (active transportation, transit, roads)
    - Front Road pilot project
    - Active Streets supportive programs
    - Proposed Policies
        - Traffic Calming
        - Complete Streets
        - Emerging Mobility Technology

During this engagement round, 79 written comments were received. The written comments were analyzed through a “word cloud” (see **Figure 17**) similar to the one from the public engagement round #1 summary. The most prevalent themes include “bike”, “speed”, “lanes”, “school/university”, and “events”. Roads that were frequently mentioned included Malden Road, Front Road, Matchette Road and Laurier Drive. Compared to the engagement round #1, where more high-level words such as ‘traffic’, ‘bikes’, and ‘lanes’ were mentioned, the word cloud created shows more directed comments such as location-based comments.

Figure 27: Word cloud of key themes processed from written comments



3.6.1 Proposed Network

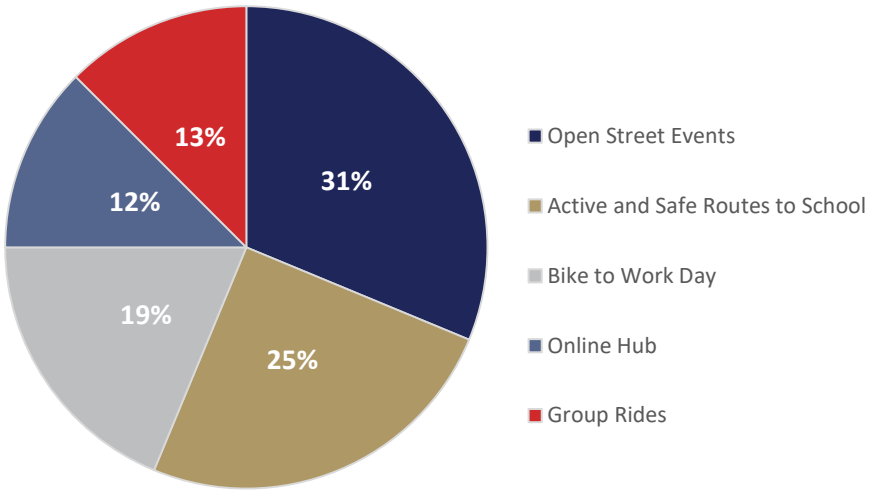
Proposed Active Transportation Network

The proposed active transportation network draft was presented to stakeholders and the public. Feedback mostly consisted of the need for improved infrastructure, gaps, education and promotion, and safety through separated facilities.

Some of the challenges brought up included specific streets that are not bicycle friendly such as Laurier Drive and Maple Avenue and specified that some bicycle facilities are being used for parking or garbage, making it difficult for cyclists to use now. Parking in bike lanes was repeatedly mentioned as an issue. The need for physical separation between active transportation facilities and roadway traffic was also brought up as a tactic to improve safety which would result in increasing pedestrian and cyclist activity.

As an engagement activity, the participants were asked to vote on Active Transportation Supportive Policies designed to increase awareness and promote active transportation. Initiatives included Group Rides, Active and Safe Routes to School, Bike to Work Day, Online Hub (for education and resources), and Open Street Events. As shown in **Figure 28**, Open Street Events which consist of closing a street for a day or event to encourage walking and cycling proved to be the most popular choice. Additional suggestions for supportive programs and AT initiatives included a Bike Rodeo, a 'Share the Road' bike friendly workshop and education for drivers to learn how to drive with active transportation (no parking in bike lanes).

Figure 28: Preference for active transportation supportive programs



Proposed Transit Network

A draft of the future transit network was provided at the engagement event and the main concerns of attendees were to improve connections and service to key destinations such as St. Clair College and the Heritage Park Alliance Church. Overall, people voiced their desire for increasing ridership and promoting transit through developing a convenient and accessible network that connects all key destinations and other areas of the town.

Proposed Road Network

The main feedback regarding the proposed road network revolved around specific issues on Laurier Drive and Malden Road. Some of the comments were addressing truck routes, traffic calming measures, and traffic operation issues such as the need for a centre left turn lane.

3.6.2 Proposed Policies

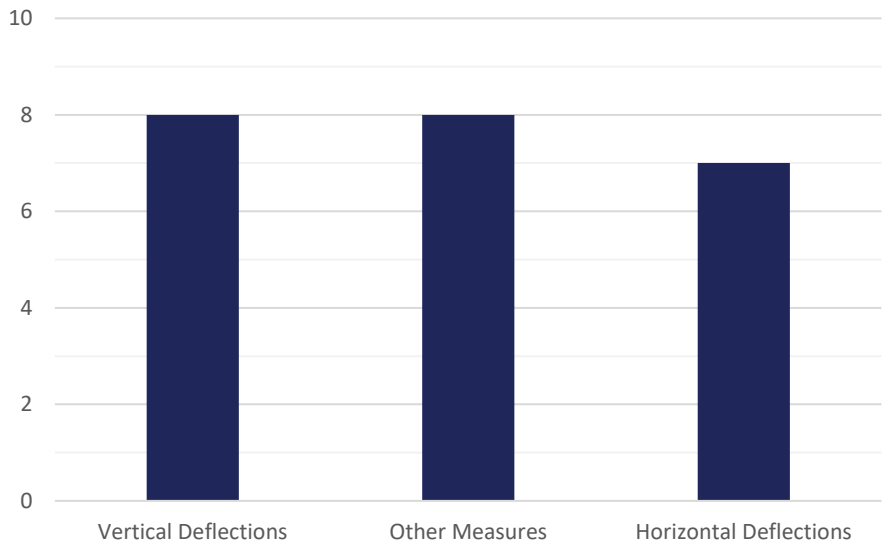
Traffic Calming Policy

Through the engagement process, traffic calming was one of the new topics introduced. An overview of the proposed step-by-step process to have a traffic calming measure approved and potential types of traffic calming measures were introduced. The second engagement activity prepared was to provide the participant's preference on the traffic calming measures using stickers provided. The three available options for the measures were: vertical deflections, horizontal deflections and other measures which included enforcement, speed radar signage and education, as shown in **Figure 29**.

Figure 29: Examples of traffic calming measures

Those who were interested in the implementation of traffic calming seemed in favour of all of the traffic calming measures. **Figure 30** shows that both vertical deflections and other measures (enforcement, speed radar signage) received the most votes. Horizontal deflections were only one vote behind the other two choices.

Figure 30: Preference for traffic calming measures



The concerns of participants mostly consisted of speeding problems with specific areas or streets and a few people recommended photoradar as a form of traffic calming to hold people accountable.

Overall, the participants agreed that a desirable outcome would be to have a traffic calming policy in place to ensure the concern areas are addressed with the appropriate type of traffic calming measures.

Complete Streets Policy

The Complete Streets Policy was introduced as part of the TMP to help provide guidance in implementing Complete Streets design. The feedback received was generally positive and in line with the overall vision of designing streets for all road users, which includes pedestrians and cyclists in both existing and new roads.

Emerging Mobility Technologies

Emerging mobility technologies includes transportation such as ride-sharing, electric vehicles/scooters, and driverless vehicles. As these technologies are being used more frequently, the policy is set out for ordered integration. The feedback received were regarding the need for bike-sharing program and infrastructure of e-bikes/e-scooters.

4.0 MULTIMODAL TRANSPORTATION ASSESSMENT

4.1 Future Active Transportation Assessment

A key component of the Town's transportation system is the recommended active transportation (AT) infrastructure. This includes on and off-road routes that are proposed as part of an integrated and connected network of mobility options for residents and visitors in LaSalle. The proposed active transportation system is not intended to "reinvent the wheel" – it builds upon already existing routes, routes that have been identified in Council-approved documents including the County of Essex's County-wide Active Transportation Study (CWATS) and future planned infrastructure projects.

The following sections provide an overview of the supportive framework that shaped the network development process for the Town's preferred active transportation network. This process included five steps and was shaped by input received from Town staff, stakeholders and residents and was informed by best practices and technical analysis undertaken by the study team. An overview of the process and each step to develop the Town's active transportation network is presented in the **Figure 31** below.

Figure 31: Active transportation network development process

1 Existing Conditions
Review background materials and map existing and previously planned active transportation routes.

2 Selection Criteria and Candidate Routes
Identify a set of route selection criteria to help identify potential new candidate routes.

3 Field Investigation
Undertake field investigations on the ground in LaSalle and a desktop exercise to understand factors that could inform the selection of potential new routes.

4 Preferred Network and Facility Types
Select preferred routes for the Town's AT network including the appropriate facility types for each route.

5 Implementation Strategy
Identify priorities, proposed timeline and costs associated with each route and potential funding sources to support implementation (refer to section 5.1 for more details).

4.1.1 Informing the Network Development Process

The Town's 2018 Official Plan was reviewed to help inform the expansion of the active transportation network that could support the LaSalle's future vision for enhanced mobility options, age-friendly and healthy communities and sustainable infrastructure. The Official Plan outlines a set of fundamental principles to help ensure the Town of LaSalle remains a healthy, vibrant and successful community. These principles were assessed to better understand how the active transportation network can help to support the Town's goals, and how these principles can shape the planning, design and implementation of active transportation infrastructure and initiatives.

There are six fundamental principles outlined in the Official Plan. Five of these principles contain objectives that address and / or support enhanced transportation options, establishing public realms, community design, land-use planning and protection of natural spaces. **Table 5** provides a summary of each fundamental principle and how they relate to active transportation.

Table 5: Town of LaSalle Official Plan fundamental principles and relation to active transportation

Fundamental principle	How does this relate to AT?
Complete community A complete community meets peoples' day-to-day needs by providing convenient access to a mix of destinations and services including places of employment, housing, services, educational and recreational facilities and open spaces.	Supports a linked network of active transportation facilities to enable convenient access to jobs, housing, open spaces and other key destinations.
Viable community A viable community has a strong economy that is diverse, market responsive, efficient and cost effective.	Helps ensure that future projects in already established communities and / or new developments support a range of mobility options including cycling, walking and public transit.
Beautiful and high-quality community A high quality and beautiful community includes well-designed neighbourhoods, centres and corridors, buildings as well as streetscapes. A high-quality community includes an accessible and well-designed system of parks and open spaces that celebrate the area and provide opportunities for enjoyment by the entire population.	Helps ensure that the planning and design of streets, parks and open space are pedestrian / bike-friendly and accessible to people of all ages and abilities.

Fundamental principle	How does this relate to AT?
Healthy community A healthy community seeks to improve the mental, social and physical well-being of its citizens. The built environment should be designed to create opportunities to encourage residents to be physically active. A fundamental element of a healthy community is supporting the opportunities for residents to engage in active forms of travel and recreation.	Supports the development of an active transportation network that is integrated and connected within the community and to adjacent municipalities. This principle also promotes the planning and implementation of new facilities / destinations that are located within appropriate walking and cycling distances from populations expected to access them.
Sustainable community A sustainable community is environmentally and socially healthy, and resilient. A sustainable community balances its human, natural and financial resources equitably and takes a long-term view that focusses on both the current and future generations' needs.	Supports a transportation system that reduces the reliance on the automobile for all trips and promotes active transportation options.

The Official Plan fundamental principles provide the framework for what the Town's active transportation network is intended to achieve. Collectively, these fundamental principles and the TMP's vision and principles provide a long-term outlook for a healthy, vibrant and successful Town. Where possible, these fundamental principles were considered when identifying the preferred routes and facility types to form part of the Town's active transportation network.

The following sections outline each step of the process that was undertaken to develop the Town's active transportation network – an integrated and connected component of LaSalle's transportation system to enhance mobility options for residents and visitors in LaSalle.

4.1.2 Developing the Active Transportation Network

Step 1: Existing Conditions

Information was collected from the Town of LaSalle to develop a geographic information system (GIS) database of existing conditions, including routes that were previously proposed in Council-approved planning documents such as the County of Essex's County-wide Active Transportation Study (CWATS) Master Plan (2012 and on-going update). The GIS database was updated to reflect new information as well as input received from members of the public, key stakeholders and Town staff.

In total, there are approximately 164 kilometres of existing active transportation routes and 50 kilometres of previously proposed active transportation routes – this includes routes located on roads and lands owned by the Town of LaSalle, County of Essex and the Ministry of Transportation Ontario. Some of these routes also form part of regional trail systems including the Waterfront Trail, Great Trail, Herb Gray Parkway Trail and the Province-wide cycling network.

Figure 32 illustrates the existing and previously proposed active transportation facility types in the Town of LaSalle.

A summary of the existing and previously proposed active transportation routes is presented in **Table 6**. A detailed overview of the total kilometres of existing active transportation facility types is provided in Section 2.7.1.

Table 6: Existing and previously proposed active transportation facilities

	Existing KM	Previously Proposed KM
Town of LaSalle[1]	147.4	33.0
County of Essex	12.0	16.5
MTO	4.3	0.0
Total	**163.7**	**49.5**

Note:

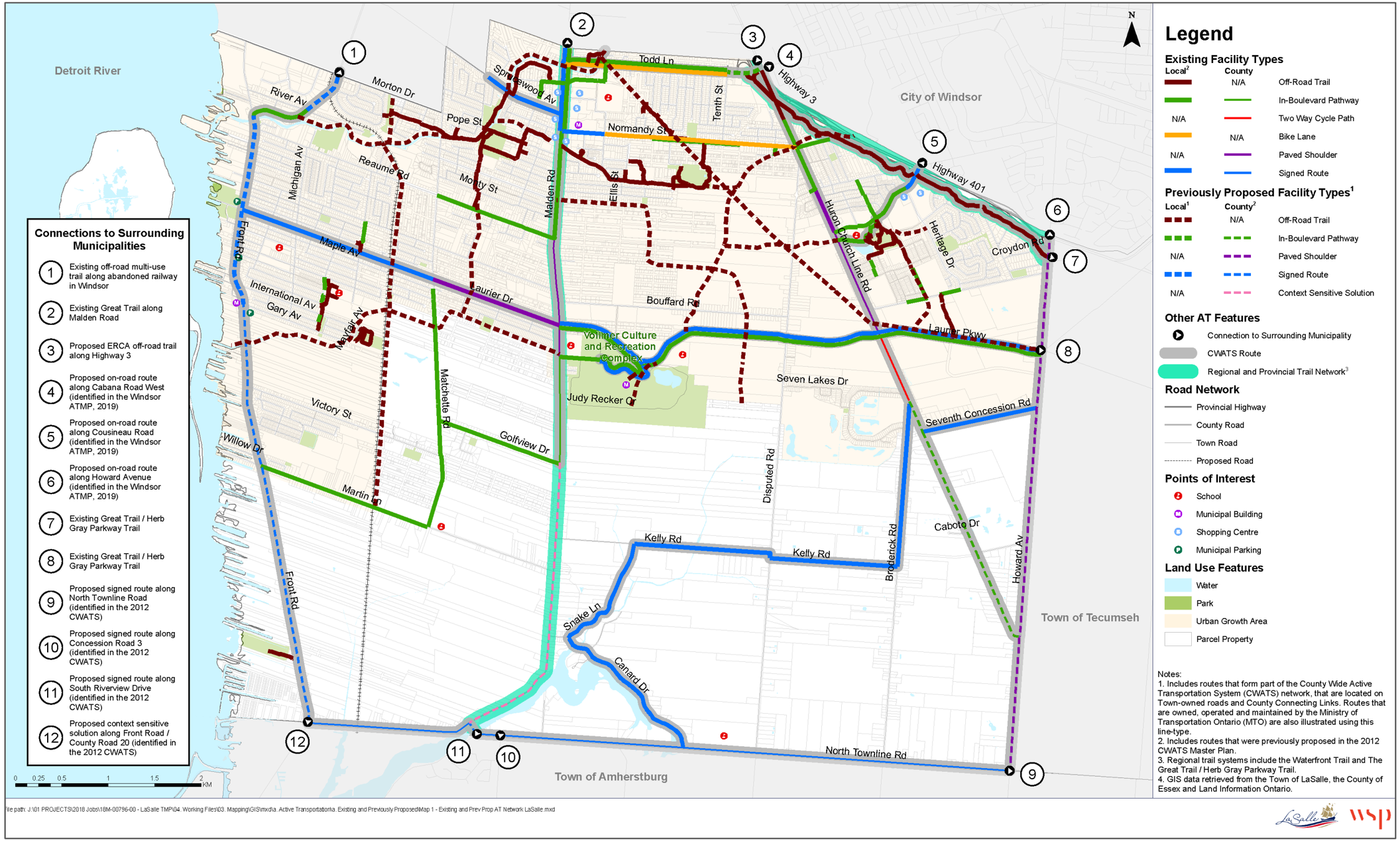
1. Includes Town-owned routes (110.8 km) + Town routes within the CWATS network (26.8 km) + County Connecting Links within the CWATS network (9.8 km).

What is GIS?

GIS (geographic information system) refers to a mapping tool for gathering, managing and analyzing data. GIS is typically used to illustrate spatial information and can help to visualize data patterns and relationships to inform decision-making.

The GIS database developed for the LaSalle TMP is intended to be used beyond the lifespan of the study as a tool to guide and monitor the implementation of active transportation infrastructure.

Figure 32: Existing and previously proposed active transportation facility types



Step 2: Selection Criteria and Candidate Routes

A set of network development criteria were established to help inform and refine the selection of routes that could form part of the Town's active transportation network. These criteria were identified based on a review of best practices and emerging guidelines including Ontario Traffic Manual (OTM) Book 18: Cycling Facilities (2013 and on-going update). The intent is that these criteria will help support the Town's Official Plan fundamental principles and overall vision for enhanced mobility options, active and healthy communities and sustainable infrastructure. Each network development criterion is meant to support one or more of the fundamental principles to ensure the recommended active transportation network reflects LaSalle's long-term outlook for a healthy, vibrant and successful Town.

The following table outlines the network development criteria used to inform the selection of active transportation routes and which Official Plan fundamental principles are supported by each criterion.

Table 7: Network development criteria and relationship to the Official Plan fundamental principles

Network Development Criteria	Description	Town of LaSalle Official Plan Fundamental Principles
Safety and Comfort	Routes are considered comfortable and safe for people of all ages and abilities. The network should include a variety of on and off-road routes to accommodate a range of user groups that have different interests / trip purposes.	
Connectivity	Routes that help provide continuous north-south and east-west connections within and between neighbourhoods and key destinations.	
Integrated Transit	Routes are located along a transit route or are located in proximity to a transit stop. For example, a route is located 400 metres from a transit stop (approximately a 5-minute walk). Routes that connect to transit stops also support users to complete their first and last mile by foot or by bike.	

Legend

- Not applicable
- Applicable

Network Development Criteria	Description	Town of LaSalle Official Plan Fundamental Principles
Potential to increase AT use	The route provides an opportunity to increase the number of people engaging in active forms of travel and recreation for shorter trips (approximately 5 kilometres by bike or 1 kilometre by walking). Routes that are considered to have a high potential to increase AT use are in areas with a high density of employment, housing and key destinations such as schools, libraries, community centres, municipal services, parks and recreational areas as well as minimal variance in topography.	
Missing Links	The route completes a gap between two existing facilities and helps to facilitate a more direct and continuous link.	
Equity	The route provides mobility options to traditionally under-served populations and locations with higher equity needs such as areas that have a high concentration of low-income households, seniors and children. Routes implemented within these areas can offer an increased sense of independence for vulnerable populations and those with higher equity needs.	
Natural Areas	Routes could pass through natural features or areas with scenic vistas and connect to parks / open spaces.	

Legend

- Not applicable
- Applicable

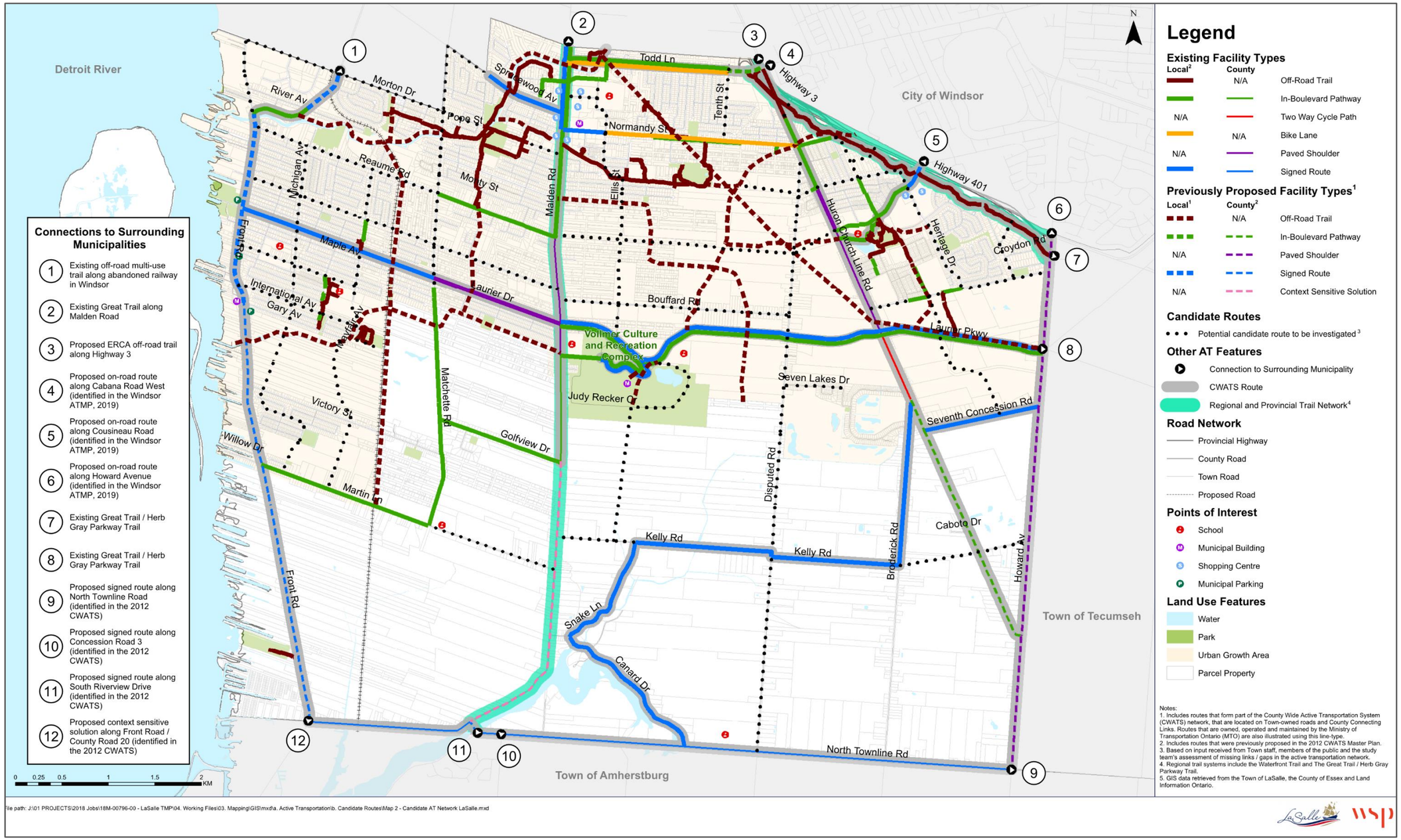
These network development criteria were used to help confirm existing routes and identify new route segments that together would form the Town's active transportation network, and ultimately achieve the long-term vision for a healthy, vibrant and active Town. In addition to the network development criteria, the following considerations were used to help identify potential new candidate active transportation routes:

- Complete gaps between existing routes.
- Connect to newly constructed routes in Windsor such as the extension of the Ojibway Parkway Trail.
- Provide direct connections to the Herb Gray Parkway Trail.
- Enhance connections to regionally significant trail systems.
- Connect to new development areas.
- Provide direct connections to key destinations in the Town.
- Leverage already planned capital road / infrastructure projects.
- Enhance connectivity in already existing neighbourhoods.
- Connect to surrounding municipalities.

Figure 33 illustrates the candidate active transportation routes that were identified for more detailed field investigation for the Town of LaSalle.

Existing in-boulevard multi-use pathway along Malden Road

Figure 33: Candidate active transportation routes



Connections to Surrounding Municipalities

1. Existing off-road multi-use trail along abandoned railway in Windsor
2. Existing Great Trail along Malden Road
3. Proposed ERCA off-road trail along Highway 3
4. Proposed on-road route along Cabana Road West (identified in the Windsor ATMP, 2019)
5. Proposed on-road route along Cousineau Road (identified in the Windsor ATMP, 2019)
6. Proposed on-road route along Howard Avenue (identified in the Windsor ATMP, 2019)
7. Existing Great Trail / Herb Gray Parkway Trail
8. Existing Great Trail / Herb Gray Parkway Trail
9. Proposed signed route along North Townline Road (identified in the 2012 CWATS)
10. Proposed signed route along Concession Road 3 (identified in the 2012 CWATS)
11. Proposed signed route along South Riverview Drive (identified in the 2012 CWATS)
12. Proposed context sensitive solution along Front Road / County Road 20 (identified in the 2012 CWATS)

Legend

Existing Facility Types

Local[2]	County	
	N/A	Off-Road Trail
		In-Boulevard Pathway
N/A		Two Way Cycle Path
	N/A	Bike Lane
N/A		Paved Shoulder
		Signed Route

Previously Proposed Facility Types[1]

Local[1]	County[2]	
	N/A	Off-Road Trail
		In-Boulevard Pathway
N/A		Paved Shoulder
		Signed Route
N/A		Context Sensitive Solution

Candidate Routes

- Potential candidate route to be investigated[3]

Other AT Features

- Connection to Surrounding Municipality
- CWATS Route
- Regional and Provincial Trail Network[4]

Road Network

- Provincial Highway
- County Road
- Town Road
- Proposed Road

Points of Interest

- School
- Municipal Building
- Shopping Centre
- Municipal Parking

Land Use Features

- Water
- Park
- Urban Growth Area
- Parcel Property

Notes:
1. Includes routes that form part of the County Wide Active Transportation System (CWATS) network, that are located on Town-owned roads and County Connecting Links. Routes that are owned, operated and maintained by the Ministry of Transportation Ontario (MTO) are also illustrated using this line-type.
2. Includes routes that were previously proposed in the 2012 CWATS Master Plan.
3. Based on input received from Town staff, members of the public and the study team's assessment of missing links / gaps in the active transportation network.
4. Regional trail systems include the Waterfront Trail and The Great Trail / Herb Gray Parkway Trail.
5. GIS data retrieved from the Town of LaSalle, the County of Essex and Land Information Ontario.

File path: J:\01 PROJECTS\2018 Jobs\18M-00796-00 - LaSalle TMP\04. Working Files\03. Mapping\GIS\mxd\a. Active Transportation\b. Candidate Routes\Map 2 - Candidate AT Network LaSalle.mxd

Step 3: Field Investigation

Following steps 1 and 2 of the network development process, field investigations of the candidate routes were undertaken to better understand existing conditions and locations where routes were proposed. Photos and observations were documented for each route and location investigated, including traffic speed, roadway width, on-street parking, surrounding land uses and local destinations. These field investigations were supplemented by a desktop review allowing the team to revisit specific routes and consider the route selection criteria. The information gathered was used to inform the selection of preferred routes and facility types for the Town's preferred active transportation network.

There was a total of 268 photos taken and 255 waypoints created during field investigation. **Figure 34** provides an example of the waypoints and photos illustrated in Google Earth that were gathered during field investigations. This database of digital photos will also be useful as a reference for Town staff as the network is implemented in the future.

Figure 34: Field investigation waypoints and photos

Step 4: Preferred Network and Facility Types

The preferred active transportation routes were refined and selected based on the outcomes from steps 1 to 3 as well as the input received throughout the course of the study from the public, key stakeholders and Town staff. Once the preferred routes were confirmed, the OTM Book 18 three-step facility selection tool was used to determine the most appropriate facility type for each route, with additional consideration given for pedestrian connectivity. A high-level overview of the three-step facility selection tool is illustrated in **Figure 35**.

Figure 35: Three-step facility selection process (adapted from OTM Book 18)

Step 1: Pre-Selection

Shared	Designated	Separated	Off-Road
			

Step 2: Examine Factors

On-Road	Off-Road
▸ Function of the road	▸ Connectivity
▸ Vehicle mix and speed	▸ Environmental Protection
▸ Collision history	▸ Safety
▸ Cost	▸ Potential use and user experience
▸ Anticipated use	▸ Topography
▸ Type of improvement	▸ Cost
▸ On-street parking	▸ Maintenance
▸ Intersection frequency	▸ Accessibility (AODA)

Step 3: Recommend & Document

Review and confirm the preferred facility types based on staff input and context-specific understanding

The approach to the LaSalle AT network's preliminary facility recommendations considered the current (2013) OTM Book 18 and the forth-coming update, specifically to identify facility types that provide greater separation between active transportation users and motor vehicles.

OTM Book 18

OTM Book 18 is currently being updated and the three-step facility selection tool is being revised for application in both urban and rural environments. Step 1 of this process is being revised to include two different nomographs for urban / suburban contexts and rural contexts.

In addition, it is expected that the thresholds for separated facilities will be reduced. For example, the preference to have designated or separated facilities will be identified for roads that have traffic volumes that are lower than what is currently identified in the 2013 OTM Book 18.

Proposed Changes and Additions to the Approved 2012 CWATS Network in LaSalle

As part of the network development process, the forth-coming update to the OTM Book 18 three-step facility selection tool was applied to the Town's active transportation network to identify the most appropriate facility type (and level of separation) based on the posted speed limit and traffic volumes. The updated facility selection tool takes into consideration different thresholds for rural and urban / suburban contexts and identifies the need for greater separation between motor vehicles and on-road users. As a result of applying the updated facility selection tool, there are some proposed revisions to the current approved (2012) CWATS facility types. **Table 8** provides a summary of the CWATS route segments in LaSalle where changes in facility types are proposed. In addition, one new proposed addition to the CWATS network is identified in **Table 8**. This proposed new addition is an extension of an already existing CWATS route (Kelly Road) and was identified through input received from the public and stakeholders over the course of the study. Any proposed changes to the CWATS network would need to be reviewed, confirmed and approved by the County of Essex and the County's CWATS Committee before further planning, design and / or implementation.

The recommended active transportation network for the Town of LaSalle is illustrated **Figure 37**.

Table 8: CWATS Route Segments where changes are proposed as part of the LaSalle TMP

Proposed Facility Type Modifications

Current Approved CWATS Route and Facility Type							LaSalle TMP Proposed Modification	
Road Name	To	From	Jurisdiction	Length (KM)	CWATS ID	CWATS Facility Type	OTM Book 18 Step 1 Results	TMP Proposed Facility Type
Front Road / County Road 20	Morton Drive	Malden Road / County Road 3	County / County Connecting Link	7.8	Las-7, Las-8, Las-9	Signed Route	Physically Separated Bikeway (Urban nomograph)	Separated Bike Lane

Rationale:

- Posted speed is 50 km/h and AADT is 12,500 to 21,300. The desired operating space based on OTM Book 18 – Step 1 of the facility selection process (using the forth-coming Book 18 update) is a separated facility.
- Based on the outcomes of OTM Book 18 Step 1, the LaSalle TMP is proposing that a separated bike lane be implemented along Front Road / County Road 20. A separated bike lane is considered an appropriate facility type due the high volume of motor vehicles on the road. The linkage is considered a key connection in the Town's active transportation network and it provide a linear connection from Windsor (northern limits) to Amherstburg (south limits).
- The LaSalle TMP is proposing a pilot project between Morton Road and International Avenue. A pilot project could include reducing the travel lanes from four to two lanes with a continuous centre left-turn lane with 1.5 metre bike lanes and 0.5 metre buffer zones on each side.
- The separated bike lanes could include pre-cast concrete curbs placed in the buffer zone, with flexible bollards mounted on the concrete curbs at the approach to intersections and other select locations.
- A proposed pilot project is intended to enhance Front Road as a main economic and commercial corridor, support a revitalized waterfront district, and become an attractive destination for the community.
- It is recommended that consideration be given for a physically separated facility such as cycle tracks as the ultimate design along the entire section of Front Road from Morton Drive to Malden Road / County Road 3.

Current Approved CWATS Route and Facility Type							LaSalle TMP Proposed Modification	
Road Name	To	From	Jurisdiction	Length (KM)	CWATS ID	CWATS Facility Type	OTM Book 18 Step 1 Results	TMP Proposed Facility Type
Laurier Drive	Front Road / County Road 20	Matchette Road	Town	2.2	Las-12 The 2012 CWATS includes Las-12 from Front Road / County Road 20 to Malden Road / County Road 3. The LaSalle TMP identifies proposed changes from Front Road / County Road 20 to Matchette Road.	Signed route	Shared Roadway to Paved Shoulder with Buffer (Rural nomograph)	In-Boulevard Pathway

Rationale:

- Posted speed is 50 km/h and AADT is 2,700 to 6,600. The desired operating space based on OTM Book 18 – Step 1 of the facility selection process (using the forth-coming Book 18 update) is a shared roadway to a paved shoulder with buffer.
- The Town of LaSalle's Official Plan (2018) Schedule D - Transportation Plan, identifies Laurier Drive as an Arterial Road. As part of the LaSalle TMP study process, Town staff noted that all arterial roads should have a separated active transportation facility, such as in-boulevard multi-use pathways. In addition, Town staff provided input (as part of the LaSalle TMP study process) to upgrade this section of Laurier Drive to an in-boulevard pathway. Town staff noted / recognized that significant work may be needed due to the number of driveway crossings.
- The proposed in-boulevard pathway is intended to connect to the already existing in-boulevard pathway along Laurier Drive east of Matchette Road.

Current Approved CWATS Route and Facility Type							LaSalle TMP Proposed Modification	
Road Name	To	From	Jurisdiction	Length (KM)	CWATS ID	CWATS Facility Type	OTM Book 18 Step 1 Results	TMP Proposed Facility Type
County Road 3 / County Road 8 / North Townline Road	County Road 20 / Front Road	Howard Avenue / County Road 9	County	7.6	COE-11, COE-12 The 2012 CWATS includes COE-12 from Malden Road / County Road 3 (COE-11) to South Talbot Road in the Town of Essex. The LaSalle TMP identifies proposed changes on COE-12 from Malden Road / County Road 3 to Howard Avenue / County Road 9.	Signed route	Paved Shoulder to Paved Shoulder with Buffer (Rural nomograph)	Buffered Paved Shoulder

Rationale:

- Posted speed is 50 km/h to 80 km/h and AADT is 2,300 to 4,700. The desired operating space based on OTM Book 18 – Step 1 of the facility selection process (using the forth-coming Book 18 update) is a paved shoulder to a paved shoulder with buffer. Based on the outcomes of OTM Book 18 Step 1, the LaSalle TMP is proposing that buffered paved shoulders be implemented along County Road 3 and County Road 8.
- Based on initial field investigations and select measurements using GIS data (aerial imagery and property parcel) there appears to be sufficient width to implement a paved shoulder (1.5 metres) plus a buffer (0.5 metres) on both sides of County Road 3 and County Road 8.

Current Approved CWATS Route and Facility Type							LaSalle TMP Proposed Modification	
Road Name	To	From	Jurisdiction	Length (KM)	CWATS ID	CWATS Facility Type	OTM Book 18 Step 1 Results	TMP Proposed Facility Type
Broderick Road	Kelly Road	Huron Church Line	Town	1.8	Las-13	Existing signed route	Paved Shoulder (Rural nomograph)	Paved Shoulder

Rationale:

- Posted speed is 60 km/h and AADT is 2,000. The desired operation space based on OTM Book 18 – Step 1 of the facility selection process (using the forth-coming Book 18 update) is a paved shoulder. Based on the outcomes of OTM Book 18 Step 1, the LaSalle TMP is proposing that a paved shoulder be installed along Broderick Road (upgrade the existing signed CWATS route).
- Based on initial field investigations and select measurements using GIS data (aerial imagery and property parcel) there appears to be sufficient width within the existing road platform to pave out shoulders (1.5m minimum).
- Paved shoulders provide a linkage for pedestrians in the rural areas of the Town where there are no sidewalks. In addition, paved shoulders provide greater separation for cyclists from motor vehicle traffic.
- The proposed paved shoulder is intended to be implemented when road is next reconstructed to achieve economies of scale and potential cost savings.

Current Approved CWATS Route and Facility Type							LaSalle TMP Proposed Modification	
Road Name	To	From	Jurisdiction	Length (KM)	CWATS ID	CWATS Facility Type	OTM Book 18 Step 1 Results	TMP Proposed Facility Type
County Road 7 / Huron Church Line Road	Broderick Road	County Road 9 / Howard Avenue	County	2.5	Las-2	In-boulevard Pathway	Shared or Paved Shoulder (Rural nomograph)	Paved Shoulder

Rationale:

- Posted speed is 60 km/h and AADT is 1,511. The desired operating space based on OTM Book 18 – Step 1 of the facility selection process (using the forth-coming Book 18 update) is a shared facility or paved shoulder.
- along County Road 7 / Huron Church Line Road. A paved shoulder is more appropriate compared to the 2012 recommendation due to the road context – rural cross-section (no curb and gutter). The 2012 CWATS 2012 Master Plan proposed an in-boulevard facility along this section of County Road 7 / Huron Church Line Road.
- If possible, it is recommended that consideration be given to implementing 0.5 metre buffers on both side of the road when the road is next scheduled for reconstruction / rehab in the future.

Current Approved CWATS Route and Facility Type							LaSalle TMP Proposed Modification	
Road Name	To	From	Jurisdiction	Length (KM)	CWATS ID	CWATS Facility Type	OTM Book 18 Step 1 Results	TMP Proposed Facility Type
County Road 9 / Howard Avenue	Laurier Parkway	County Road 8 / North Townline Road	County	4.6	COE-1, COE-6	Paved Shoulder	Paved Shoulder with Buffer (Rural nomograph)	Buffered Paved Shoulder

Rationale:

- Posted speed is 80 km/h and AADT is 10,044. The desired operating space based on OTM Book 18 – Step 1 of the facility selection process (using the forth-coming Book 18 update) is a paved shoulder with buffer.
- Based on the outcomes of OTM Book 18 Step 1, the LaSalle TMP is proposing that buffered paved shoulders be implemented along Howard Avenue.
- Buffered paved shoulders provide greater separation for cyclists and pedestrians along a road that has high traffic volumes. The facility is also intended to connect to buffered paved shoulder proposed along County Road 8.

Current Approved CWATS Route and Facility Type							LaSalle TMP Proposed Modification	
Road Name	To	From	Jurisdiction	Length (KM)	CWATS ID	CWATS Facility Type	OTM Book 18 Step 1 Results	TMP Proposed Facility Type
County Road 6 / Todd Lane	Highway 401	Tenth Street	County Connecting Link	0.35	Las-6	Bike Lane and In-Boulevard Pathway	Physically Separated Bikeway (Urban nomograph)	In-Boulevard Pathway

Rationale:

- Posted speed is 50 km/h and AADT is 10,259. The desired operating space based on OTM Book 18 – Step 1 of the facility selection process (using the forth-coming Book 18 update) is a physically separated bikeway.
- Based on the outcomes of OTM Book 18 Step 1, the LaSalle TMP is proposing that an in-boulevard facility be implemented along this section of Todd Lane (not bike lanes as proposed in the 2012 CWATS Master Plan).
- Todd Lane / County Road 6 is identified as an Arterial Road in the Town's Official Plan. As part of the ongoing TMP, Town staff have noted that all arterial roads should have a separated AT facility, such as in-boulevard multi-use pathways. In addition, the road appears to have been recently reconstructed (based on field work for the LaSalle TMP) and there is not sufficient width to implement on-road bike lanes.
- The proposed in-boulevard pathway is intended to connect to the existing boulevard facilities west of Todd Lane, the future planned connection along Cabana Road in Windsor (as identified in the 2019 Windsor ATMP) and the Herb Gray Parkway Trail.

Current Approved CWATS Route and Facility Type							LaSalle TMP Proposed Modification	
Road Name	To	From	Jurisdiction	Length (KM)	CWATS ID	CWATS Facility Type	OTM Book 18 Step 1 Results	TMP Proposed Facility Type
County Road 40 / Sprucewood Avenue	Malden Road	Abbott Street	County Connecting Link	0.9	Las-10	Signed Route	Paved Shoulder with Buffer (Rural nomograph)	In-Boulevard Pathway

Rationale:

- Posted speed is 50 km/h and AADT is 6,773. The desired operating space based on OTM Book 18 – Step 1 of the facility selection process (using the forth-coming Book 18 update) is a paved shoulder with buffer.
- County Road 40 / Sprucewood Avenue is identified as an Arterial Road in the Town's Official Plan. Through the LaSalle TMP study process, Town staff have noted that all arterial roads should have a separated AT facility, such as in-boulevard multi-use pathways. As such the LaSalle TMP is proposing that an In-boulevard pathway be installed along Sprucewood Avenue.
- The proposed in-boulevard pathway is intended to connect to the proposed off-road trail west of Abbot Street as well as the existing off-road trails (Turkey Creek Recreation Ways) on both sides of Sprucewood Avenue.

Current Approved CWATS Route and Facility Type							LaSalle TMP Proposed Modification	
Road Name	To	From	Jurisdiction	Length (KM)	CWATS ID	CWATS Facility Type	OTM Book 18 Step 1 Results	TMP Proposed Facility Type
County Road 3 / Malden Road	County Road 8	Golf View Drive	Town	5.7	Las-1, Las-3	Context Sensitive Solution	Paved Shoulder with Buffer (Rural nomograph)	Paved Shoulder

Rationale:

- Posted speed is 70 km/h and AADT is 7,965. The desired operating space based on OTM Book 18 – Step 1 of the facility selection process (using the forth-coming Book 18 update) is a paved shoulder with buffer.
- Based on field work conducted as part of the Town of LaSalle TMP, the study team noted that the existing roadway platform along this section of road is narrow and does not have sufficient width to implement a separated facility such as buffered paved shoulders. It is recommended that consideration be given to implement a paved shoulder as part of scheduled / future road capital projects to achieve greater economies of scale.

Proposed new route for the CWATS network

Proposed New CWATS Route and Facility Type					LaSalle TMP Proposed Modification	
Road Name	To	From	Jurisdiction	Length (KM)	OTM Book 18 Step 1 Results	TMP Proposed Facility Type
Kelly Road (Proposed extension of Las-13)	Snake Lane	Malden Road	Local	0.85	Shared Roadway (Rural nomograph)	Signed route

Rationale:

- Posted speed is 50 km/h and AADT is 1,365. The desired operating space based on OTM Book 18 – Step 1 of the facility selection process (using the forth-coming Book 18 update) is a shared roadway.
- The proposed route along this section of Kelly Road is intended to be an extension of the route on Kelly Road that currently terminates at Snake Lane. An extension of a signed route on Kelly Lane could also provide a direct connection to / from Malden Road.

The Recommended Active Transportation Network

The proposed active transportation network by facility type is illustrated in **Figure 36**. A summary of the proposed facility types which comprise the Town's active transportation network is provided in **Table 9**.

Table 9: Summary of proposed active transportation facility types

Facility Type	Town Total KM[1]	Town Routes KM	CWATS Network			ERCA KM	Developer KM	Total KM
			Town KM	County Connecting Links KM	County KM			
Off-Road Recreational Trail	**23.9**	23.9	0	0	0	0.1	0	**24.0**
In-Boulevard Pathway	**25.6**	20.7	3.6	1.3	1.7	0	18.1	**45.4**
Separated Bike Labe	**3.3**	0	0	3.3	4.6	0	0	**7.8**
Bike Lane	**2.6**	2.6	0	0	0	0	9.2	**11.7**
Buffered Paved Shoulder	**0**	0	0	0	12.1	0	0	**12.1**
Paved Shoulder	**13.7**	11.9	1.8	0.0	7.3	0	0	**20.9**
Signed Route with Edgeline	**1.5**	1.5	0	0	0	0	0	**1.5**
Signed Route	**5.2**	3.2	2.0	0	0.1	0	0	**5.4**
Total	**75.8**	63.8	7.4	4.5	25.7	0.1	27.3	**128.9**

Note:
1. Total Town length (75.8 km) = Town routes (63.8 km) + Town routes within the CWATS network (7.4 km) + County Connecting links within the CWATS network (4.5 km).

The Town's active transportation network contains routes that are located on roads and lands owned by private developers. Routes that are located on developer-owned roads and lands are expected to proceed when development occurs in the future, such as when new subdivisions are constructed and / or when construction approvals are granted. **Appendix E** contains a map which illustrates the proposed active transportation routes that are located on developer-owned roads and lands.

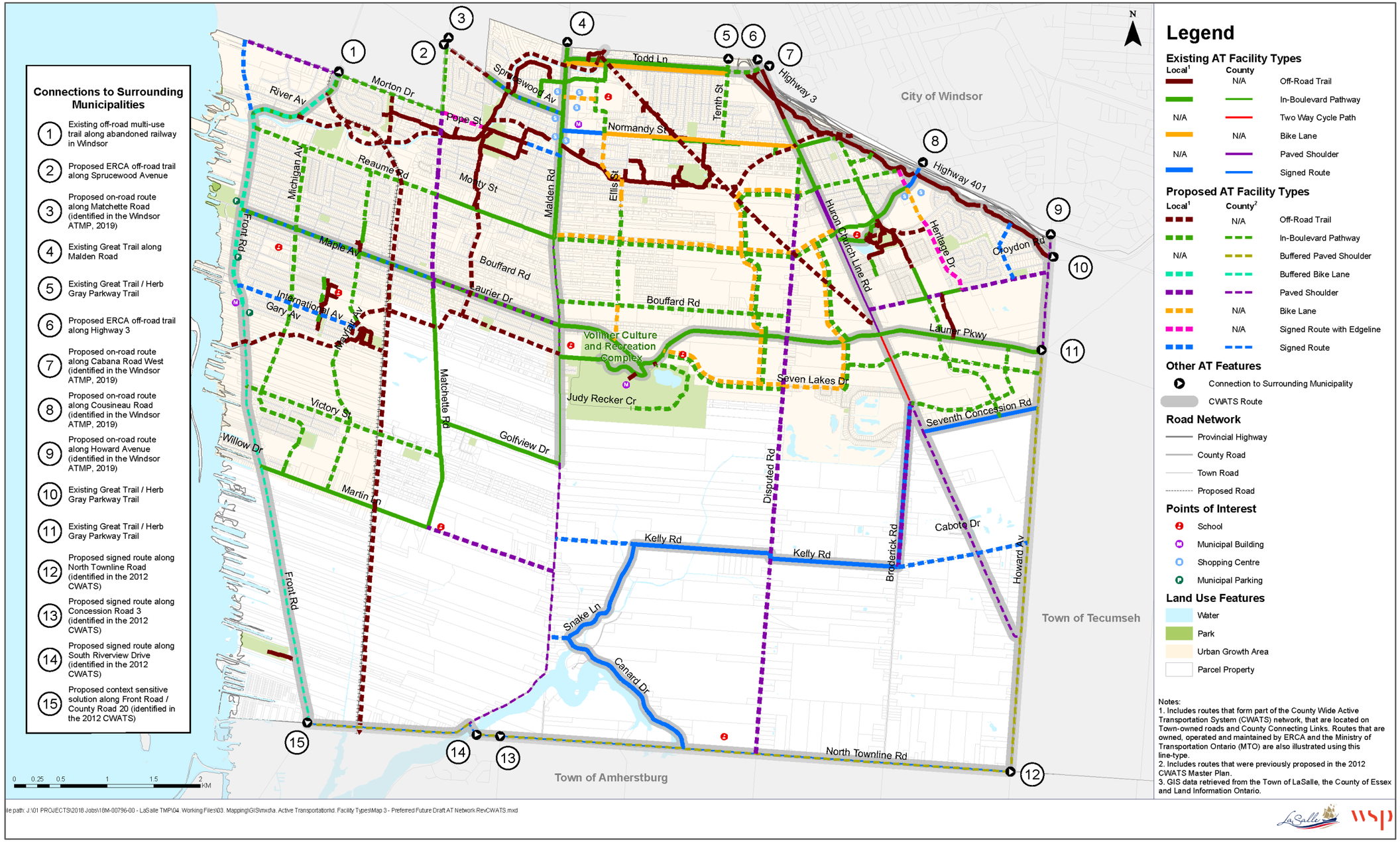
It is recommended that Town staff use this Appendix as a reference to identify all routes and facilities that are expected to be built and paid for, by private developers when new subdivisions are constructed in the future.

In addition, if there are any deviations from the original (2012) CWATS facility type Town staff should continue to work with the County's CWATS Committee and the County of Essex, through their confirmed process to ensure that the decisions are appropriately highlighted, documented and approved.

The recommended network is intended to be a blueprint for the implementation of active transportation facilities in LaSalle and used as a guide for future decision-making. The recommended network is also intended to be flexible so new opportunities for additional routes or revisions of facility types can be accommodated in the future.

Normandy Street existing bike lanes and in-boulevard pathway

Figure 36: Proposed active transportation network by facility type



4.1.3 Design Resources and Considerations

The Town's active transportation network includes a variety of routes and facility types that are intended to accommodate a range of users and abilities. Though the design of active transportation infrastructure does not follow a "one-size fits all" approach, it is important to ensure that routes and facilities are consistent with current guidelines, best practices and sound engineering judgement.

The following guidelines and standards can be used as a reference to ensure that the active transportation infrastructure being planned, designed and implemented is consistent with the most current guidelines as well as widely-accepted documents and resources.

Provincial	▸ Ontario Traffic Manual (OTM) Book 18: Cycling Facilities ▸ Ontario Traffic Manual (OTM) Book 15: Pedestrian Crossing Treatments ▸ Ministry of Transportation Ontario (MTO) Bikeways Design Guidelines ▸ Accessibility for Ontarians with Disabilities Act (AODA) – Built Environment Standards
National	▸ Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads ▸ Transportation Association of Canada (TAC) Bikeway Traffic Control Guideline for Canada
International	▸ American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities ▸ National Association of City Transportation Officials (NACTO) Urban Bikeways Design Guide and Urban Street Design Guide ▸ Dutch CROW Design Manual for Bicycle Traffic

OTM Book 18 is currently being updated and takes into consideration best practices from the national and international resources listed above. It is recommended that Town staff use OTM Book 18 (and the forth-coming update) as the primary resource for active transportation in LaSalle. Collectively, OTM Book 18 and these other resources are meant to compliment existing guidelines and documents from the Town and County, which include:

Town of LaSalle

- Official Plan
- Bouffard and Howard Planning Districts Development Standards Manual

County of Essex

- Official Plan
- County Wide Active Transportation System (CWATS) Master Plan – 2012 and on-going update

In addition to these guidelines, the following sections outline additional designs and enhancements that could be considered when implementing the Town's active transportation network.

Travel Lane Widths

The design of a road cross-section can have a direct impact on the perceived level of comfort and safety for pedestrians and cyclists. The TAC Geometric Design Guide for Canadian Roads (2017) identifies a number of considerations and elements which impact the design of a cross-section, including:

- Safety;
- Design speed;
- Climatic conditions such as snow accumulation;
- Land availability;
- Traffic volumes (current and project volumes);
- Potential need for special purpose lanes such as turning lanes, on-street parking, or bus lanes;
- Existing major utilities;
- Adjacent land use and access patterns; and
- Intended function / use.

The width of motor vehicle travel lanes can vary depending on the location of the road, who the anticipated road users are and the intended function of the road. The ability to redesign and repurpose the existing curb-to-curb width of a roadway can provide opportunities to implement on-road cycling facilities, such as bike lanes and buffered or separated bike lanes, where possible and in conjunction with scheduled capital works projects. Many municipalities in Ontario have taken similar approaches to implement on-road cycling facilities where feasible and appropriate – this approach is commonly referred to as a "road diet".

A road diet includes a redistribution of roadway space whereby the number of travel lanes are reduced or travel lane widths are narrowed and reallocated to other modes, such as cycling. Road diets are typically implemented along sections of road where data indicates that a reduction or narrowing vehicle lanes is not expected to have a significant impact on the overall capacity and / or demand of motor vehicle traffic flow and level of service. When undertaking a road diet, consideration should be given to the practical and recommended travel lane widths identified in the TAC Geometric Design Guide for Canadian Roads.

The following tables outline the recommended and practical design parameters for through-lane widths along rural and urban roadways based on the TAC Geometric Design Guide for Canadian Roads:

- **Table 10** presents lane widths for lower volume, two-lane rural roadways.
- **Table 11** presents lane widths for high volume, multi-lane rural roadways.
- **Table 12** presents lane widths for urban roadways.

Figure 37 provides an example of where a road diet (narrowing existing travel lanes) is proposed in the Town of LaSalle to achieve implementation of on-road bike lanes.

Table 10: Through lane widths — rural roadways (design hour directional volume <=450)

Design Speed (km/h)	Design Domain			
	Practical Lower Limit	Recommended Range		Practical Upper Limit
		Recommended Lower Limit	Recommended Upper Limit	
60 and less	2.7m	3.0m	3.7m	4.0m
70 to 100	3.3m	3.5m	3.7m	4.0m
110 and higher	3.5m	3.5m	3.7m	4.0m

Table 11: Through lane widths — rural roadways (design hour directional volume >450)

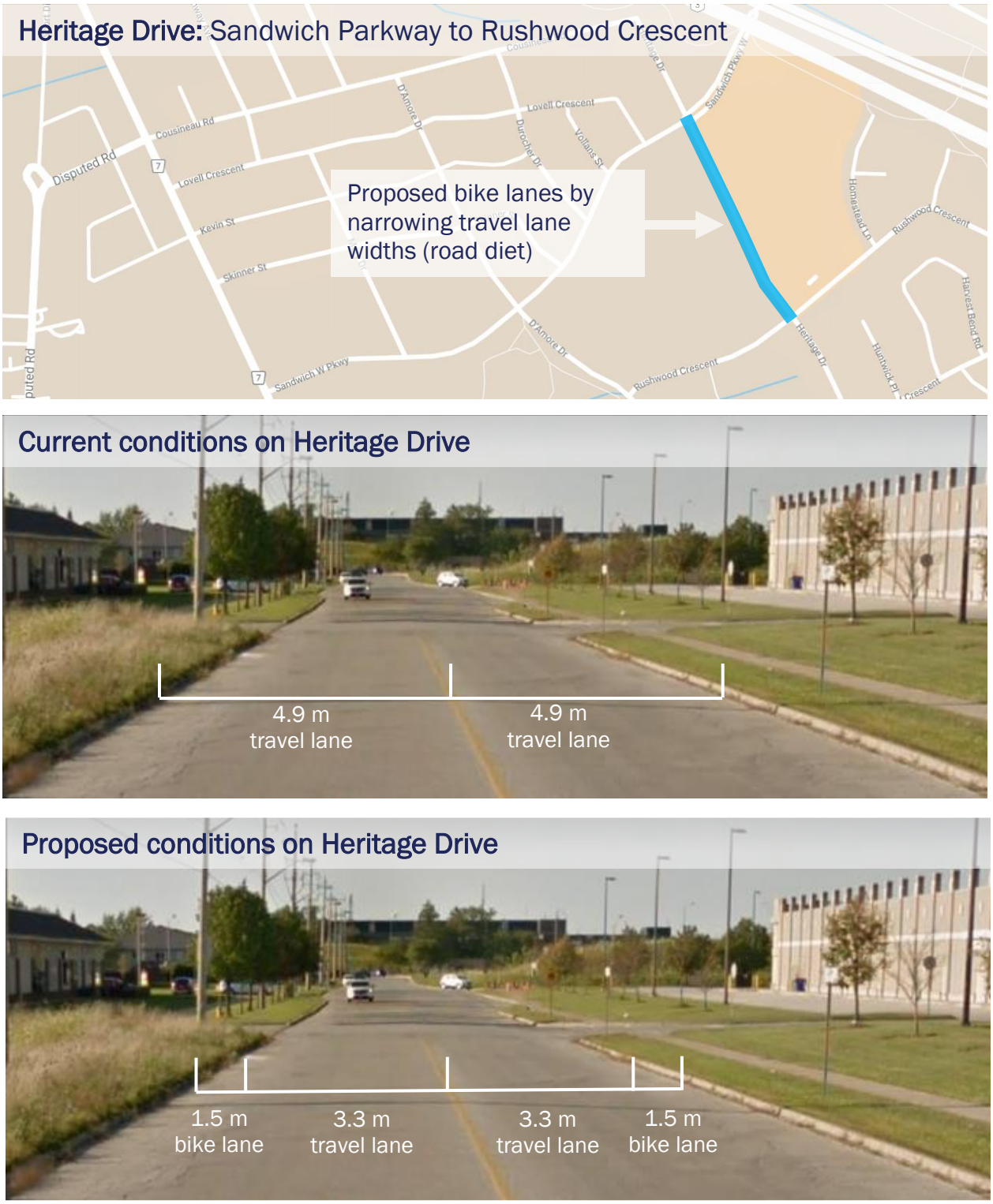
Design Speed (km/h)	Design Domain			
	Practical Lower Limit	Recommended Range		Practical Upper Limit
		Recommended Lower Limit	Recommended Upper Limit	
60 and less	3.0m	3.5m	3.7m	4.0m
70 to 100	3.5m	3.5m	3.7m	4.0m
110 and higher	3.5m	3.7m	3.7m	4.0m

Table 12: Through lane widths — urban roadways

Design Speed (km/h)	Design Domain			
	Practical Lower Limit	Recommended Range		Practical Upper Limit
		Recommended Lower Limit	Recommended Upper Limit	
60 and less	2.7m	3.0m	3.7m	4.0m
70 to 100	3.0m	3.3m	3.7m	4.0m
110 and higher	3.5m	3.7m	3.7m	4.0m

Where buses and larger trucks are expected to regularly use a lane, a minimum lane width of 3.3 metres is recommended on rural and urban roads regardless of the design speed or traffic volumes.

Figure 37: Example of proposed treatment along Heritage Drive north of Rushwood Crescent



Crossings and Transitions

The Town's active transportation network includes a variety of facility types, whereby pedestrians and cyclists will be required to transition from one facility type to another. In locations where the facility type transitions from one to another, users could be deterred from using the route if a seamless and smooth transition between facilities is not provided.

The integration of walking and cycling facilities into the overall transportation system is a critical component of a well-connected and accessible network. To maximize connectivity, pedestrians and cyclists should be able to transition between facilities and cross conflict points in a way that is considered to be both safe and comfortable. There are a number of treatments which can help to improve a user's ability to cross a roadway and to transition between facility types more comfortably and safely. Examples of these treatments are provided below.

Crossings

Bike Boxes

Bike boxes are designated areas between the crosswalk and the stop bar which are meant to be used by cyclists that are waiting for a signal to change and an intersection. The bike box is intended to increase a motorist's visibility of cyclists and allow the cyclists to proceed ahead of the motorists on the green traffic signal.

Figure 38 provides examples of bike boxes that have been implemented at intersections in two Ontario cities.

Figure 38: Bike boxes at Gordon Street at Waterloo Avenue in Guelph (left), Oxford Street at Sanatorium Road in London (right)

Pavement Markings

Pavement markings include painted visual cues on the pavement to increase awareness of the presence of cyclists on the road and to provide cyclists with a space to use when going through an intersection or transition to another facility. Pavement markings may include lines to designate the space, stencils of pedestrians or bicycles, sharrows, and directional arrows.

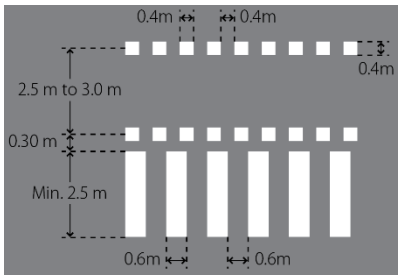
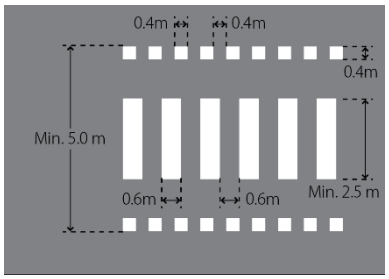
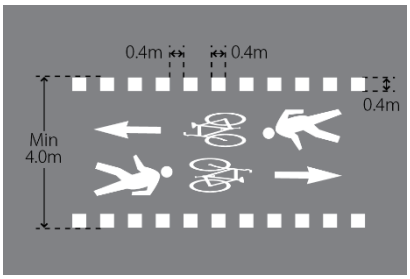
Figure 39 and **Figure 40** provide examples of directional pavement markings through an intersection to guide cyclists to the bike lane on the far side of the intersection.

Figure 39: Green pavement markings at Queens Avenue and Colborne Street in London

Figure 40: Sharrow markings through intersection to guide cyclists to bike lanes, Newmarket

Cross-rides

A cross-ride is a crossing treatment that can be used by both cyclists and pedestrians. Cross-rides allow cyclists to move through an intersection without having to dismount and separates pedestrians to decrease potential conflict. OTM Book 18 identifies three types of cross-rides:

Separate cross-ride	Combined cross-ride	Mixed cross-ride
		
A separate crossing, with separate space for cyclists and pedestrians.	A full-sized combined crossing, where cyclists cross on both sides of pedestrians.	A reduced width combined crossing where pedestrians and cyclists use the same space.

The following graphics provide examples of each type of cross-ride (separated, combined and mixed) that have been implemented in other municipalities within Ontario. Examples are provided for white painted cross-rides and green surface treated cross-rides.

Green surface treatment is typically used to increase the visibility of a cycling facility, highlight areas of conflict, and reinforce priority to cyclists in conflict areas. Based on guidance provided in the forth-coming OTM Book 18 Update, green surface treatment could be considered for the following situations:

- Where motor vehicles merge or weave with cyclists on approach to an intersection.
- In cycling queueing spaces, where there is potential for motor vehicles encroachment
- At driveways and minor intersections where the cycling movement has right-of-way, and there is a high volume of vehicles crossing the cycling facility.
- At signalized intersections, where a high volume of turning vehicles permissively crosses the path of a cycling movement.

Colour surface treatments are believed to be more effective when used selectively and at strategic locations throughout a network. As such, it is not recommended that green coloured surface treatment be applied everywhere on the Town's active transportation network. Consideration should be given to applying green surface treatment at select crossings and / or transitions that have sightline constraints, a history of collisions, high volumes of commercial traffic and high volumes of turning movements.

Figure 41: Green surface treatment on a separate cross-ride with left-turn bike in Guelph

Figure 42: White painted separate cross-ride in Toronto (Finch Hydro Recreational Hydro Corridor)

Figure 43: Green surface treatment on a mixed cross-ride along the Lake to Lake Trail, Leslie Street in Richmond Hill

Figure 44: White painted mixed cross-ride along the Lake to Lake Trail, Leslie Street in Richmond Hill

Figure 45: White painted combined cross-ride at Erb Street East and Peppler Street in Waterloo

In locations where a combined cross-ride is proposed to be implemented, additional consideration should be given to the facilities on the approach to the crossing to ensure cyclists are not directed onto the sidewalk. As such, combined cross-rides are considered to be more appropriate at midblock crossings. In addition, green surface treatment is typically not used at combined cross-rides as these are not significant conflict locations / zones.

It is important to emphasize that cross-ride markings and green surface treatment are separate features. Cross-rides are mandatory in certain applications (e.g. to allow cyclists to legally ride their bicycle within the crossing without dismounting), whereas green surface treatment is an optional, and in some locations, a recommended marking to reinforce priority for cyclists in conflict zones. Green surface treatment should only be applied in select locations to highlight areas of conflict and to increase the visibility of a cycling facility.

Transitions

A transition is the point where one facility types changes to another facility type. Transitions may be necessary to accommodate a facility through a physical constraint (such as a bridge), a change in the roadway context (such as a narrow cross-section) or in locations where there is an increase in motor vehicle volumes. It is important to clearly communicate to cyclists and pedestrians where they are expected to travel to ensure a smooth, safe and comfortable transition.

Transitions in facility types can be facilitated using signage, pavement markings, ramping up / down the facility and shifting the facility from the roadway to the boulevard, or vice-versa. Examples of transitions are illustrated below and based on the 2013 OTM Book 18. It is recommended that Town staff use the current OTM Book 18 as well as the forth-coming update which is anticipated to provide additional guidance for transitions between on-road and in-boulevard facilities, multi-use paths to separate pedestrians and cycling facilities, one-way to two-way facilities, and transitions at intersections.

Figure 46 illustrates a one-way raised cycle track transition (ramp down) to a conventional bicycle lane on the approach to an intersection. The facility can also transition back up a ramp to a raised cycle track following the intersection.

Figure 46: Raised Cycle Track Transition to a Conventional Bike Lane on the approach to an intersection, OTM Book 18 (2013)

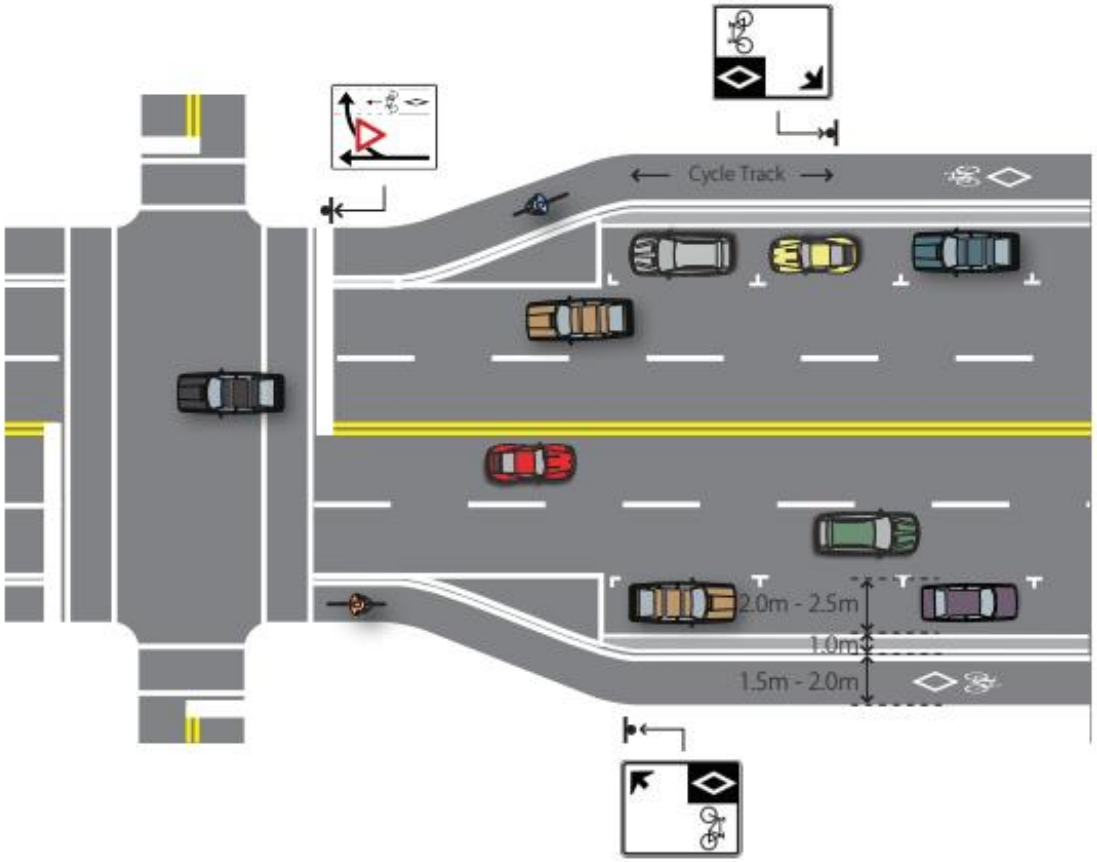


Figure 47 illustrates a typical cross-section for a shared facility (e.g. signed bike route) that transitions to a bicycle lane mid-block. **Figure 48** illustrates a typical cross-section for a bicycle lane that transitions to a signed bike route at a mid-block location. Both examples illustrate the use of signage to communicate where the bike lane begins and ends, as well as pavement markings (dashed lines) to help guide cyclists from the bike lane into the adjacent traffic lane. Both graphics are based on the current (2013) OTM Book 18. It is recommended that Town staff use OTM Book 18 (current version and the fort-coming update) to provide guidance on facility type transitions.

Figure 47: Introduced Midblock Bicycle Lane where Roadway Widens, OTM Book 18 (2013)

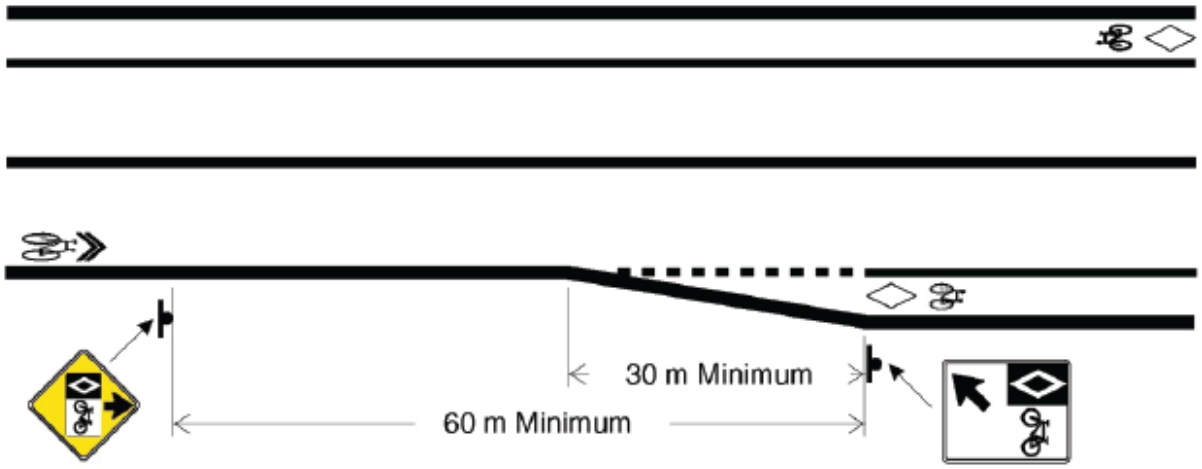
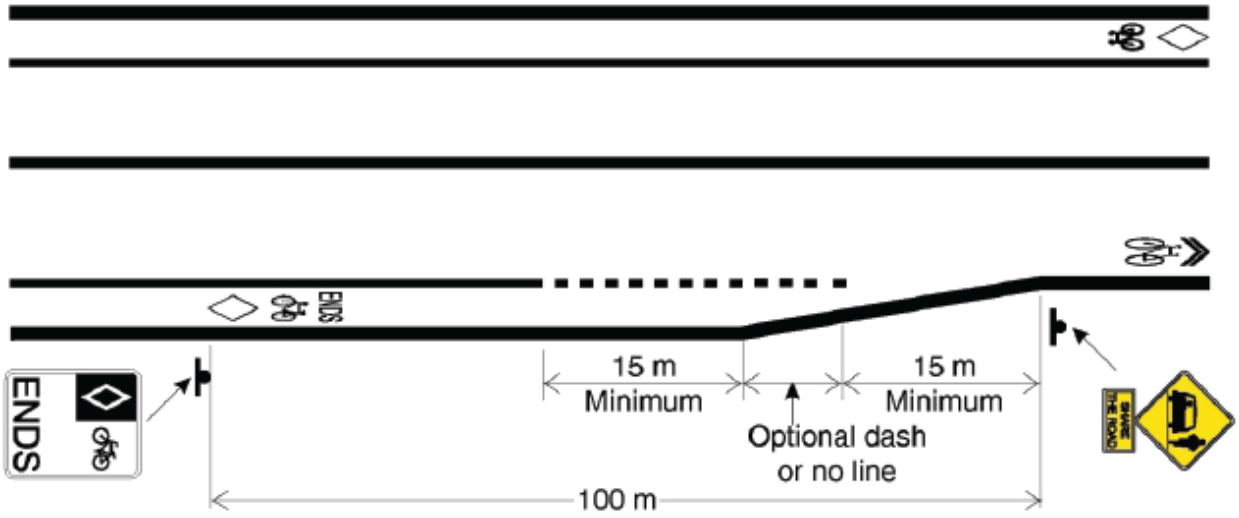


Figure 48: Discontinued Midblock Bicycle Lane where Roadway Narrows, OTM Book 18 (2013)



Complete Streets

Complete Streets refers to the concept of designing roadways to accommodate all ages, abilities and travel modes. A Complete Streets approach when planning and designing roadways is intended to support the principle of complete communities. Existing policies and planning documents at the Provincial level identify complete communities to be well-designed communities that offer transportation choices, accommodate people at all stages of life and have an adequate mix of housing, employment, and accesses to goods and services to meet daily needs.

There is no "one size fits all" approach to achieve a Complete Street. Each road is unique and the planning and design stages for a roadway should be context specific to reflect the characteristics of the road and surrounding land use. When designing for a Complete Street, considerations to be addressed include: land use, role of the street in the overall transportation network, traffic volumes, existing transportation modes, cyclist and pedestrian demand and utilities.

Research completed by The Centre for Active Transportation (TCAT) outlines four key goals that a Complete Streets approach is intended achieve. Each goal includes a set of performance measures to assess the impacts that have emerged from applying a Complete Streets approach when constructing a new road and / or redesigning an existing road.

The four key goals of a Complete Street approach are summarized in **Table 13** below.

Table 13: Overview of the four key goals for complete streets

Active and Sustainable Transportation	Level of Safety	Level of Service	Surrounding Environment
Common measures include pedestrian and cycling counts, transit ridership and motor vehicle counts. Results could help demonstrate a potential mode shift toward more active and sustainable travel modes.	A successful Complete Street project could help to decrease collision severity, frequency and vehicle operating speeds. For example, research shows that there is a relationship between lower speeds and improved safety, particularly for vulnerable road users.	On a Complete Street, the experience for pedestrians, cyclists and transit users should be considered. In addition to measures relating to motor vehicle delays, other factors can be measured including transit travel times and perception related to comfort and safety.	A successful Complete Street project can have many benefits to the surrounding area including economic such as property values and retail sales, environmental such as air quality and noise pollution, and health such as increased physical activity, lower rates of obesity and chronic illness.

Source: Adapted from The Centre for Active Transportation (TCAT)

Examples where a Complete Streets approach has been applied in various Ontario municipalities are illustrated below.

Todd Lane / County Road 6 in LaSalle

Figure 49: Complete streets example of Todd Lane / County Road 6 in LaSalle

Source: Google Street View – May 2014 (left photo) and September 2017 (right photo)

Shellard Lane in Brantford, ON

Figure 50: Complete streets example of Shellard Lane in Brantford, ON

Source: Complete Streets for Canada (https://www.completestreetsforcanada.ca/wp-content/uploads/2019/01/CompleteStreetTransformations_web-1.pdf)

College Avenue in Guelph, ON

Figure 51: Complete streets example of College Avenue in Guelph, ON

Source: Complete Streets for Canada (https://www.completestreetsforcanada.ca/wp-content/uploads/2019/01/CompleteStreetTransformations_web-1.pdf)

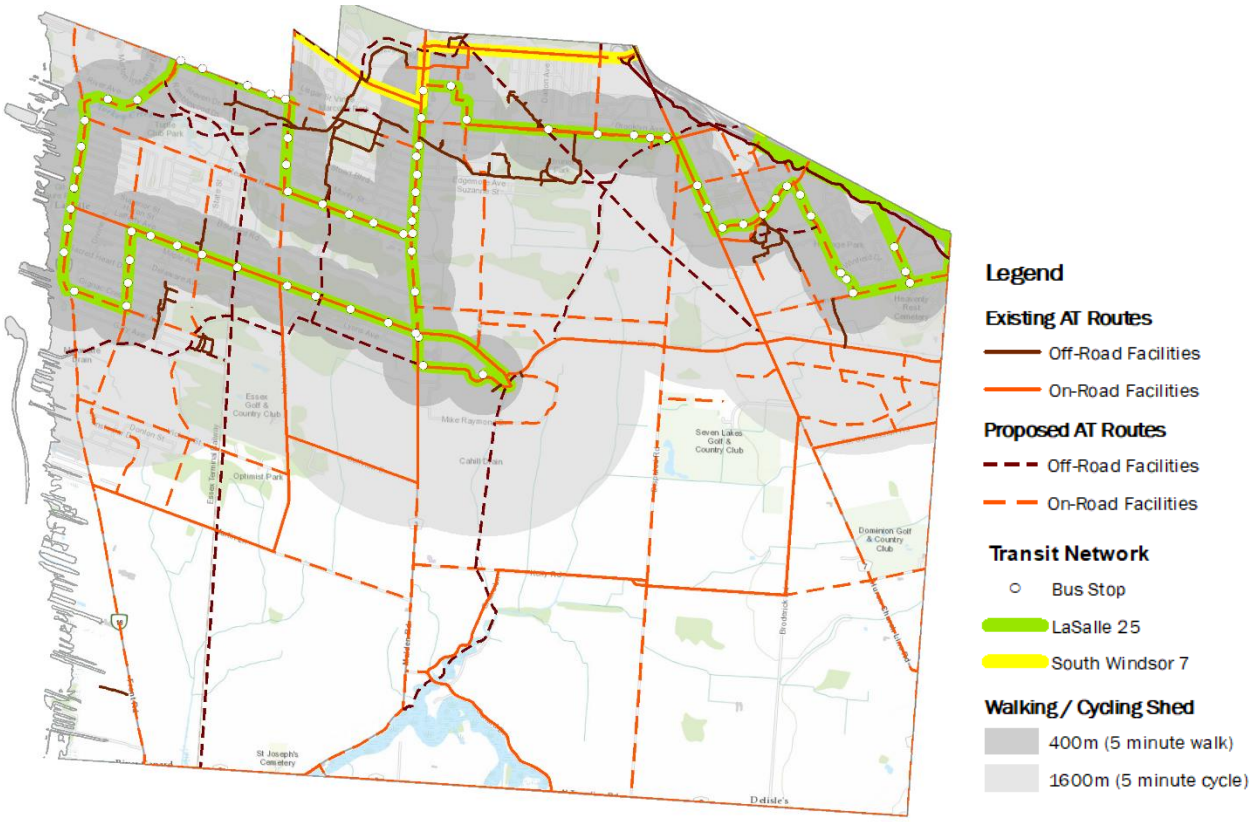
Integrating Transit and Active Transportation

Access to transit stops is an important aspect of designing a multi-modal transportation network. The integration of active transportation with transit can help to encourage more people to use sustainable modes of transportation to complete the first and last mile of their trips. Most transit trips begin and end with an active transportation component, whether it is someone walking or cycling to a bus stop or someone walking home from a bus stop.

There are two existing transit routes in LaSalle. All busses are equipped with bike racks that can hold up to two bicycles from March to December. It is recommended that the Town leverage the existing transit service by developing high quality, accessible active transportation connections and include amenities at transit stops that support first and last mile connections to transit. Additionally, it is important that transit stops are connected through continuous sidewalks, pathways and bicycle facilities to encourage more people to combine active modes and transit for the same trip.

Figure 52 illustrates the catchment areas for a five minute walking and cycling distance from the existing transit stops within the Town of LaSalle. All transit stops are connected to existing or planned active transportation routes that are located within the catchment areas for walking and cycling.

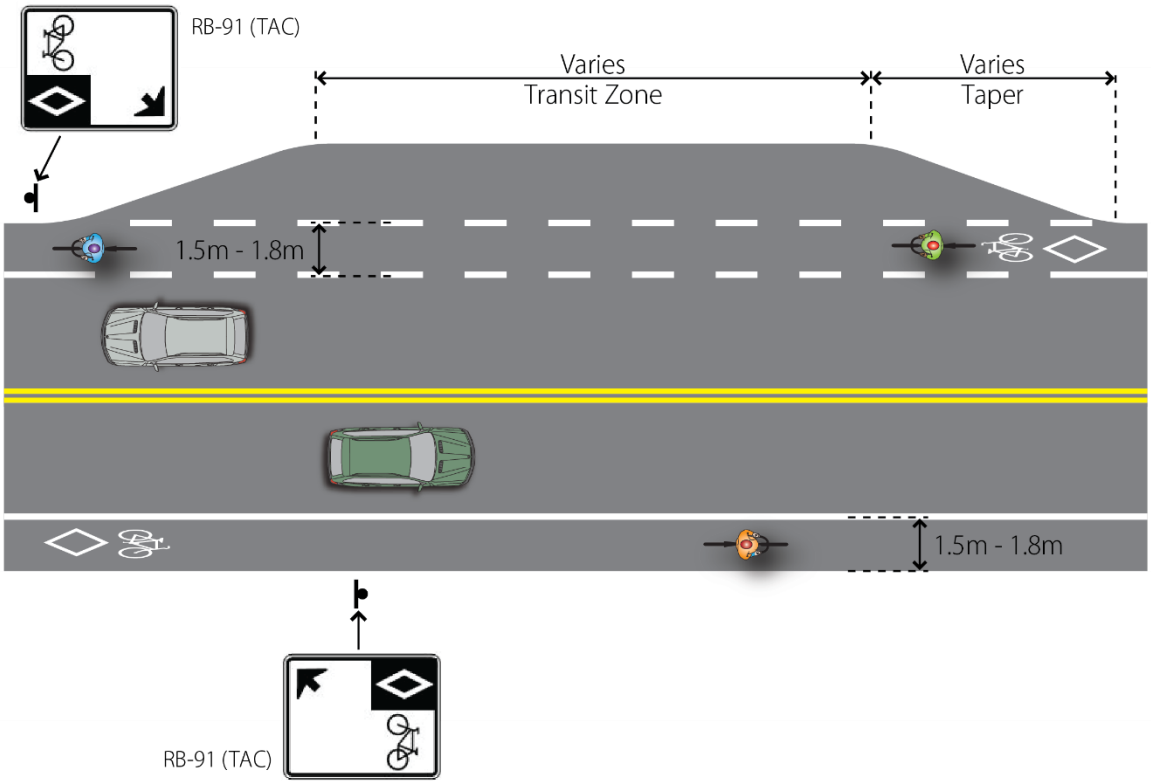
Figure 52: Walk and bike shed to transit stops in LaSalle



The active transportation network is also meant to connect and facilitate “first and last mile trips” with the proposed transit enhancements identified in the TMP. Section 4.2 provides detailed information on the proposed transit improvements for the Town of LaSalle.

When integrating active transportation facilities along transit routes, additional consideration should be given to mitigating potential conflicts between different users. For example, in locations where a cycling route crosses a bus bay, buses would be required to cross the facility to access the bus bay (curbside). **Figure 53** provides an example a bike lane passing a bus bay based on OTM Book 18 (2013).

Figure 53: Bike Lane passing a bus bay



Source: OTM Book 18: Cycling Facilities

Where no bus bay is provided, buses should maneuver up to the curb to minimize the gap when passengers board the bus, thus encroaching on any curbside cycling route. In some cases, practitioners may consider incorporating the bike facility into the transit platform. For example, the bike facility can ramp up to the platform to slow cyclists as they approach the conflict area. Additional pavement markings and coloured tactile paving be used to clearly identify the conflict zones for all users. Refer to OTM Book 18 section 5.4.2 for additional design considerations.

Accessibility

In 2005, the Province of Ontario passed the Accessibility for Ontarians with Disabilities Act (AODA), with the goal of creating a fully accessible province by 2025. As part of the AODA, the Accessibility Standards for the Built Environment were established to address barriers in transportation. The Accessibility Standards for the Built Environment provide guidelines related to pathways, trails, and sidewalks, to help remove barriers to buildings and outdoor spaces. Sections 80.8 and 80.10 of the Accessibility Standards provide the technical requirements for multi-use recreational trails.

As previously noted, there is no "one size fits all" solution when planning, designing and implementing an active transportation network. Providing supportive features, including a variety of on and off-road facilities, can help to enhance mobility and accessibility for particularly vulnerable road users such as youth, seniors and those with physical disabilities. Examples of supportive design enhancements that can be implemented as part of an active transportation network include:

- Crosswalks and crossings;
- Leading pedestrian intervals at intersections;
- Accessible pedestrian signals;
- Pedestrian crossings (PXOs);
- Pedestrian crossing island / refuge island;
- Tactile Walking Surface Indicators and delineators;
- Curb ramps / curb cuts; and
- Rest areas such as benches.

In addition to the physical infrastructure, there is emerging technology which can help to improve user mobility and accessibility. E-bikes (and soon ride style e-scooters) are rapidly entering the market in Ontario and are generally used to improve personal mobility and independence, active lifestyles and in areas with difficult topographies. Within the Province of Ontario, municipalities are responsible for establishing and / or amending their respective by-laws to address permitted and prohibited activity for e-bikes and other micro-mobility vehicles / devices.

Within the Town of LaSalle, Town staff are expected to liaise with and seek input from the Accessibility Advisory Committee when planning, designing and implementing new facilities to ensure barriers are eliminated and consistent with the Ontarians with Disabilities Act, 2001, Accessibility for Ontarians with Disabilities Act, 2005 (AODA) and the Ontario Human Rights Code. In 2018, the Town's *Multi-Year Accessibility Plan for January 2018 to December 2022* was established and outlined future initiatives to enhance accessibility related to customer services, information and communications, employment, transportation and design of public spaces. Key initiatives that have been planned for 2018-2022 include:

- Provide clear widths, firm and stable surfaces, clear signage, amenities and ramps.
- Installation of accessible pedestrian crossing signals, tactile profiles and rest areas.
- Installation of flat ramps with bumps at sidewalk intersections as well as accessible asphalt and concrete pathways and trails.

RECOMMENDATIONS

- The network development criteria identified in **Table 7** should be used beyond the lifespan of the plan, such as when new routes are being considered, to best determine how to integrate these routes with the active transportation network.
- The Official Plan fundamental principles should be used as a reference when new routes are being considered for the Town's active transportation network.
- The proposed active transportation network must be flexible enough to provide for changes in routing and / or facility types based on new information, Council policy and data as it becomes available. There may be opportunities for additional or alternate connections in the future. These connections should be considered, and the mapping and database should be updated if a change is warranted.
- The OTM Book 18 three-step facility selection process should be used by Town staff and its partners as the network is implemented and as new routes are identified. It is recommended that the forthcoming update of OTM Book 18 be used as the primary design reference when planning, designing and implementing routes.
- The Town should adopt the recommended network illustrated in **Figure 36** as a guide for the development of a connected and continuous active transportation network in LaSalle.
- Prior to proceeding with future planning, design or construction of CWATS routes and / or proposed changes to the current (2012) approved CWATS facility types, Town staff shall work with the County of Essex and the CWATS Committee to confirm next steps an where necessary, formally request the change of facility type.
- Town staff should refer to the design guidelines outlined in section 4.1.3 when moving forward with the design and implementation of active transportation routes.

4.2 Future Transit Assessment

This section describes the transit planning work undertaken to identify a preferred option for future transit expansion. Existing constraints in the transit network are briefly re-examined to prepare for the identification and assessment of future options for transit improvements. A recommended option is nominated and is supported by enhancements for transit, as well as a discussion on emerging trends that should be considered as the transit system evolves.

4.2.1 Existing Constraints

The current route 25 operates from 7:00 a.m. to 7:00 p.m. on weekdays with a 45-minute headway for most of the day. The overall route cycle time is 90 minutes, which includes 85 minutes of running time and a 5-minute layover at St. Clair College. Two buses operate on this route during weekdays. On Saturdays, the route operates with a 90-minute headway, which requires only one bus.

Based on the route design and the temporal constraints outlined above, there is very limited flexibility for this route to serve future developments. For example, there is no time in the schedule to serve the residential area at Victory Road and Front Road, as well as the future development area along Bouffard Road. Any extension of the route will require a third bus during peak hours in order to maintain the 45-minute one-way running time.

Furthermore, the large one-way loop on the west end of the corridor requires that passengers transfer along Malden Road to minimize travel time if travelling to a destination in the loop.

4.2.2 Addressing Future Transit: Fixed-Route Options

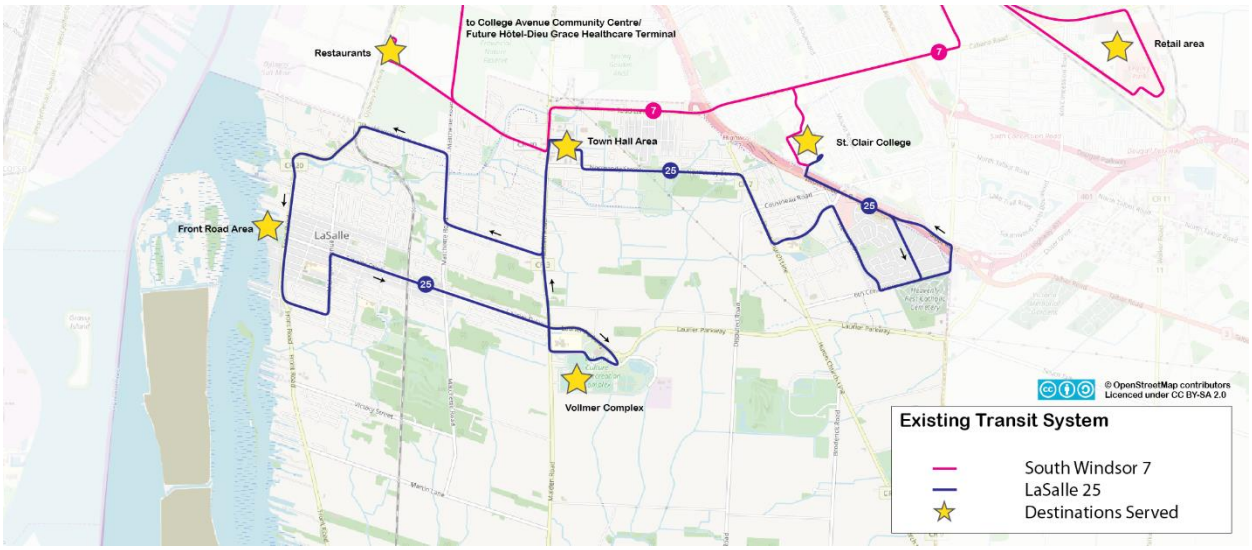
Given the existing transit routes in LaSalle, three options for future fixed-route transit service were considered as part of the TMP.

Option 1: Do-Nothing Scenario

The do-nothing scenario continues the LaSalle 25 route service as it operates today, in a circuitous fashion coupled with a one-way loop on the west end of the town. This option takes advantage of the two capital assets (transit buses) that are owned by the Town for the service but continues to provide limited service to the west end of the town (that is, if desiring to travel clockwise through the loop) and little to no flexibility in providing service to new developments on the east side of the town. As noted in the Phase 2 LaSalle Transit Feasibility Study report, potential extensions of the route could generate additional ridership by providing one-seat service to Devonshire Mall; however, there is no flexibility in running time for this extension, plus it would require the capital cost of another transit vehicle.

The service in its current form could continue until ridership patterns emerge or further development of the Town generates a new flux of ridership.

Figure 54: Option 1 transit service – Do Nothing



Option 2: North and South Circuits

Option 2 utilizes the current routing along the northern portion of LaSalle from the LaSalle 25 and establishes a distinct route running east-west along the south via Laurier Parkway and Laurier Drive. Under this option, the routes could meet at St. Clair College, the Civic Centre and along Laurier Drive. These meeting points provide locations for convenient transfers between the routes. The advantage of splitting the route into two routes provides for easier management of the routes from unexpected schedule deviations (for example, traffic congestion) as well as introduce new service south of International Avenue. However, the connections to other routes, namely Transit Windsor 5, 6 and 7 could potentially be difficult. It is not anticipated that having two routes would be more attractive than one single route; however, there is the potential to shorten travel times across LaSalle. Furthermore, as the Town develops between Malden Road and Huron Church Line, it is relatively easy to make adjustments to the routes to serve developing areas, such as realigning the south route away from Laurier Parkway. As the north and south circuit both serve St. Clair College, there is also the potential to interline the two routes to establish a clock-face headway.

Caveats related to this option involve the procurement of a third vehicle to establish a reasonable headway on both routes. For operational purposes, it is likely that the route can be interlined at St. Clair College to provide for a reasonable layover time and consistent headways between both routes. Furthermore, the route design of this option does not allow for riders on the north circuit to directly access Vollmer Complex, instead requiring a transfer to the south circuit.

Both routes can be timed to meet the South Windsor 7 at Civic Centre, minimizing transfer time for northbound and eastbound cross-boundary trips.

Route running times were estimated using vehicle travel times on Google Maps and additional buffer time added to account for the operating characteristics of buses versus cars and continuous stopping for boarding and alighting of passengers. Route cycle times are estimated at 60 and 70 minutes for the north and south branches, respectively. A total interlined route cycle time of 135

minutes, with three buses, would provide 45-minute service on both routes, while also allowing for layover time at St. Clair College.

Option 3: East and West Circuits

Option 3 utilizes the routing along the east and west of LaSalle from the LaSalle 25 and splits them at Malden Road. In this option, the routes could meet at both the Vollmer Complex and Civic Centre, providing more frequent bidirectional service along Malden Road. Passengers can transfer between the two services anywhere along Malden Road. Similar to Option 2, there is an advantage of two routes, allowing for easier management of the routes from unexpected schedule deviations. For customers wishing to travel from the western portion of LaSalle to the eastern portion of LaSalle, a transfer may be required. However, with these route configurations, it is easier to adjust the route to serve more of the town as it develops. The route running times, however, may increase and require more transit vehicles to provide a reasonable headway.

Similar to Option 2, a third bus would be required to establish a more frequent operating headway. Route running times were again estimated with Google Maps and additional buffer time added to account for differences in vehicle operation. This again results in an approximate interlined route cycle time of 135 minutes, which with three buses would provide 45-minute service on both routes. St. Clair College can continue being the layover point between the routes; however, it is more likely that the routes would meet at the Civic Centre; thus, the bus should layover on-street.

Both routes can be timed to meet the South Windsor 7 at the Civic Centre, minimizing transfer time for northbound and eastbound cross-boundary trips.

4.2.3 Transit Alternative Evaluation & Recommendation

The three fixed-route options were evaluated based on the following criteria:

- Operating frequencies (headways);
- Availability of connections to other routes;
- Connectivity to destinations;
- Travel times;
- Potential to increase ridership;
- Operating costs; and
- The ability to serve future development.

Table 14 illustrates the evaluation of the above-noted options. With these factors in mind, Option 2 is the preferred option.

Figure 55: Option 2 transit service (North and South circuits)

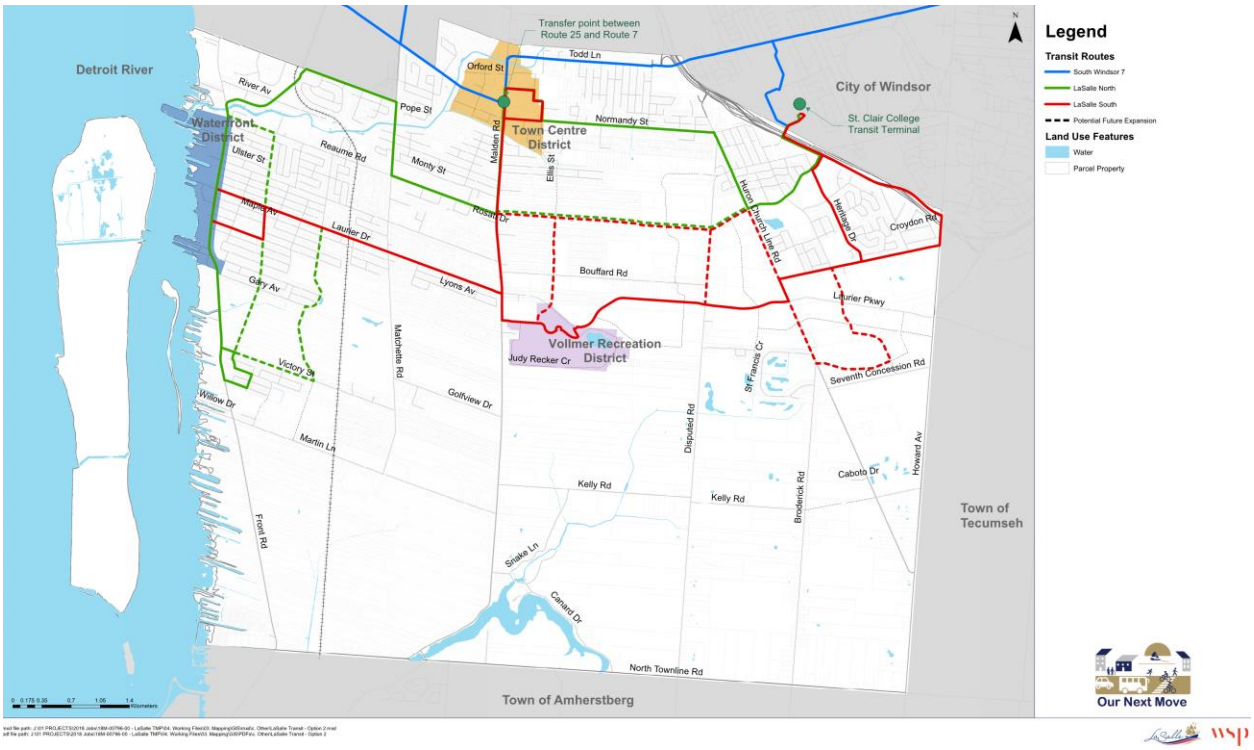


Figure 56: Option 3 transit service (East and West circuits)

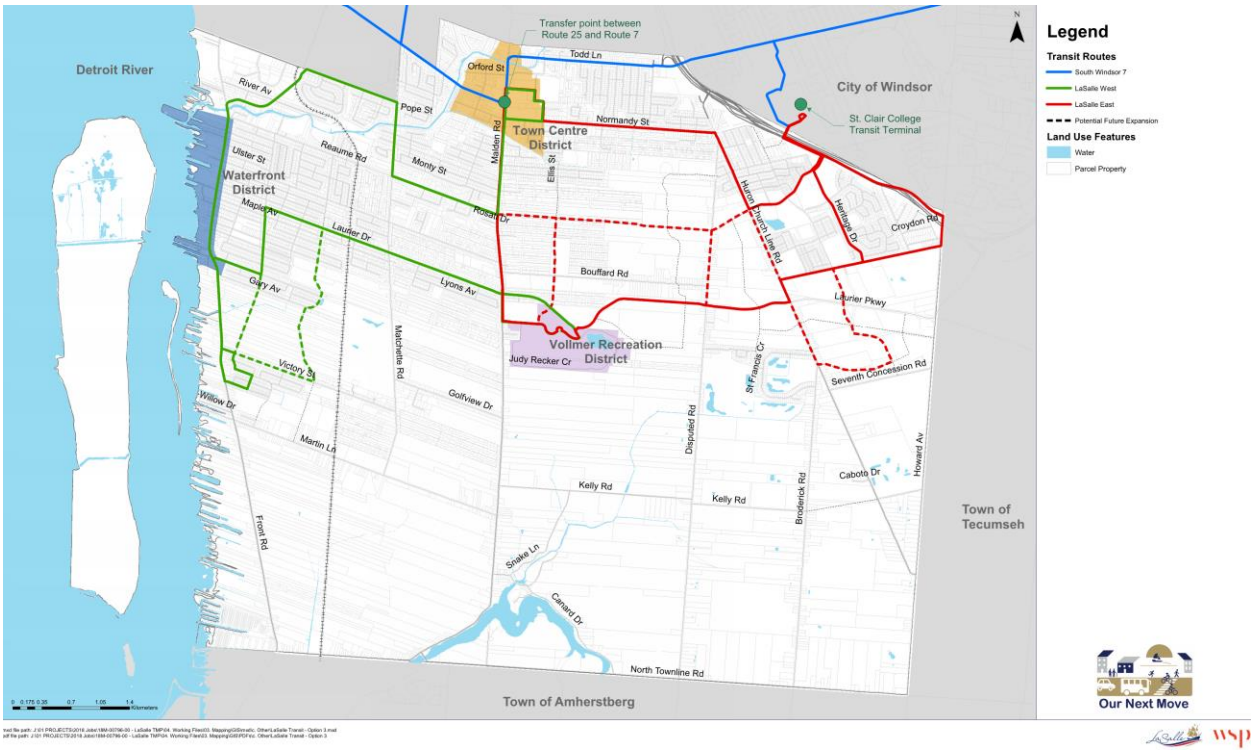


Table 14: Fixed-route option qualitative evaluation matrix

Criteria (Equal Weight)	Option 1 Business-as-Usual	Option 2 North and South Circuits	Option 3 East and West Circuits
Description	***Maintain status quo service***	***Split route into north and south branches, allowing for transfers along Front Road, the Civic Centre and at St. Clair College***	***Split route into east and west loops, allowing for transfers along Malden***
Operating Frequency *Headway between buses and average waiting time*	4 ● 45-minute frequency. Can be reduced with additional buses.	4 ● 45-minute frequency. Can be reduced with additional buses.	4 ● 45-minute frequency. Can be reduced with additional buses.
Availability of Connecting Routes *Connections to any other transit route*	3 ◕ Connections to routes 5, 6 and 7 are maintained.	3 ◕ Connections to routes 5, 6 and 7 are maintained.	1 ◔ East circuit maintains connections, but west circuit is only connected to Route 7.
Connectivity to Destinations *Number of destinations in LaSalle/South Windsor connected by the network*	4 ● The current route serves all major destinations within the Town of LaSalle.	3 ◕ Transfers would be needed to access the Vollmer Complex from the north route.	3 ◕ Transfers would be needed to get to and from St. Clair College.
Travel Time *Directness of Service*	3 ◕ Passengers within the one-way loop are required to transfer along Malden Road.	3 ◕ Travel times to and from Town Hall and St. Clair College are reduced; however, passengers headed towards Vollmer Complex must transfer.	2 ◑ Passengers in the west are required to transfer if headed towards St. Clair College.
Increase Ridership / Rider Base *Ridership potential increase due to catchment area increase, frequency, or convenience of service*	1 ◔ The existing route exhibits fluctuating ridership and serves most of the Town but does not provide much room for future flexibility in reaching new developments.	3 ◕ The circuits provide access to transit south of International Avenue as well as flexibility in future transit planning between Malden Road and Huron Church Line.	3 ◕ The west circuit would provide flexibility to introduce transit south of International Avenue as the road network develops.
Operating Costs *Annual cost comparisons based on operating factors such as vehicles, drivers and fuel*	4 ● Annual operating cost of approximately $480,000, with the start-up capital cost of $1.0 million for vehicles (sunk cost).	2 ◑ As proposed, one more bus is required due to the lengthy travel times with a proportional increase in costs. This is estimated at $600,000 for a new bus and substantially less for a used bus. Operational costs would increase proportionally to a total of $720,000.	2 ◑ As proposed, one more bus is required due to the lengthy travel times with a proportional increase in costs. This is estimated at $600,000 for a new bus and substantially less for a used bus. Operational costs would increase proportionally to a total of $720,000.
Ability to Serve New Development Areas *Flexibility of route in accommodating new transit demand*	0 ○ The current route is circuitous and any additional deviations from the route design will result in worse service to the remainder of the route or removed service from already-developed areas of LaSalle. There is little to no ability for future expansion.	3 ◕ Splitting the route into a north and south branch straightens and simplifies the route which permits for additional running time to accommodate new developing areas. The route can shift to accommodate new collector roadways.	3 ◕ Splitting the route into an east and west branch straightens and simplifies the route which permits for additional running time to accommodate new developing areas. The route can shift to accommodate new collector roadways.
Total Score	**19**	**21** ***Preferred Option***	**18**

4.2.4 Enhancing the Transit Experience

At this time, no changes are recommended to the service hours; however the Town of LaSalle should undertake a transit needs study to assess whether further services in addition to the existing service with Windsor Transit would be required. Transit demands and identifying underserved areas should be reviewed in the study. The high-level suggestions from this TMP would be used as base options and any improvement with detailed implementation plan would be further addressed in the transit needs study.

In the meanwhile, to improve the transit experience within LaSalle, the idea of providing chartered service for community assets, such as providing transit service or a church shuttle on Sundays should be explored. Some examples of enhancing the ridership experience include:

- Lit solar-powered shelters
- Next vehicle arrival/departure screens
- Benches
- Garbage receptacles
- Concrete waiting pads, delineated from the sidewalk (size varies by ridership)
- Connections to active transportation infrastructure
- Large bus stop markers
- In-vehicle amenities such as USB charging ports

Strategic locations for these amenities should be areas where multiple routes converge, such as St. Clair College or Civic Centre.

On-Demand Transit

An alternative to fixed route transit, which is increasing in popularity for towns with moderate density or moderate population, are methods of alternative service (demand responsive services). Alternative service delivery options are very similar to existing paratransit operations, where a user makes a call or booking request for a vehicle to pick up the customer. The vehicle schedule is developed based on the calls scheduled for that day and plots the most efficient way to carry customers. Similarly, there has been an increase in rideshare programs such as Uber or Lyft, which provide easy to use mobile applications for near-immediate vehicle hailing.

An Uber-based system could potentially be used in LaSalle, with almost all managerial requirements, drivers and vehicles provided by a third-party contractor who would operate the service on behalf of the Town. Such a service could be used to provide connections to other Transit Windsor routes or direct service to and from popular destinations during times which the LaSalle 25 does not operate, such as past 7 p.m. An expansion of the Handi-Transit system can also be considered to supplement service, given the similarities to a rideshare program.

Community Engagement

The transit service has been successful in engaging the public to try the service with various promotions such as the free-fare period in 2017 and the $1 student rides during March Break. It is recommended that further promotions be continued to emphasize the convenience of the service and further promote the service to people whom may not know the transit service exists, as well as increase utilization of the service. One option to promote transit would be to offer

discounted or free rides to the Town's annual strawberry festival. This may attract many new riders who do not regularly use transit and begin to make them feel comfortable with riding.

RECOMMENDATIONS

- Based on the evaluation criteria, transit frequency, network connectivity, travel time, operating cost and ability to serve future demands, implement transit route Option 2, North and South Circuits, as the preferred option. The Option 2 splits the route into north and south branches, allowing for transfers along Front Road, the Civic Centre and at St. Clair College.
- Conduct a Transit Needs Study to assess transit demand and identify underserved areas to further develop an implementation plan.
- To enhance the transit experience, provide additional amenities such as schedule information screens where multiple routes merge.
- Keep up with the emerging trends for transit by providing alternative services.
- Continue to promote fare reduction during high-profile events can increase exposure to LaSalle's transit services and increase ridership.

4.3 Future Road Network Assessment

4.3.1 Approach

LaSalle's road network assessment and roads improvements strategy were developed through a multi-step process building upon the existing conditions analysis of Chapter 2 and the input received during public consultations. A comprehensive approach was adopted to consider the following objectives for LaSalle's road network:

- Promote alternative modes of travel;
- Provide alternative connections to relieve north-south corridors for Malden Road, Matchette Road and Front Road;
- Enhance connectivity to the new development areas in Town and;
- Encourage vehicle movement towards the recently renovated and expanded Highway 401 to facilitate movement into Windsor.

The Town's Official Plan and previously conducted Environmental Assessments and Secondary Plans of specific districts were also taken into consideration when drafting the proposed future alternatives.

Three alternative future scenarios to the year 2031 were developed: one Do Nothing scenario and two alternative scenarios. The Do Nothing scenario considers future population and employment growth but no further improvements to the existing transportation network as the base scenario and the two alternatives (#2 and #3) include options for expanding collector and arterial roads to accommodate future growth. The alternative options were developed by studying previously identified candidate roads, the inputs received during the consultation phases, through multiple workshops with Town staff, and technical analysis. Lastly, quantitative and qualitative assessments were conducted to select the preferred alternative.

For the quantitative analysis, existing traffic data sets and previous Roads Needs Studies were examined to establish a baseline of existing travel patterns and identify historic traffic growth trends. The baseline conditions used were validated by contrasting the geo-referenced information of congestion zones received during the first engagement round (refer to **Section 3.5.2**) and Town staff's local knowledge of current traffic conditions. The data and findings were then used to forecast future traffic volumes and evaluate two future road network alternatives through a traffic screenline analysis.

Traffic screenline analysis is a useful method to measure the overall road network performance in terms of vehicular volumes to roadway capacity across a given number of north-south or east-west axes. This analysis yields an "x-ray" of the road network performance in a given direction. Typically, the volume and capacity ratios measure the traffic experienced during the hour of maximum demand in the road network, or "peak hour." Evaluating scenarios with peak hour data is a conservative approach to transportation planning as the road network is tested when it experiences its highest stress.

A qualitative assessment was also undertaken with comprehensive evaluation criteria to weigh the challenges and opportunities of adopting each of the three road alternatives. This analysis helped to inform the selection of a preliminary preferred future road network, which was presented during the second consultation round to the public and technical stakeholders. The data and feedback collected during this round helped to further refine considerations for the preferred future road network.

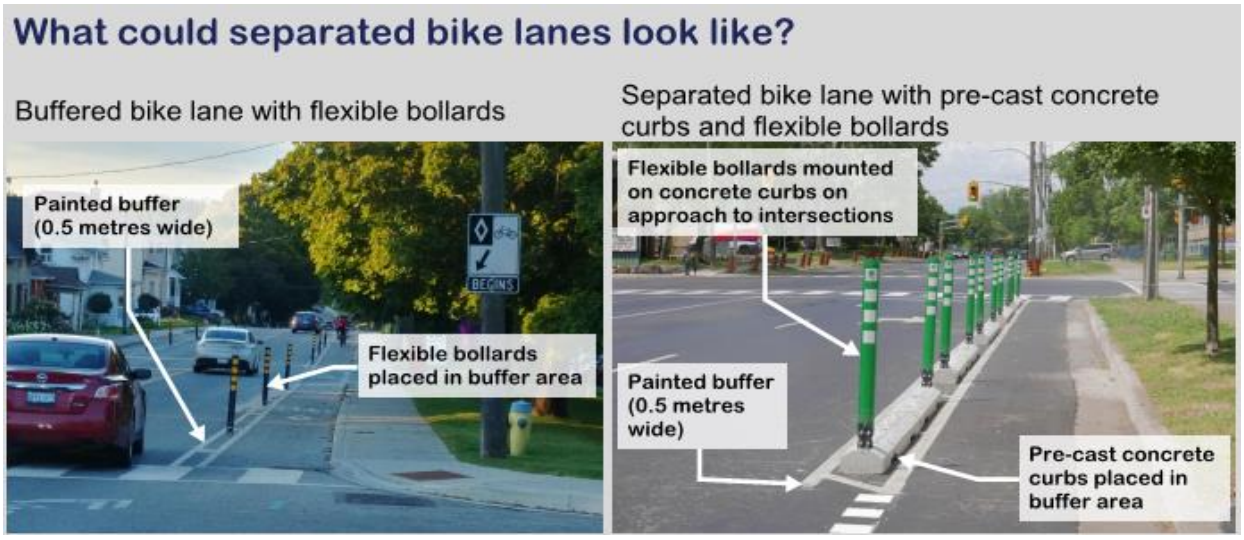
4.3.2 Front Road Revitalization Pilot Project

One focus area for the multi-modal road network planning has been Front Road from International Avenue in the south to the Town border (Morton Drive) in the north. The current four-lane arrangement on Front Road acts as a conduit for vehicles travelling through LaSalle. There is little provision for other modes of transportation and the high-speed nature of the road does not lend itself to community building. The Town wishes to revitalize Front Road and encourage this area to become a key destination that is more inviting for all people. The Town would also like to recognize its historical importance to the residents, businesses and visitors by establishing a new vision for this segment of the road. As part of the TMP, a context-sensitive solution is being proposed to repurpose the right-of-way to help re-invigorate the community and create more of a sense of place and to capitalize on economic development and recreational opportunities. In the process, there will be an improvement to local and regional walking and cycling connectivity and enhancements to Front Road as a main commercial corridor, a revitalized waterfront district, and an attractive destination for the community. While transportation focused, the vision is also expected to directly benefit businesses and residents along the corridor. To meet this vision, a pilot project is being proposed that would:

- Reduce the travel lanes from four to three lanes with a continuous centre left-turn lane;
- Promote off-street municipal parking lots adjacent to Front Road;
- Implement continuous sidewalks and continuous, separated bike lanes on both sides of the road; and
- Encourage through traffic and commuter vehicle traffic that originates and is destined outside of LaSalle to use alternate routes such as Howard Avenue and Highway 401.

The reduction to three lanes of vehicular traffic would be expected to result in lower vehicle speeds and an environment more conducive to walking or biking between shops or other destinations. The reduction of travel lanes would provide space to accommodate separated walking and cycling facilities on Front Road. Two examples of possible treatments for the pilot cycling facility are shown in **Figure 57**.

Figure 57: Example of Separated Bike Lanes

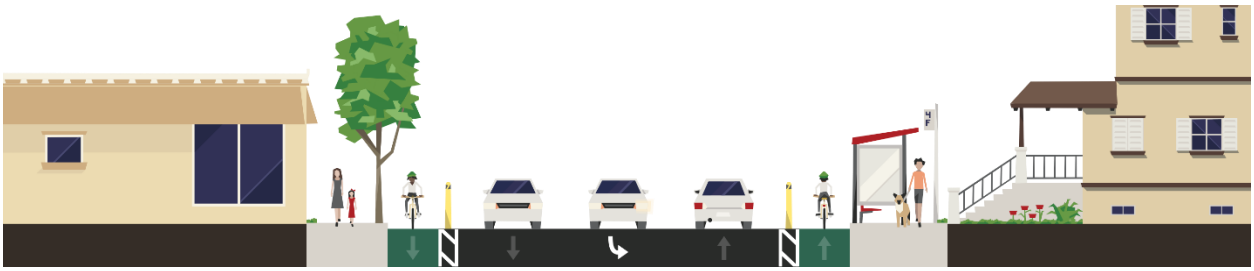


The pilot project has three steps:

1. Seek Council approval to undertake a pilot project on Front Road for one to two years. If approved, implement measures in steps two and three.
2. During the pilot duration:
    - Undertake data collection to monitor motor vehicle traffic volumes on Front Road as well as on parallel corridors such as Matchette Road, Malden Road and Howard Avenue;
    - Work with local businesses and residents to understand concerns and potential measures to improve daily operations; and
    - Undertake public opinion surveys to understand public perception and support from the broader community.
3. Report findings to Council and recommend whether to make the pilot project permanent or not, and to recommend further extension to the pilot project if warranted.

A cross section sketch of the pilot project, reducing Front Road to three lanes and providing active transportation facilities is depicted in **Figure 58**.

Figure 58: Front Road pilot project cross section



4.3.3 Proposed Future Roads Network Alternatives

Three road network scenarios were analyzed before arriving at the preferred future alternative. The three alternatives scenarios are:

1. **Do Nothing:** existing road network, no expansion of arterial/collector roads;
2. **Scenario #2:** utilizing the current alignments and providing east-west connections along Reaume Road, Golfview Drive, and Martin Lane. Improving north-south routes along Dunkirk Avenue and Tenth Street and filling the gaps along Mayfair Avenue; and
3. **Scenario #3:** providing connections through an integrated arterial and collector road network.

The road network Alternatives #2 and #3 are depicted in **Figure 59** and **Figure 60**, respectively. The three scenarios are detailed in **Table 15** and the proposed new roads and improvements are numbered accordingly between the table and figures.

Figure 59: Road network alternative #2

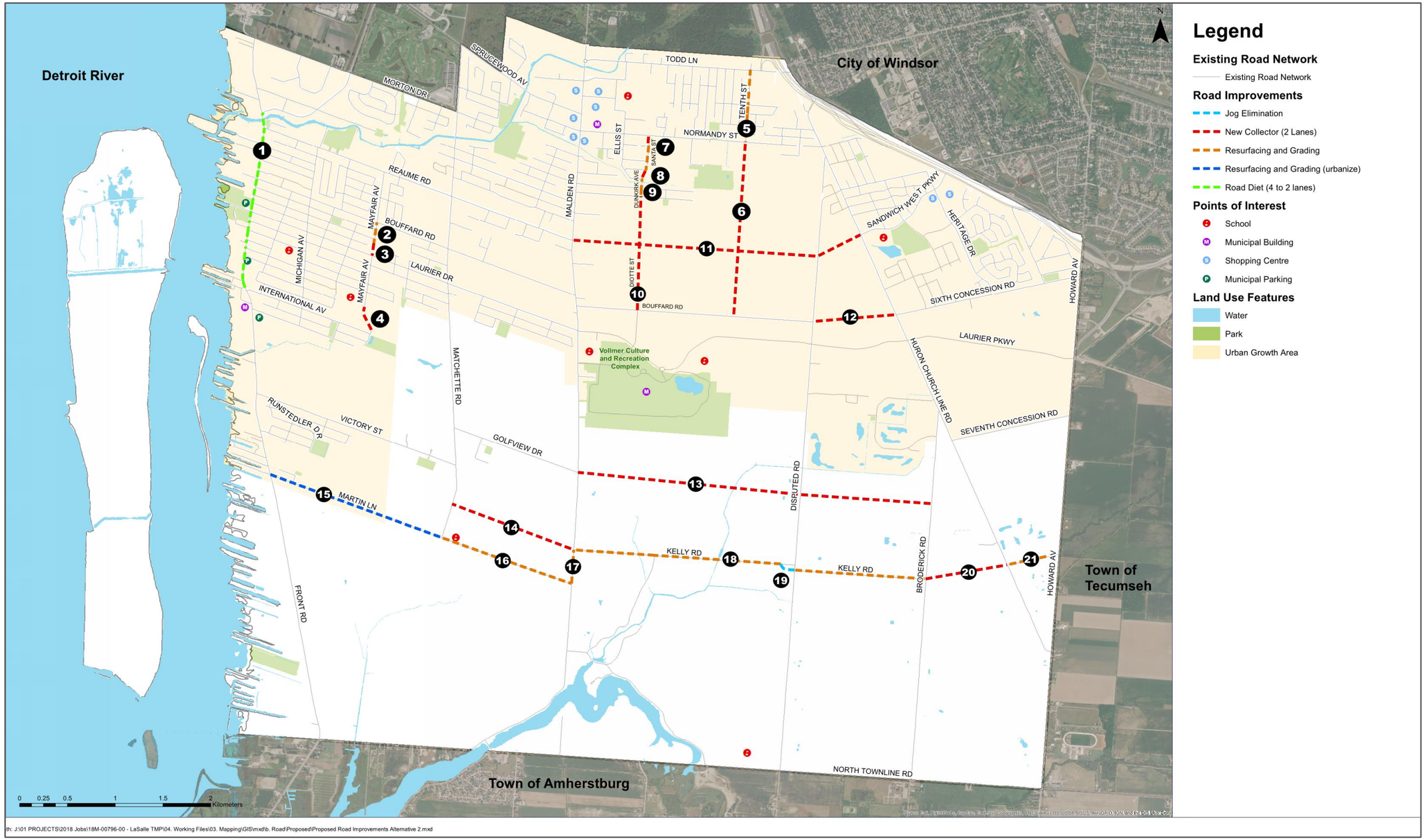


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Figure 60: Road network alternative #3

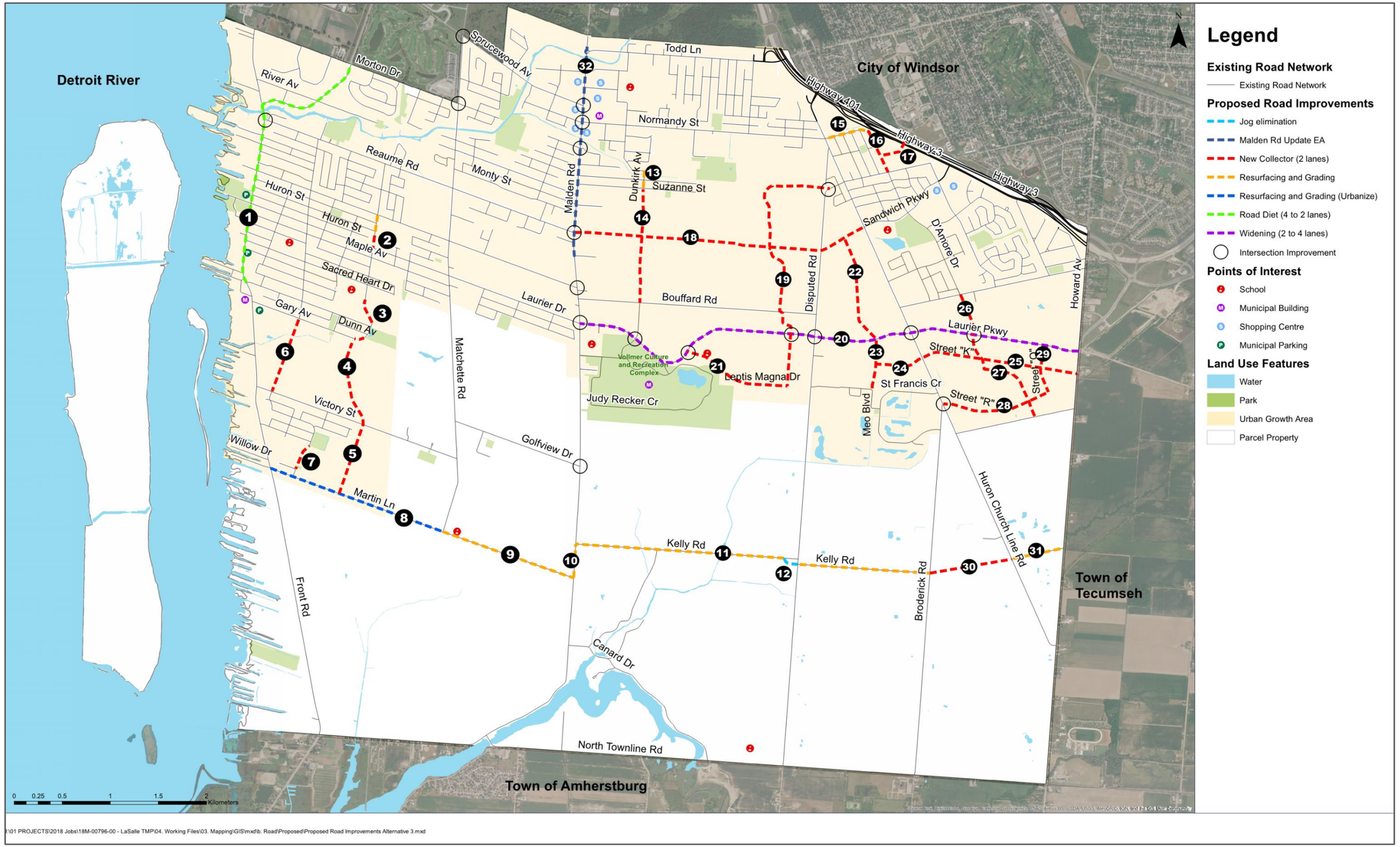

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Table 15: Road network alternatives

Alternative	Road Network Improvements
2031 Alternative 1 (Do-Nothing)	This scenario assumes that the existing network of collector and arterial roads will be maintained as it is currently until the year 2031.
2031 Alternative 2	This scenario assumes the existing network of collector and arterial roads with additional construction of the following projects: 1. 1-lane reduction of Front Rd. from north of Reaume Rd. to International Ave. 2. Resurfacing and grading of Mayfair Ave. from Bouffard Rd. to south of Huron St. 3. New 2-lane urban extension of Mayfair Ave. from south of Huron St. to Laurier Dr. 4. New 2-lane urban extension of Mayfair Ave. from south of Sacred Heart Dr. to International Ave. 5. Resurfacing and grading of Tenth St. from Todd Ln. to Normandy St. 6. New 2-lane urban extension of Tenth St. from Normandy St. to Laurier Pkwy. 7. New 2-lane urban extension of Santa St. from Casa Grande Blvd. to Normandy St. 8. New 2-lane urban extension of Santa St. from Angelina Ave. to Ellis St. 9. Resurfacing and grading of Dunkirk Ave. from Suzanne St. to Ellis St. 10. New 2-lane urban extension of Diotte St. from Buffard Rd. to Suzanne St. 11. New 2-lane urban extension of Sandwich W Pkwy. from Huron Church line to Malden Rd. 12. New 2-lane urban extension of Bouffard Rd. from Disputed Rd. to Huron Church Line. 13. New 2-lane extension of Golfview Dr. from Malden Rd. to Broderick Rd. 14. New 2-lane extension of Kelly Rd. from Malden Rd. to Matchette Rd. 15. Resurfacing and grading (urbanize) of Martin Ln. from Front Rd. to Matchette Rd. 16. Resurfacing and grading of Martin Ln. From Matchette Rd. to Malden Rd. 17. Resurfacing and grading of Malden Rd. from Martin Ln. to Kelly Rd. 18. Resurfacing and grading of Kelly Rd. from Malden Rd. to Broderick Rd. 19. Jog elimination to continuously connect Kelly Rd. at Disputed Rd. 20. New 2-lane urban extension of Kelly Rd. from Broderick Rd. to Huron Church Line Rd. 21. Resurfacing and grading of Kelly Rd. from Huron Church Line Rd. to Howard Ave.

Alternative	Road Network Improvements
2031 Alternative 3 (Preferred Build out)	This scenario assumes the existing network of collector and arterial roads with additional construction of the following projects: 1. 1-lane reduction of Front Rd. from Morton Dr. to International Ave. 2. New 2-lane urban extension of Mayfair Ave. from south of Huron St. to Laurier Dr. 3. New 2-lane urban extension of Mayfair Ave. from south of Sacred Heart Dr. to International Ave. 4. New 2-lane urban extension of Mayfair Ave. from southern terminus (south of Dunn Ave.) to Victory St. 5. New 2-lane urban extension of Mayfair Ave. from Victory St. to Martin Ln. 6. New 2-lane urban extension of Michigan Ave. from Gary Ave. to Victory St. 7. New 2-lane urban extension of Runstedler Dr. from Jewel St. to Dossenbach Dr. 8. Resurfacing and grading (urbanize) of Martin Ln. from Front Rd. to Matchette Rd. 9. Resurfacing and grading of Martin Ln. from Matchette Rd. to Malden Rd. 10. Resurfacing and grading of Malden Rd. from Martin Ln. to Kelly Rd. 11. Resurfacing and grading of Kelly Rd. from Malden Rd. to Broderick Rd. 12. Jog elimination to continuously connect Kelly Rd. at Disputed Rd. 13. Resurfacing and grading of Dunkirk Ave. from Ellis St. to Suzanne St. 14. New 2-lane urban extension of Diotte St. from Buffard Rd. to Suzanne St. 15. Resurfacing and grading of Villa Maria Blvd. from Huron Church Line Rd. to D'Amore Dr. north extension. 16. New 2-lane urban extension of D'Amore Dr. from Villa Maria Blvd. to Cousineau Rd.

Alternative	Road Network Improvements
2031 Alternative 3 (Preferred Build out)	17. New 2-lane urban extension of "New Road Link 1" from Geraedis Dr. to D'Amore Ext. 18. New 2-lane urban extension of Sandwich W Pkwy. from Huron Church line to Malden Rd. 19. New 2-lane urban extension of LaSalle Woods Rd. from western extension of Cousineau Rd. to Leptis Magna Drive. 20. 4-lane urban widening of Laurier Pkwy. from Malden Rd. to Howard Ave. 21. New 2-lane urban extension of Leptis Magna Drive from Laurier Parkway to Disputed Rd. 22. New 2-lane urban extension of Meo Boulevard from Sandwich W Pkwy. extension to Laurier Pkwy. 23. New 2-lane urban extension of Meo Boulevard from Laurier Pkwy. to Donato Drive 24. New 2-lane urban extension of Street "K" from Meo Boulevard to Huron Church Line Rd. 25. New 2-lane urban extension of Street "K" from Huron Church Line Rd. to Howard Ave. 26. New 2-lane urban extension of D'Amore Dr. from terminus to 6th Concession Rd. 27. New 2-lane urban extension of D'Amore Dr. from Laurier Pkwy. to 7th Concession Road 28. New 2-lane urban extension of Street "R". from Huron Church Line Rd. to Street "O". 29. New 2-lane urban extension of Street "O". from Laurier Pkwy. to Street "R". 30. New 2-lane extension of Kelly Rd. from Broderick Rd. to Huron Church Line Rd. 31. Resurfacing and grading of Kelly Rd. from Huron Church Line Rd. to Howard Ave. 32. Enhancement of Malden Road based on the EA update from Todd Lane to Meaghan Dr.

Preliminary Qualitative Analysis of Alternatives

An initial qualitative analysis was conducted for Alternatives 2 and 3. Alternative 2 was found to be deficient due to roads outside of the urban boundary that would not be needed in the timeframe of this TMP and due to roads within the protected natural environment that would not be permitted, such as a connection of Tenth Line to Laurier Parkway. Alternative 2 also did not fully consider road networks in plans of subdivision that would help accommodate future growth.

Based on this qualitative analysis, Alternative 3 was developed in finer details to address the noted concerns and to be carried forward for screenline analysis.

4.3.4 Screenline Analysis Process

A quantitative screenline network analysis was conducted for the Do Nothing scenario and Alternative 3. A screenline analysis is useful for transportation planning purposes as it measures the available capacity for north-south and east-west travel and identifies whether there is enough capacity in the system to accommodate forecast traffic volumes.

The data sources used in the analysis are summarized in **Table 16** and include traffic volume data, road capacity, modal split information, and directional volume ratios.

Table 16: Data sources used for screenline analysis

Data	Source
Traffic Volume Data (AADT)	2007 & 2017 Roads Needs Studies
Road Capacity	Road Class Hierarchy as established by the Standard Capacity of Roadways ITE Transportation Planning Handbook (2nd edition)
Modal Split Indexes	2016 Census Commuter Journey to Work data
Directional Volume Proportions	Turning Movement Counts of five key intersections

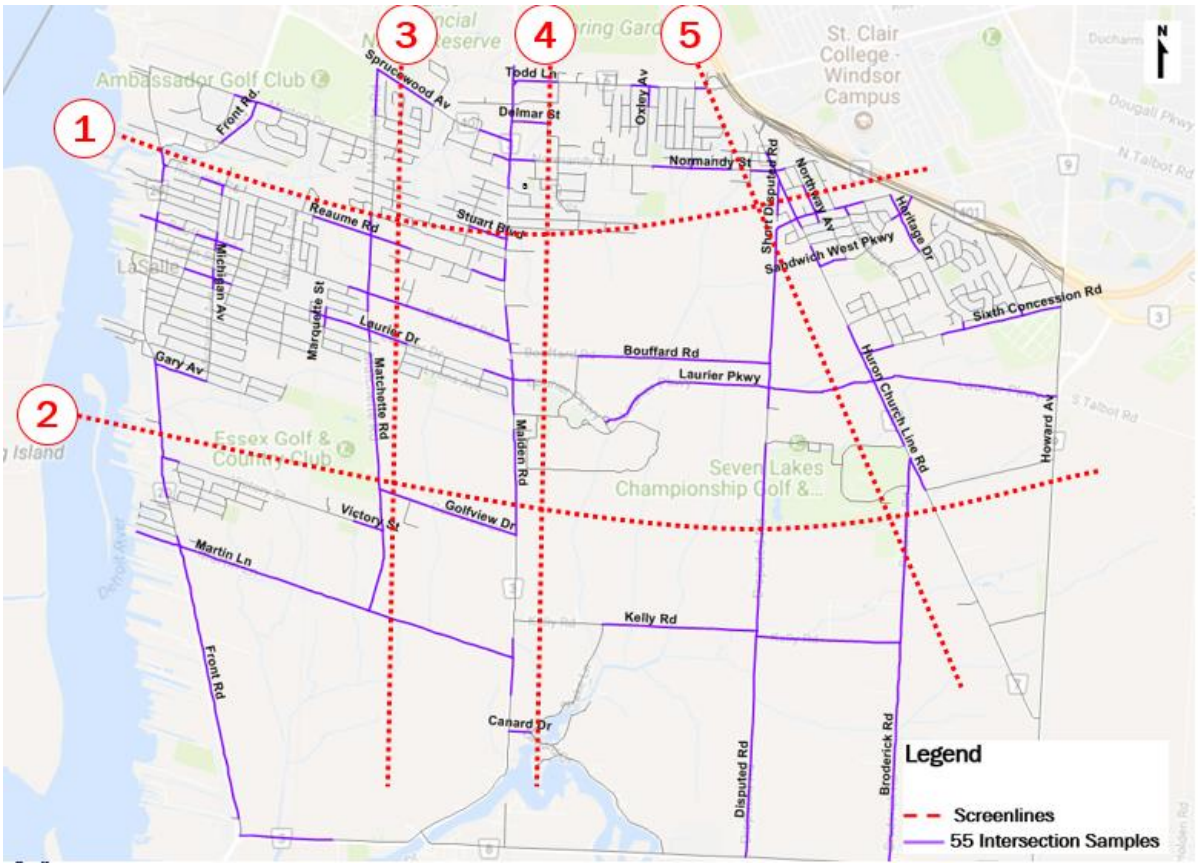
To set the baseline conditions for the road network analysis:

- **Existing available traffic volume data** (Annual Average Daily Traffic – or AADT) was extracted from the Town's 2007 and 2017 Roads Needs Studies;
- **Road capacity** was calculated based on road class hierarchy, as established by the Standard Capacity of Roadways ITE Transportation Planning Handbook (2nd edition);
- **Modal split indexes** were estimated using the 2016 Census Commuter Journey to Work data for the Town; and
- **Directional volume proportions** were estimated based on Turning Movement Counts of five key intersections[2] in the Town, which provided a robust sample of commute directional patterns during the weekday a.m., p.m., and Saturday peak periods. The latter was specifically helpful to identify and select the peak hour period and percentage of daily traffic.

[2] Intersections include: Ojibway Parkway and Sprucewood Avenue; Matchette Road and Sprucewood Avenue; Matchette Road and Reaume Road; Malden Road and Morton Drive; Malden Road and Plaza Entrance; and Malden Road and Todd Lane.

The screenline analysis was conducted by joining traffic volume data of 55 intersections across collector and arterial roads to the Town's latest GIS road network classified by hierarchy with the respective assigned capacity. The road links around each of these intersections were colour-coded to reflect a poor, fair, and good service level based on the volume to capacity ratios (v/c) of the peak hour. Five screenlines or axes were drawn over the road network of LaSalle to measure the directional network performance across key corridors. The screenlines used for baseline and future scenarios are depicted in **Figure 61**.

Figure 61: Location of screenlines in the Town of LaSalle



To assess future conditions to the year 2031, a ten-year (2006 -2016) historic traffic trend of 42 intersections that had AADT data available for both years was studied to estimate a growth rate for the future. The recent Roads Needs Study (2017) published was used to validate this exercise. Results showed consistency, and a one percent annual growth rate was applied to urban arterial and collector roads, and a 0.5 percent annual growth rate to rural roads. These rates were forecast to the year 2031 using 2016 AADT data as a base. A summary of the process to establish and measure baseline and future traffic conditions is detailed in **Table 17**. A comparative analysis was later conducted to evaluate the impact on the capacity of the road network and the new traffic volumes with and without preferred road improvements.

Table 17: Screenline analysis process

	Input	Process	Output
Volumes	▸ 2006 AADT Data (Roads Needs Study 2007) ▸ 2016 AADT Data (Roads Needs Study 2007) ▸ 2016 TMC Data of 5 key representative intersections	▸ Establish existing baseline traffic volume conditions ▸ Estimate a traffic growth rate based on 10-year trend period (2006-2016) ▸ Forecast future traffic volumes based on applied growth rate ▸ Determine hour of maximum demand (peak hour) and proportion of trips in relation to daily volumes ▸ Determine average directional volume proportions based on TMC data	▸ Estimated volume sample of 55 intersections for 2031 alternatives ▸ Applied annual growth rate to 2031 alternatives: ○ Arterial and Collector Roads: 1% ○ Rural Roads: 0.5% ▸ Peak hour studied: ○ Weekday p.m. peak ○ 12% of daily volumes ▸ Average directional volume proportions applied to AADT (p.m. peak): ○ Northbound: 36% ○ Southbound: 64% ○ Westbound: 48% ○ Eastbound: 52%
Capacity	▸ Standard Capacity of Roadways ITE Transportation Planning Handbook (2nd edition)	▸ Roadway Capacity = Maximum number of vehicles per lane per hour * Number of lanes in roadway	▸ Assigned Capacity: ○ Arterial: 1000 vehicles/lane per hour ○ Collector: 700 vehicles/lane per hour ○ Minor Collector: 500 vehicles/lane per hour

	Input	Process	Output
Road Network	▸ Baseline Conditions (2016): ○ Existing road network (GIS) ○ Future 2031 Alternatives: ○ Existing road network (GIS) ○ Proposed recommendations including but not limited to previously proposed in Official Plan, Secondary Plans, and Environmental Assessments	▸ Develop three alternative scenarios for the future road network to enhance connectivity and serve new development areas	▸ Road Networks: ○ 2016 – Existing Conditions ○ 2031 – Alternative 1 ○ (Do Nothing) ○ 2031 – Alternative 2 ○ 2031 – Alternative 3 (Preferred)

Do Nothing scenario and Alternatives 3 were chosen for the screenline analysis exercise. The growth rate was applied to estimate future traffic volumes during the p.m. peak hour in the horizon year of 2031. While Alternative #1 (2031 Do Nothing) simulates traffic based on existing trip patterns, Alternative #3 used the trip distribution/assignment exercise with the new proposed road projects to address congestion shown on road links at or above capacity (volume to capacity ratio > = 1).

Trip distribution and assignment for this scenario was:

- Conducted with the goal of shifting through-traffic of Front Road, Matchette Road and Malden Road to the east through Laurier Parkway to use Howard Avenue and Highway 401 for north-south travel; and
- Reinforced with the idea that future development areas in the east, especially within the Bouffard-Howard districts, will likely attract more trips as new residential, commercial or recreational-oriented development takes place; and
- Guided by the premise that congested traffic will naturally seek to follow the 'path of least resistance' to reach a destination zone through the next available order of high-tier roads.

This trip distribution exercise took into consideration both through-traffic patterns and individual road corridor traffic influx and outflow patterns of LaSalle-destined trips to different Town zones. Additionally, Alternative #3 sets an average of 7.5 percent trip reduction goal as the modal split shift to sustainable modes to the year 2031. The trip distribution exercise was helpful to evaluate the capacity and resilience of the road network if trips entering the Town from the west were to be shifted to the east to access the Town.

4.3.5 Screenline Analysis Results

The screenline volume to capacity (v/c) road network analysis was conducted for the Baseline Conditions (2016), Alternative #1 (Do-Nothing) and Alternative #3. **Table 18, Table 19,** and **Table 20** summarize the assessment based on the aggregate volume and capacity indexes along the respective screenlines and corresponding directions. **Figure 62** and **Figure 63** illustrate the volume to capacity ratios on the individual road links around the intersection samples. The volume to capacity ranges were classified following industry standards:

- At or over road capacity, equivalent to high congestion, yielding a volume to capacity (v/c) ratio greater than or equal to 1.
- Reaching road capacity, equivalent to moderate congestion, yielding a volume to capacity (v/c) ratio between 0.8 and 0.99.
- Available road capacity, equivalent to free-flow conditions or low congestion, yielding a volume to capacity (v/c) ratio between 0 and 0.79.

Screenline analysis for the 2016 existing conditions as shown in **Table 18** suggests the overall network and all locations along the screenlines are operating at near free-flow conditions with available capacity. The overall network volume to capacity (v/c) ratio in all directions is 0.38. While the screenline #1 shows the highest v/c (0.68), it is still well within the road capacity and no improvements are required. The southbound traffic flow along Malden Road and Matchette Road indicates the trip volumes returning to Town from work during the p.m. peak hour. The analysis was completed for the p.m. peak hour in order to analyze the highest peak volume of the day.

Table 18: Screenline analysis baseline conditions (2016) p.m. peak hour

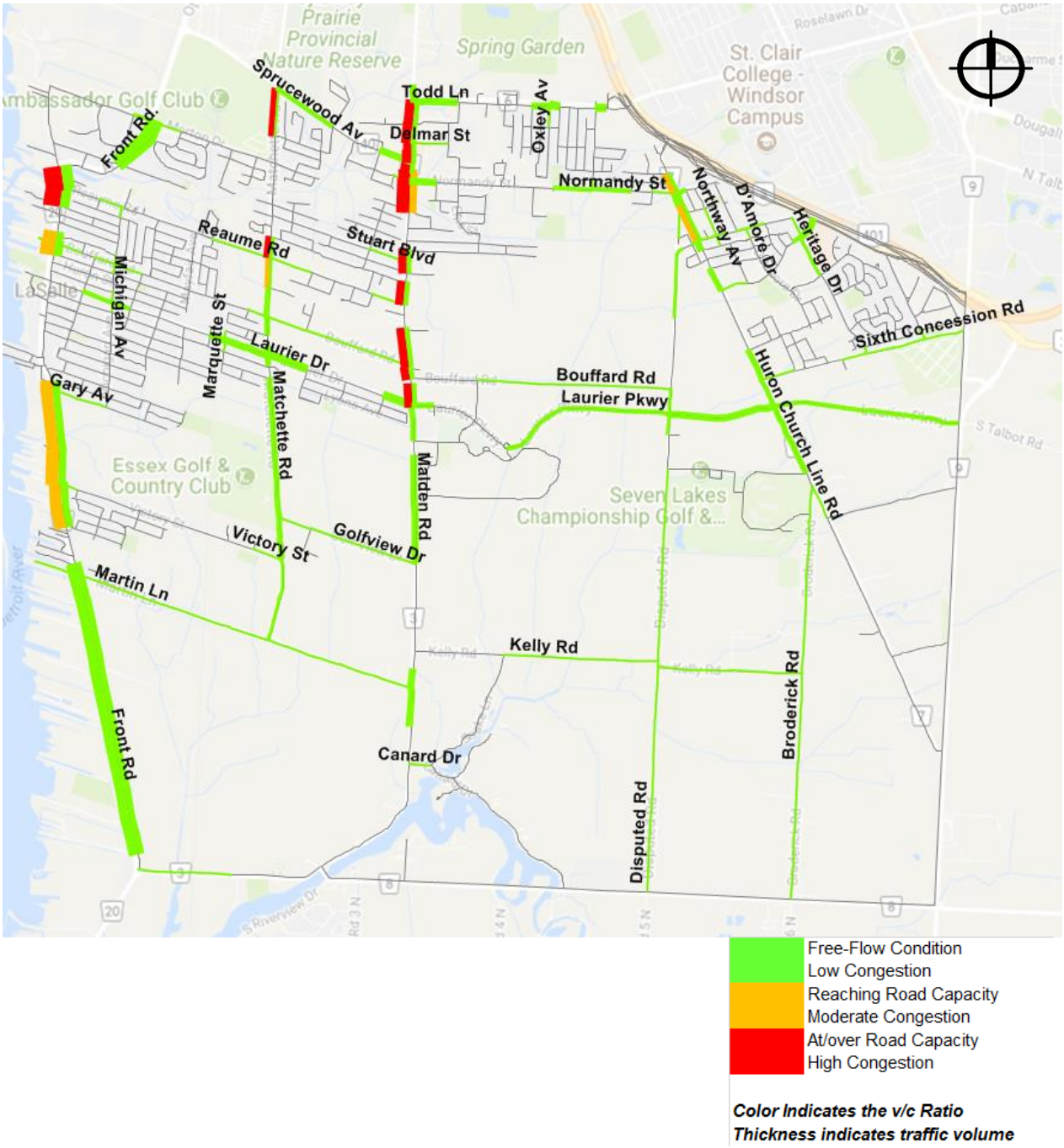
Screenline No.	Location	Direction	Volume	Capacity	Volume to Capacity Ratio
1	North Parallel of Reaume Rd. / Sandwich Pkwy.	NB	2,714	6,800	0.40
		SB	4,591	6,800	0.68
2	North Parallel of Golfview Dr. / South of Seventh Concession Rd.	NB	1,694	6,100	0.28
		SB	2,866	6,100	0.47
3	East Parallel of Matchette Rd.	WB	1,228	4,800	0.26
		EB	1,163	4,800	0.24
4	East Parallel of Malden Rd.	WB	1,374	4,100	0.34
		EB	1,270	4,100	0.31
5	West Parallel of Disputed Rd./ Huron Church Ln.	WB	1,316	4,100	0.32
		EB	1,216	4,100	0.30
		Total NB/WB	**8,325**	**25,900**	**0.32**
		Total SB/EB	**11,106**	**25,900**	**0.43**
		Total All Directions	**19,431**	**51,800**	**0.38**

Alternative #1 (Do-Nothing) forecasts an increment in trip volumes across the whole road network to the year 2031 to reflect population and employment growth, but with the capacity of the network essentially staying as-is. This exercise was done to validate whether the existing road network had enough capacity to accommodate future forecasted volumes. The results of screenline analysis of Alternative #1 (**Table 19**) suggest that while v/c aggregate ratios increase across screenlines, the road network still has sufficient capacity with an overall volume to capacity ratio of 0.44 in all directions. Screenline #1 showing southbound traffic continues to indicate the highest v/c ratio (0.78). This screenline also exhibited the highest v/c ratio in the existing conditions. However, if individual road links are examined more closely across this axis on the west districts of Town (refer to **Figure 62**), there are three portion of road links on Malden Road, Matchette Road, and Front Road that are forecast to be at or above capacity on the southbound direction. This suggests that if travel behavior remains unchanged until 2031, these three corridors will likely experience congestion and vehicle delays during the p.m. peak hour.

Table 19: Screenline analysis alternative #1 (Do-Nothing) p.m. peak hour

Screenline No.	Location	Direction	Volume	Capacity	Volume to Capacity Ratio
1	North Parallel of Reaume Rd. / Sandwich Pkwy.	NB	3,152	6,800	0.46
		SB	5,332	6,800	0.78
2	North Parallel of Golfview Dr. / South of Seventh Concession Rd.	NB	1,966	6,100	0.32
		SB	3,328	6,100	0.55
3	East Parallel of Matchette Rd.	WB	1,425	4,800	0.30
		EB	1,350	4,800	0.28
4	East Parallel of Malden Rd.	WB	1,595	4,100	0.39
		EB	1,474	4,100	0.36
5	West Parallel of Disputed Rd./ Huron Church Ln.	WB	1,528	4,100	0.37
		EB	1,412	4,100	0.34
		Total NB/WB	**9,666**	**25,900**	**0.37**
		Total SB/EB	**12,896**	**25,900**	**0.50**
		Total All Directions	**22,562**	**51,800**	**0.44**

Figure 62: Volume to capacity map (Alternative #1 - 2031)

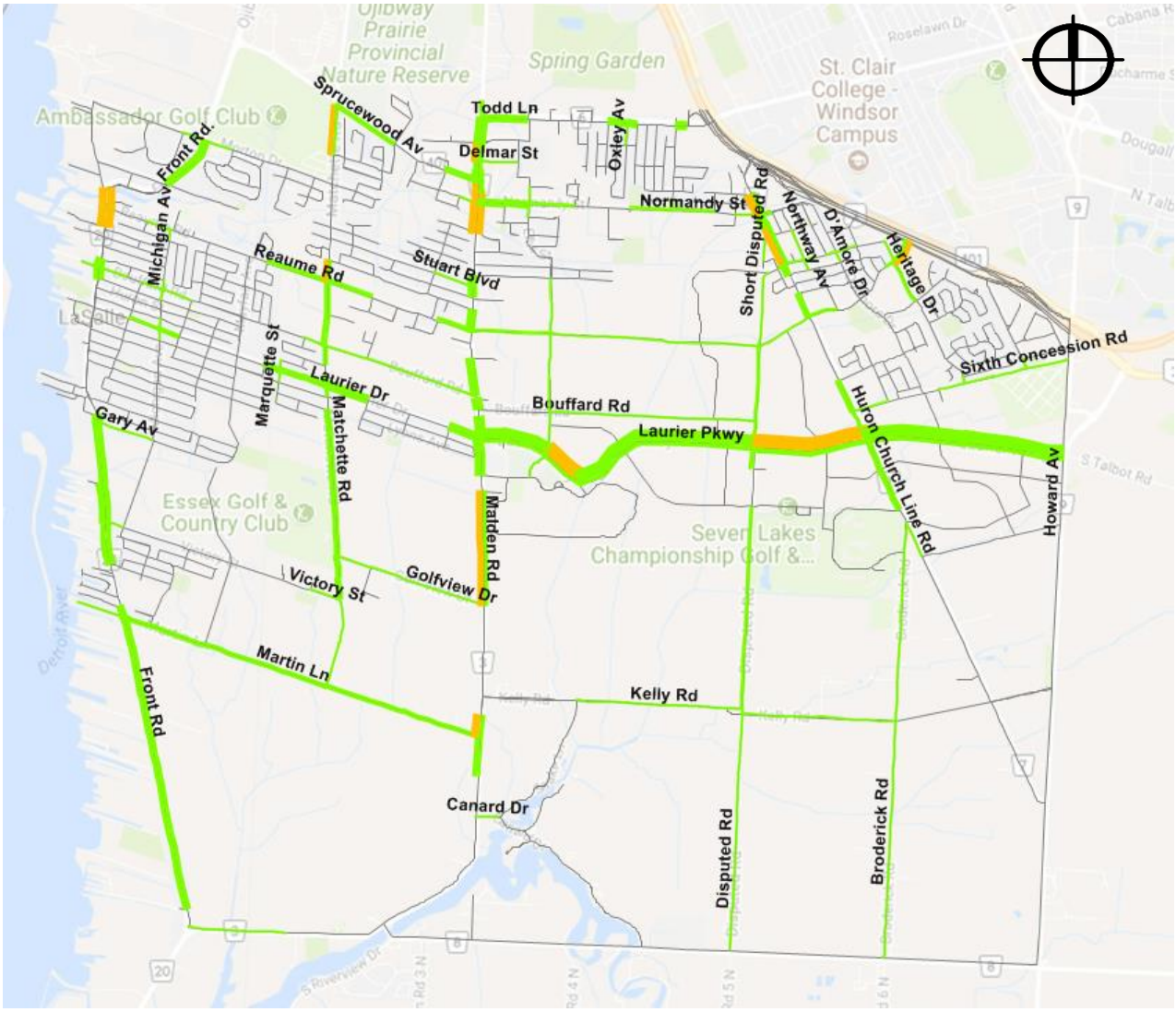


The screenline analysis results of Alternative #3 (**Table 20**) shows increased capacity in the Town's network with lower v/c ratios across most screenlines when compared to the Do-Nothing (Alternative #1) counterpart. As this scenario assumes that traffic will shift to the east, Screenline #1 southbound movements show considerable volume to capacity ratio improvement when compared to Alternative #1 (0.79 to 0.51). Trips that are redistributed to enter LaSalle from the eastern links of the road network (Howard Avenue, Sandwich West Parkway west extension, and Laurier Parkway) suggest that proposed road capacity improvements are adequate to meet future demand and relieve congestion from existing corridors like Malden Road, Matchette Road, and even Front Road with the revitalization pilot project. The new travel patterns reflecting a shift of trip volumes to the east (principally along Laurier Parkway) show the westbound increment on Screenline #4's v/c from 0.39 to 0.51; which is a good level of service for an arterial 4-lane road and still would have additional capacity should vehicle volumes increase.

Table 20: Screenline analysis alternative #3 p.m. peak hour

Screenline No.	Location	Direction	Volume	Capacity	Volume to Capacity Ratio
1	North Parallel of Reaume Rd. / Sandwich Pkwy.	NB	2,633	6,800	0.39
		SB	3,475	6,800	0.51
2	North Parallel of Golfview Dr. / South of Seventh Concession Rd.	NB	1,805	6,100	0.30
		SB	2,428	6,100	0.40
3	East Parallel of Matchette Rd.	WB	2,057	4,800	0.43
		EB	1,432	4,800	0.30
4	East Parallel of Malden Rd.	WB	2,973	5,800	0.51
		EB	1,694	5,800	0.29
5	West Parallel of Disputed Rd./ Huron Church Ln.	WB	2,987	5,800	0.51
		EB	1,549	5,800	0.27
		Total NB/WB	**12,456**	**29,300**	**0.43**
		Total SB/EB	**10,578**	**29,300**	**0.36**
		Total All Directions	**23,033**	**58,600**	**0.39**

Figure 63: Volume to capacity map (Alternative #3 – 2031)



4.3.6 Qualitative Evaluation of Alternative Future Road Networks

A qualitative assessment was undertaken to provide a comprehensive and multi-dimensional evaluation of the three road network alternatives. This exercise complements the quantitative screenline analysis by exploring the implications and opportunities to integrate or support other modes of transportation, Complete Streets, new development areas, rural areas, goods movement among other. The results of the analysis are summarized in **Table 21**.

Based on the evaluation conducted, Alternative #3 yields the highest qualitative score. This scenario scores higher in most aspects analyzed compared to Alternative #2, save on rural to urban connectivity and financial cost implications. Alternative #3 supports active transportation and transit facilities as well as this alternative maximizes opportunities to connect new development areas with the existing network of main collector and arterial roads. Both Alternatives #2 and #3 propose a Front Road lane reduction as a complementary strategy to help revitalize the Waterfront District by providing a balance of transportation options, supporting local businesses and creating a sense of place and destination along this corridor. One main difference is that Alternative #3 proposes the extension of that project north to Morton Drive to further connect with existing City of Windsor facilities.

4.3.7 Recommended Alternative

As the qualitative and quantitative analysis of the three alternatives have demonstrated, the road network proposed in Alternative #3 is the preferred option in this assessment, as it is likely to result in the most positive benefits to the Town.

Table 21: Multi-criteria evaluation of road network alternatives

	Assessment Criteria	Evaluation Measures/Consideration	2031 Alternative 1 (Do-Nothing)		2031 Alternative 2		2031 Alternative 3 (Preferred Build out)	
1	**Active Transportation**	Ability to support pedestrian and cycling infrastructure and facilities	◔	The existing network will continue to support existing off-road and on-road walking/cycling facilities. Increased vehicular traffic congestion may impose more conflicts on selected busy corridors such as Front Rd. and Malden Rd.	◕	Able to support additional pedestrian, bicycle connections along new proposed road projects, including connections in the Howard-Bouffard District between Huron Church Line Rd. and Malden Rd. Front Rd. pilot would also introduce separated facilities as part of the efforts to revitalize the Waterfront District.	●	Able to support additional pedestrian, bicycle connections along new proposed road projects, including ample opportunities for separated facilities within the Howard-Bouffard District. Front Rd. pilot would also introduce separated facilities as part of the efforts to revitalize the Waterfront District and connect more seamlessly with Windsor trail system north of Morton Dr.
2	**Complete Streets**	Ability to support Complete Streets	◔	The existing Complete Streets that currently cater to various modes of transportation (Todd Ln., Laurier Dr. and Malden Rd.) will continue to serve the community but may experience more conflicts due to higher vehicular congestion, along these and other corridors.	◑	This option supports existing Complete Streets and proposed new ones along Front Rd. (especially between Reaume Rd. and International Ave.) and a new multi-modal boulevard on Laurier Pkwy.	●	This option supports existing Complete Streets and proposed new ones along Front Rd. (especially between Morton Dr. and International Ave.) and a new multi-modal boulevard on Laurier Dr. west of Malden Rd.

	Assessment Criteria	Evaluation Measures/Consideration	2031 Alternative 1 (Do-Nothing)		2031 Alternative 2		2031 Alternative 3 (Preferred Build out)	
3	**Transit**	Ability to support Transit within arterial/collector road network	◑	The existing road network is able to support the existing Route 25 as it currently does, and no additional road capacity would be needed to introduce a bidirectional service or increase frequencies. May experience increased delays along Malden Rd. and Front Rd. during congested traffic periods. Does not offer new opportunities to serve the south-west district of LaSalle nor future development areas north of Laurier Pkwy.	◑	Able to maintain current service and increase coverage to future development areas north of Laurier Pkwy. through Sandwich W Pkwy. extension to Reaume Rd. (Howard-Bouffard District).	◕	Able to maintain current service and provide coverage to the south-west district of LaSalle through the proposed extension of Michigan Ave. or Mayfair Ave. Future development areas north of Laurier Pkwy. could also be served through Sandwich W Pkwy. extension to Reaume Rd. (Howard-Bouffard District).
4	**Placemaking**	Ability to support placemaking and community-oriented destinations	◔	Existing road infrastructure will continue to support established facilities around the Civic Centre and Vollmer Complex.	◕	Proposed road diet on Front Rd. may provide the opportunity to revitalize the Waterfront District and become an attractive Town destination.	●	Proposed road diet on Front Rd. may provide the opportunity to revitalize the Waterfront District and become an attractive Town destination. Widening of Laurier Pkwy. could foster opportunities for a mixed-use development corridor with pedestrian boulevards and in-boulevard multi-use pathway.

	Assessment Criteria	Evaluation Measures/Consideration	2031 Alternative 1 (Do-Nothing)		2031 Alternative 2		2031 Alternative 3 (Preferred Build out)	
5	**Rural to Urban**	Ability to enhance connectivity with rural areas and improve/upgrade rural roadways	◔	Existing network of roadways provide connectivity to some rural areas in Town but may come short in connecting new development in rural locations.	◕	Proposed roadways such as the east extension of Golfview Dr. and the west extension of Kelly Rd. could improve greater connectivity to rural areas south of the urban boundary. Resurfacing and grading of Martin Ln. all the way to Broderick Rd. and the further east extension to Howard Ave. would provide a higher tier continuous southern east-west corridor across rural side of Town.	◑	Resurfacing and grading of Martin Ln. all the way to Broderick Rd. and the further east extension to Howard Ave. would provide a higher tier continuous southern east-west corridor across rural side of Town.
6	**New Development Areas**	Ability to support opportunities to serve new development districts within the existing urban boundary of LaSalle	○	The existing road network provide very limited connectivity to proposed new development areas within Town.	◑	Proposed collector roadways within Howard-Bouffard district will be able to serve new development and provide access to other main arterial roads.	●	Proposed collector roadways within Howard-Bouffard district will be able to serve new development and provide access to other main arterial roads. Michigan Ave. and Mayfair extensions will be able to serve development north of Victory St. Proposed roadways north of 7th Concession Rd. will be able to provide access to Laurier Pkwy. to Hwy. 401.

	Assessment Criteria	Evaluation Measures/Consideration	2031 Alternative 1 (Do-Nothing)		2031 Alternative 2		2031 Alternative 3 (Preferred Build out)	
7	**Environmental Impact**	Minimize impact on environmentally sensitive areas	◕	Low environmental impact in terms as no big road infrastructure could disrupt local flora and fauna. More acute vehicular congestion on main corridors (Malden Rd., Matchette Rd. and Front Rd) may impact air quality.	◑	Proposed south extension of Tenth St. and east extension of Bouffard Rd. impact local woodlots which would have to be deforested. However, fewer road projects have a lower footprint on the local environment.	◑	Proposed roadway network goes through greenfield sites in the urbanized area. Extension of Mayfair Ave. south of Sacred Heart Dr. may see some environmental challenges going through the small woodlot.
8	**Financial Costs**	Estimated build-out cost implications	●	Main costs would revolve around the upkeep and maintenance of existing network of collector and arterial roadways.	◕	Fewer roadway projects may entail less onerous investment or lower development-led tax collection.	◑	More roadway projects entail more onerous investment or higher development-led tax collection.
9	**Goods Movements**	Ability to support movement of consumer goods to commercial zones	◔	No new connections to facilitate goods movements are provided and existing supply routes would have to be maintained.	◑	Some additional connectivity directly to Hwy. 401 through Sandwich W Pkwy. could provide an alternative to suppliers from the east into Town.	●	More connectivity to Hwy.401 with more access and capacity to upper-tier roadways (such as Laurier Pkwy. widening, Sandwich W Pkwy. extension, and connecting link into D'Amore Dr. and onto Normandy St.) that lead to commercial areas in Town.
	○ = Least Benefit/Higher Impact ⟶ ● = Most Benefit/Lower Impact							

4.4 Supporting Policies

Policies have been prepared to help support travel throughout the Town and to help with the implementation of the preferred alternative. Policies addressed in this section include:

- Road design standards,
- Emerging trends and autonomous vehicles;
- Travel demand management; and
- Traffic calming.

4.4.1 Road Design Standards

The Town of LaSalle's Official Plan includes a Zoning By-Law and policy documents for the long-range planning of the Town. The Official Plan, last updated and approved in October 2018, includes the classification of types of roads in the transportation system, their functions, their right-of-way (ROW), and recommended elements within the road profile. Schedule D of the Official Plan shows the road classification with three categories: arterial, collector and local roads.

The hierarchical system of the arterial, collector and local roads states that the arterial roads provide for high volume of vehicle traffic at a moderate speed for inter-urban trips, and collector roads provide a connection between local and arterial roads at low to moderate speeds. All roads that are not classified as arterial or collector are expected to function as local roads, which accommodate lower volume of traffic. A higher order of road class type are given priority for any repairs to maintain the traffic flow.

The minimum road widths for each of the road types are:

- Arterial Roads: 30 - 33 metres
- Collector Roads: 22.5-26 metres
- Local Roads: 20.1 metres (or 15.2 metres with 2.5 metres of easements on both sides of the road for reduced right-of-way, if approved by Council)

The Official Plan supports active transportation facilities to provide separation between vulnerable road users such as pedestrians and cyclists, and motor vehicles. Development and maintenance of off-road trails is encouraged as part of LaSalle's 'greenway system', and the connection to points of interest such as schools, commercial districts, and open spaces. The OP states that sidewalks are to be provided on both sides of the street for new developments. Overall, the intention of the transportation system is to provide safe and convenient network for all transportation methods, and to promote walking and cycling within and between all municipal corridors and developments in the Town's urban area.

The current road network and its road classification have been reviewed to enhance a multi-modal and complete streets approach. Developing a road design standard with a set of cross-sections for each road classification will provide connectivity throughout the Town's network and it can be incorporated into improvement or new road construction projects.

Complete Streets are intended to address all users, all ages, mode of transportation, and physical abilities to provide safe and convenient transportation. Through the lens of Complete Streets, it

allows for a street to have a different intent and purpose compared to automobile-centric roads. The takeaway is that the function of the road types is not to be altered, but to consider other modes and users for all road types. This will allow arterial roads to be a "complete" arterial road while serving a different function than a "complete" local road.

Based on the review of the current standards and incorporating complete street design guidelines, the road design standard has been identified and updated. **Table 22** includes the existing elements as shown in the OP and additional recommendations. There are four added sections for each road classification: cyclists, pedestrian, transit, and goods movement.

Table 22: Recommended road classification

	Arterial Roads	Collector Roads	Local Roads
Function	Provide for high volume passenger and commercial traffic, including major public transportation, provides for inter-urban travel, and provides direct access to properties	Provide for moderate amounts of traffic between local and arterial roads along with direct access to properties	Provide direct access to various abutting land uses
Speed	Moderate	Low to Moderate	Low
Right of Way (metres)	30.5 - 26.2	26.1 – 22.0	20.1
Driveway/Intersection Spacing	Moderate number of driveways and new road intersections.	Frequent driveways within the residential area	Frequent driveways within the residential area
Pedestrian Facilities	Sidewalks on both sides of the street with minimum 1.5m of the sidewalk width. 2.55 m sidewalk recommended. Pedestrian amenities and street furniture such as street lighting, benches, wayfinding signage) recommended	Sidewalks on both sides of the street with minimum 1.5m of the sidewalk width.	Sidewalks on both sides of the street with minimum 1.5m of the sidewalk width.

	Arterial Roads	Collector Roads	Local Roads
Bicycle Facilities	Separated cycling facilities such as in-boulevard pathways are recommended where feasible. 3.0 m in-boulevard facilities are recommended.	Separated cycling facilities where feasible. 3.0 m in-boulevard facilities are recommended. On-road cycling facilities are permitted. Shared space (signed bike route) where ROW width is not available for a separate facility and where traffic volumes are low.	Separated cycling facilities where feasible. On-road cycling facilities are permitted.
Transit Facilities	Priority transit services with amenities such as bus bays, bus shelters, and schedule information.	Transit services with amenities such as bus shelters and schedule information.	No transit services.
Goods Movement	Provide comprehensive goods movement policies outlining LaSalle's truck routes and its connection to the county and province's goods movement routes.	Limited goods movement.	Local deliveries only.
Parking	On-street parking are not permitted.	On-street parking on at least one side of the road, typically on the side of the road with development.	On-street parking on at least one side of the road, typically on the side of the road with development.

Two cross-sections for road classification types, arterial and collector, were developed. Each cross-section shows the total right-of-way, travel lane width, parking lane width, streetscaping, boulevard, sidewalk and cycling facility. The development of the cross-sections was focused on providing space within the right-of-way for all road users and incorporating the latest design guidelines for cycling and

pedestrian facilities. The overall concepts of the recommended cross-sections were guided by the following principles:

- Providing as much physical separation between the cyclists and vehicles;
- Providing pedestrian facilities on both sides;
- Minimum bike lanes are at 1.5 metre as per OTM Book 18;
- Minimum travel lane of 3.25 metres; and
- Minimum parking lane of 2.5 metres.

The recommended cross-sections are provided in **Appendix C**.

RECOMMENDATIONS

- Update the road design standards to enhance a multi-modal and complete streets approach. The integration of the complete streets approach allows for a cohesive road network within the available right-of-way and connectivity throughout the Town's network.
- Update the design standards with four additional sections for each road classification: pedestrian, cyclist, transit, and goods movement.
- Update the Development Standards cross-sections for arterial and collector roads to:
  - Provide as much physical separation between the cyclists and vehicles with facilities;
  - Provide pedestrian facilities on both sides;
  - Minimum bike lanes are at 1.5 metre as per OTM Book 18;
  - Minimum travel lane of 3.25 metres; and
  - Minimum parking lane of 2.5 metres.

4.4.2 Emerging Trends and Autonomous Vehicles

With today's modern technological advancement, transportation methods and travel options are being developed, changed, and improved. New technology including ride-sharing applications, e-bikes and e-scooters, electric vehicles, and even autonomous vehicles are becoming more prevalent and realistic modes of travel. These services are expanding and growing to accommodate and serve more municipalities. To embrace and prepare for the future, governments are considering the policies and regulations to ensure the smooth introduction and operation of these services.

Intelligent Transportation System (ITS)

Intelligent Transportation Systems (ITS) include a wide range of technology paired with infrastructure to enhance efficiency of transportation operations for smarter, more convenient and safer travelling. The objective of ITS is to minimize travel time, traffic congestion, and increase safety and comfort through real-time information on transit and traffic conditions.

Transit Windsor's program "Where's My Bus" utilizes ITS and integrates with maps and schedules to assist riders with relevant information such as the current location, arrival times and delays of the

particular bus. This program includes features of Google Maps to help riders plan their trips with bus stop text messaging, real-time passenger information, automated stop announcements and an interactive voice response system. The various message delivery options for keeping track of the transit schedule are to ensure accessibility to all users. The web portal feature shows real time locations of buses on their routes, and security cameras for enhanced safety of riders and operators.

ITS practices implemented by MTO on provincial highways and at the border of Windsor/Detroit consist of queue and border delay warnings and traffic updates, and cameras dispersed along routes to inform the ministry, OPP, and traffic analysts of any problems.

Other forms of ITS implemented in other municipalities and that can be expanded in LaSalle are Open Data and performance monitoring. LaSalle has already launched and is in use of an online web-based interactive map service, infoLaSalle. This mapping tool provides information on the network of road, trail, and sidewalk, environmental and topographic, and public services. Additional traffic information such as the daily traffic volume, expected construction schedule, and truck routes can be useful for residents and businesses for information and in decision making. Identifying and developing performance monitoring measures is a method of keeping track of the Town's progress towards its goals and objectives. Examples of performance measure are expected travel time, transit delay time and modal split. Performance indicators using ITS technology can improve effectiveness of monitoring system and enhance transparency and accountability of Town's policies.

Ridesharing

Ridesharing platforms, such as Uber and Lyft, are becoming more common in cities and towns as they increase accessibility and allow people to provide taxi services from privately owned vehicles. Uber is already in operation in the City of Windsor and the Town of LaSalle has considered the platform as an alternate shared transportation service that can help with mobility. The last update regarding Uber was in the 2017 Council Services' departmental goals and objectives in which they commented that they were "awaiting results of studies in larger urban centres as all examinations to date have been conducted by consultants."

The Town should continue to consider how ridesharing services can benefit Town residents. With the changes to Taxi licensing by-laws, further needs study for ridesharing opportunities is recommended to be able to provide alternative modes of transportation to LaSalle residents.

Electric Vehicles

Electric vehicles and hybrid vehicles are becoming the environmentally friendly alternative to the traditional automobile. As car manufacturers start to provide more affordable options for electric vehicles, municipalities should prepare proper infrastructure to accommodate this type of transportation. Providing high speed charging stations at gas stations and points of interest are the foundation to be able to attract the population to invest in electric vehicles. LaSalle is currently on the right path by providing six charging stations located at the LaSalle Civic Centre and one station at Windsor Crossing Outlet Mall. Depending on the vehicle, a full charge can take as little as 3 hours with an approximate average of 6 hours. To further support electric vehicles, the Town can install charging stations at Town facilities, such as the Vollmer Centre and potential carpool lots. Additionally, the Town can consider the type of charging station being installed. Level 3 charging

stations can provide an 80% charge in 30 minutes. This type of convenience could further encourage the adoption of electric vehicles.

Bikeshare, Scooter-Share, E-Bikes

How commuters travel their first and last mile has become a prominent issue in transportation planning. The idea of micro-mobility provides options for modes of travel to complete one's commute. Bikeshare and scooter-share services have been implemented to address this first/last mile issue in many cities around the world. City bikeshare initiatives are only present in seven major Canadian cities and scooter-share services just started their first pilot project in Waterloo.

E-bikes, or power-assisted bikes, also help with the first and last mile challenge and provide a mode of active transportation with an added battery-powered electric motor that can be used to assist the rider in pedalling and intensifies the amount of power to the wheel. The Ministry of Transportation Ontario regulates the use of e-bikes and the federal government sets standards for e-bikes that must be met in order to be permitted on public roads. In general, traffic laws that apply to bicycles also apply to e-bikes.

While bikeshare, scooter-share and e-bike initiatives are still relatively new, it would be beneficial to develop legislation that defines where these scooters, bikes, and e-bikes should be permitted, if helmets are required, and any other concerns that may arise. The continued expansion and maintenance of active transportation infrastructure will help promote the use of these devices. Promotion and education of these devices is important as the public will need to be aware of the functionality and common practices for these emerging modes of transportation to ensure the safety of all people on the road.

Autonomous Vehicles

Autonomous vehicles (AVs) are vehicles designed to operate without a driver having to continually control steering, acceleration or braking. This is achieved with the help of numerous tools such as GPS, lane following, vehicle tracking, sensors, cameras and an intelligence system that can monitor the driving environment.

This technology is currently in its early stages of development are currently in the pilot stage within Canada, and it is unclear as to how soon the vehicles will be widely deployed on the roads. Essex County is a part of the Municipal Alliance for Connected and Autonomous Vehicles in Ontario (MACAVO) that is working to create a seamless well-coordinated 'Preferred AV Testing Corridor' from Windsor to Ottawa. This initiative is designed to educate and inform professionals on the functionality and behaviour of these vehicles to further their understanding and will become a foundation for future planning considerations for AVs.

Autonomous vehicles have numerous benefits based on current scientific studies. They are designed to be safer and more efficient, may reduce the need for parking, will open up opportunities for car-sharing and will increase accessibility for those with mobility challenges.

The Town should engage Essex County to keep abreast with the developments of the MACAVO and consider any actions to be taken to facilitate AV implementation.

RECOMMENDATIONS

- Develop an ITS strategic plan to identify any gaps or opportunities for the Town to act upon to better position the Town to benefit from these systems.
- Consider how alternative transportation methods such as ridesharing can provide potential options for residents.
- Continue to install electric vehicle charging stations to promote environmentally friendly travel options.
- Continue the expansion and maintenance of active transportation infrastructure to help with the first and last mile concerns.
- Engage Essex County to keep abreast with the developments of the MACAVO and consider any actions to be taken to facilitate AV implementation.

4.4.3 Travel Demand Management

Travel Demand Management's goal is to reduce single occupancy vehicles from the road network in peak travel hours to reduce congestion and help consider alternative methods of travelling. The following section includes what TDM is, how it can be implemented in the Town of LaSalle and guidelines that may be required.

What is Travel Demand Management?

Travel Demand Management (TDM) consists of policies, programs, and initiatives to alter the existing travel mode share through reducing car dependency and instead encouraging other viable modes of travel including transit, walking, cycling, and carpooling, as well as measures that reduce the need to travel or the timing of trips, such as telecommuting and flexible working hours. A TDM framework is to implement measures that identify both land use and infrastructure-based changes, as well as policy and behaviour-based changes. Travel Demand Management is an effective way to manage congestion and traffic while avoiding widening and adding new roads.

Why is it Important?

Travel Demand Management seeks to address traffic congestion, improving mode share for car alternatives, high car dependency rates, climate change, and health. Moving away from single occupant automobile trips can help reduce the number of cars on the road, limit congestion and mitigate the amount of greenhouse gas emissions released from vehicles. Transit use and active transportation also promote healthy lifestyles as people are walking or cycling to and from the transit stop or their final destination. Some TDM measures can be implemented without significant costs as many of them involve policy and user behaviour changes.

Guidelines

Municipalities in Ontario have created TDM guidelines that are comprised of strategies and a matrix of tools to better select and implement travel demand measures. It is recommended that the Town should develop a similar set of guidelines to ensure smooth execution and maintenance of appropriate TDM measures. Guidelines should include both examples of TDM measures as well as

an implementation plan to effectively enforce the measures. A monitoring plan should also be considered to evaluate the effectiveness of different measures and decide what works and what does not for different scenarios. Another option could be to conduct pilot programs of certain measures as another means of evaluating them.

Potential Travel Demand Management Measures

A toolkit of TDM measures can be used by workplaces, schools, and developers to contribute towards the Town's goals. Both physical infrastructure and programming are effective in multiple scenarios. Physical infrastructure includes high density developments near transit hubs, limiting the number of parking spaces provided, or building additional active transportation infrastructure like bike lanes and multi-use paths to promote these modes of travel. Programming measures include educational and policy changes such as promotional events to help promote active transportation and taking transit, introducing paid parking and delegating carpool parking spots.

Table 23: Example of suggested TDM measures for the Town of LaSalle

Category	TDM Measures
Workplace	▸ Bicycle parking and end of trip facilities (racks, lockers, storage rooms, showers, locker rooms) ▸ Carpool preferred parking spots ▸ Telecommuting ▸ Variable work hours, compressed work week ▸ Online ride matching applications/ websites ▸ Shared parking, paid parking
Land Development	▸ Residential developments (ideally high density) close to amenities and transit hubs to eliminate the need for a car ▸ Changes to parking standards: reduced minimum/ maximum requirements
School	▸ Bicycle parking ▸ Walk / bike to school programs ▸ Crossing guards and other safety measures ▸ Improved active transportation infrastructure in school zones
Transit	▸ Transit incentives such as student transit passes or transit pass programs for large employers to get a discount on a bulk order ▸ Encouraging people to take transit for special events and even providing transit shuttles (Strawberry Festival, concerts) ▸ Park and Ride lots

Additional Considerations

When developing a travel demand management policy, additional considerations include developing a vision, creating tiered goals (short, medium, and long), emphasizing different modes of travel, and planning for possible problems that can arise such as winter maintenance and weather issues. Creating a vision for TDM helps to ensure measures and goals are focused and geared towards the Town's ideal outcome. This could include increasing transit ridership, limiting congestion or increasing the share of more sustainable travel modes. Establishing tiered goals based on short, medium and long-term time frames can ensure priorities are met with the vision or ultimate goal in mind. Finally, planning for challenges and problems that can arise will limit the potential inconveniences and provide solutions or alternatives to address them.

RECOMMENDATIONS

- Develop a plan for implementing Travel Demand Management as a sustainable and effective way to manage congestion and enhance the multimodal transportation network without widening and adding new roads. A well-planned guideline includes TDM measures, implementation plan, monitoring strategies and long-term goals to ensure effective and resilient solution.

4.4.4 Traffic Calming

The Town of LaSalle's first Traffic Calming Policy has been developed as part of the Transportation Master Plan. Traffic calming is a way to slow down traffic that is too fast for the environment or condition or divert traffic that is shortcutting through the neighbourhood to avoid congestion. Traffic calming is important for the safety of all road users and to ensure that the road function is meeting its intended use.

The policy includes the review of the neighbouring municipalities' current traffic calming policies, industry's best practices and guidelines such as the Canadian Guideline to Traffic Calming (CGTC). Transportation Association of Canada (TAC) and Institute of Transportation Engineers (ITE) have jointly produced the second edition of the CGTC. LaSalle's Traffic Calming Policy includes the summary of what has been updated in the CGTC and how it can be applied in LaSalle.

Based on the background review, a process flowchart has been developed. This flowchart is a useful guideline for Town staff to follow for all traffic calming requests and is also a transparent flowchart for all residents to review and understand the process. The second section of the policy includes suitable traffic calming measures that are available for the Town of LaSalle. These include typical measures implemented in the industry but also new emerging technologies that are selected for the Town of LaSalle. A traffic calming selection guiding table includes suitable location, area type, the issue trying to resolve, and potential benefit and challenges for each of the measures. LaSalle's Traffic Calming Policy can be found in **APPENDIX D**.

RECOMMENDATIONS

- Implement LaSalle's first Traffic Calming Policy to address speed and volume concerns in the residential areas to help maintain safety of all road users.
- Utilize the Traffic Calming Policy flowchart, which clearly outlines the procedure from initiation to implementation and a warrant system to determine appropriate measures to be considered for each location.

5.0 IMPLEMENTATION STRATEGY

5.1 AT Implementation Strategy

Implementation of the Town's active transportation network is organized into three phases and compliments the TMP's phasing strategy for road improvements. The proposed phasing is meant to be flexible and inform how AT projects can be implemented and funded over time. The proposed phasing horizons for active transportation include:

short term	medium term	long term
2019 to 2024	2025 to 2031	2032 and beyond

The proposed phasing plan is not intended to be prescriptive or a commitment to funding. The information and recommendations contained in the AT implementation strategy is meant to be used by Town staff and Council to inform future decision-making. It is also important to note that the Town's active transportation network contains routes that will be built and funded by different jurisdictions including the Town of LaSalle, Essex County, MTO and private developers. Town staff should continue working with its partners to ensure active transportation projects are coordinated and leverage scheduled construction to achieve economies of scale and potential cost savings.

The proposed implementation for construction of active transportation routes could happen in advance or later than what is identified in the TMP to meet the Town's needs at the time of implementation. For example, projects identified in the short-term could be deferred into the medium term to reflect available resources, capacity and budgets at that time. Projects that are located on developer-owned lands and roads are expected to proceed when development occurs in the future, such as when new subdivisions are constructed and / or when construction approvals are granted. The timing for routes that currently or are proposed to be part of the CWATS network require the County of Essex's confirmation and approval.

The following sections provide an overview of the proposed phasing plan, how it was developed and the estimated costs associated with implementation, maintenance and other supportive tools that can be used to implement the active transportation recommendations, facilities and initiatives identified in the TMP.

5.1.1 Implementation Approach

A set of criteria were identified to help prioritize routes included in the Town's active transportation network. To help inform the development of these criteria, a review of the existing resources and best practices was completed, including capital plan information, planned developments in the Town and the County of Essex's County-Wide Active Transportation System (CWATS) projects. In addition, a scan of how other municipalities are prioritizing active transportation initiatives was completed.

Examples of other municipal plans and documents reviewed to help establish prioritization criteria for the Town of LaSalle's active transportation network include:

- County of Essex County Wide Active Transportation System (CWATS) Master Plan Update;
- Chatham-Kent Cycling Master Plan;
- Municipality of Leamington Active Transportation Plan & Implementation Strategy;
- City of Windsor Bicycle Use Master Plan (BUMP); and
- City of Windsor Active Transportation Master Plan - Walk Wheel Windsor.

The following **Table 24** outlines criteria that have been established to help prioritize the implementation of the Town's active transportation network, including considerations for each criterion. In addition, these criteria were reviewed in conjunction with the Town's Official Plan fundamental principles to assess how they can help to achieve goals.

Table 24: AT project prioritization criteria

Route Priority Criteria	Considerations
1. Rapid build out of a continuous and connected network that supports a higher density in urban areas	The Urban Area of LaSalle is identified in the Town's Official Plan as an area of intensification and where growth and development is set to occur. The urban areas embrace an inter-connected, compact and walkable / bikeable urban form that provides active transportation facilities and community facilities to support a compact, complete communities' framework.
2. Ease of implementation and constructability	Priority should be given to routes that can be easily implemented if no road construction or widening is required (such as remarking the pavement and installing signage along a road) or if there is minimal impact to existing utilities, the surrounding natural, environmental, structural features and adjacent properties.
3. Alignment with the TMP's road improvement and transit projects / timing as well as the County's (CWATS) projects and timing	Priority should be given to routes that are identified as part of a proposed infrastructure / road project in the Town's TMP.
4. Ability to integrate with the Town's and / or County's current planned / schedule of capital works projects (including roads and trails)	Priority should be given to routes that are identified in previous and Council-approved planning documents. Priority should also be given to routes that can be implemented as part of the Town's current schedule of capital works as well as planned routes identified by CWATS to achieve greater economies of scale (cost savings).
5. Budget availability	Priority should be given to routes that have been identified in the Town's capital budget and that compliment existing maintenance and operations practices.

To help quantify each criterion, a set of scores and assumptions were established that could be used to inform the phasing for each proposed active transportation route. **Table 25** outlines the scoring approach and assumptions for each criterion.

A route can have a maximum score of 25 points. A high score represents a high priority. A low score represents a low priority. However, it is important to note that the priority is not just about the timing of a construction for a project. A priority could also indicate the need to initiate a study (such as a Class EA or an on or off-road cycling / multi-use trail feasibility study) in the short-term, as part of the planning / confirmation process, prior to detailed design and implementation.

Table 25: Overview of scoring and assumptions for prioritization criteria

Route Prioritization Criteria	Key assumptions to consider when using this criterion to score a route	Scoring
1. Rapid build out of a continuous and connected network that supports higher density in urban areas	Route is proposed in an urban area or new development area as identified in the Town's Official Plan and supporting planning documents. Consideration should be given to routes that are located in new development areas, specifically along new proposed roads that are not expected to be constructed in the short or medium term (these routes would score lower).	 High (5)
	Part of the route is located in an urban area or new development area.	 Moderate (3)
	Route is not located through or adjacent to an urban area.	 Low (1)
2. Ease of implementation and constructability	Projects that can be easily implemented with pavement markings and signage (no road reconstruction or widening required).	 High (5)
	New projects that can be implemented / constructed as part of a capital project.	 High (5)
	Projects that require a feasibility study prior to implementation (implementation of missing sidewalk links or cycle tracks behind the curb).	 Moderate (3)
	New road or AT / trail projects that require an environmental assessment prior to implementation (typically, timing for A Class EA is dependent upon when a road is required and not driven by the AT / trail facility).	 Low (1)
	Projects that have significant utility, environmental and / or structural features or additional property requirements.	 Low (1)

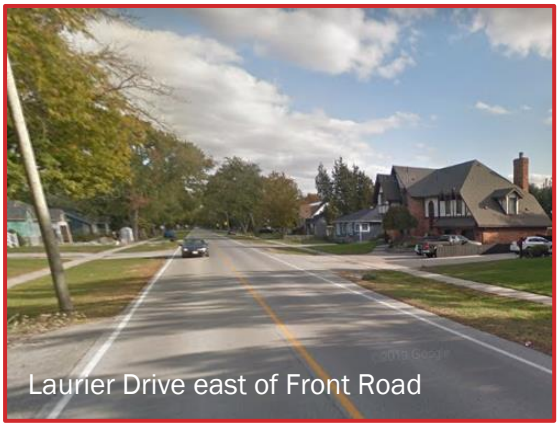
Route Prioritization Criteria	Key assumptions to consider when using this criterion to score a route	Scoring
3. Alignment with the TMP road improvement projects and timing as well as the County's (CWATS) projects and timing	The route is part of a proposed infrastructure / road project in the TMP.	High (5)
	The route is part of the County's CWATS network.	High (5)
	The active transportation / trail route connects to a project (road or transit) identified in the TMP.	Moderate (3)
	The route is not part of a proposed infrastructure / road project in the TMP and / or not part of the County's CWATS network.	Low (1)
4. Ability to integrate with current planned projects	The route has been previously identified in a Council-approved planning document.	High (5)
	The route can be implemented as part of a scheduled capital works project.	High (5)
	The route is not associated with the Town's current schedule of capital works projects.	Low (1)
5. Budget availability	The route has been identified in the Town's capital budget.	High (5)
	The route does not require modifications to maintenance and operations.	High (5)
	The route is not identified in the Town's capital budget.	Low (1)
	The route requires new maintenance and operations practices (such as winter snow removal).	Low (1)

In addition to these prioritization criteria, there are other factors that can influence the implementation of projects such as funding sources, existing processes, available staff resources, updates to existing planning documents and newly established documents and policies. These prioritization criteria are not prescriptive; they are meant to inform future decision-making and are recommended to be used by Town staff and their partners to inform how active transportation projects can be implemented over time.

Examples on how to use the prioritization criteria to help inform the phasing for a proposed active transportation route are provided on the following pages.

Prioritization Criteria – Example #1

Location: Laurier Drive (Front Road to Matchette Road)
Proposed AT Facility: In-boulevard pathway


Laurier Drive east of Front Road

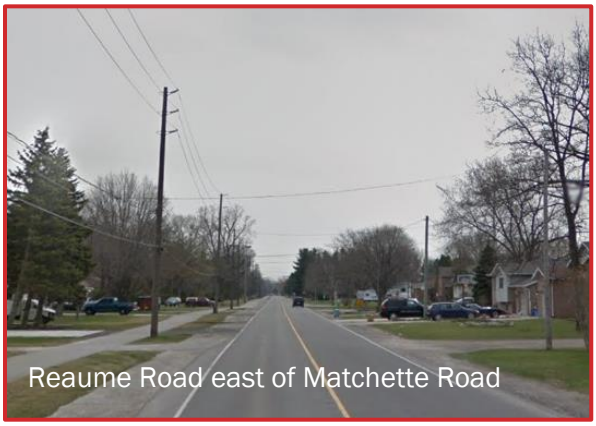

Laurier Drive west of Matchette Road

Route Prioritization Criteria	Maximum Score	Score Provided	Rationale
1. Rapid build out of a continuous and connected network that supports higher density in urban areas	5	5	Route is proposed in an urban area or new development area.
2. Ease of implementation and constructability	5	3	The route is assumed to be easily implemented but may require additional studies. The route is located near the 100 year flood line.
3. Alignment with the TMP road improvement projects and / or CWATS projects	5	3	The active transportation / trail route connects to a project (road or transit) identified in the TMP.
4. Ability to integrate with current planned projects	5	1	The route cannot be identified within the Town's schedule of capital works projects (no information is currently available).
5. Budget availability	5	1	Route is not identified in the Town's capital or operating budget.
Total		13	
Phase		Medium Term (2025-2031)	

Prioritization Criteria – Example #2

Location: Reaume Road (Front Road to Matchette Road)
Proposed AT Facility: In-boulevard pathway


Reaume Road west of Front Road


Reaume Road east of Matchette Road

Route Prioritization Criteria	Maximum Score	Score Provided	Rationale
1. Rapid build out of a continuous and connected network that supports higher density in urban areas	5	5	Route is proposed in an urban area or new development area.
2. Ease of implementation and constructability	5	3	The route is assumed to be fairly easily implemented as part of the new road construction. The route is located near flood lines, provincially significant wetlands and environmentally significant areas.
3. Alignment with the TMP road improvement projects and / or CWATS projects	5	3	The active transportation / trail route connects to a project (road or transit) identified in the TMP.
4. Ability to integrate with current planned projects	5	1	The route cannot be identified within the Town's schedule of capital works projects (no information is currently available).
5. Budget availability	5	3	Route is not identified in the Town's capital or operating budget but is expected to have minimal impacts to maintenance and operations (extension of existing in-boulevard trail)
Total		15	
Phase		Medium Term (2025-2031)	

5.1.2 Proposed Phasing

An overview of each phase and the number of proposed kilometres by jurisdiction is presented in **Table 26**. As noted in section 5.1.1, the scores were used to inform how the proposed active transportation routes could be categorized into the three different phasing horizons:

short term score = 20 to 25	medium term score = 10 to 19	long term score = 0 to 9

In addition to the prioritization criteria and resulting scores, primary consideration was given to the proposed phasing of road improvements identified in section 5.3. As such, the timing of active transportation projects located on roads identified for improvement in this TMP is intended to be consistent.

For routes located on the County's CWATS network, the County's current phasing plans / schedule were used in determining the appropriate route phasing. No changes to CWATS phasing are recommended in the LaSalle TMP. As the Town moves forward with implementing active transportation routes, they should continue to work with the County to identify opportunities for implementation. If there are any deviations from the original (2012) CWATS phasing or facility types, Town staff should also continue working with the County's CWATS Committee, through their confirmed process to ensure that the decisions are appropriately highlighted, documented and approved by the Committee and the County.

The proposed phasing plan does not reflect a recommended point of commencement for the planning and design work that is required in advance of implementation. Project commencement is intended to be determined by the Town based on strategic planning initiatives. As such, projects identified in the short-term could be deferred into the medium term to reflect available resources, capacity and budgets at that time. In addition, projects that are located on developer-owned lands and roads are expected to proceed when development occurs in the future, such as when new subdivisions are constructed and / or when construction approvals are granted.

The proposed phasing plan for the Town's active transportation network is illustrated on the following figures:

- Figure 64: Proposed AT Phasing – Full build-out (All phases)
- Figure 65: Proposed AT Phasing – Short Term (2019 to 2024)
- Figure 66: Proposed AT Phasing – Medium Term (2025 to 2031)
- Figure 67: Proposed AT Phasing – Long Term (2032 and beyond)

Each figure illustrates routes that are located on developer-owned roads and lands. The estimated construction cost for these routes are expected to be paid for by developers as part of future development. Additional details on all routes that make up the Town's active transportation network are provided in **Appendix F.**

It is recommended that the proposed implementation timeline and phasing be reviewed annually to ensure that projects are feasible based on available resources and budget, and where possible coordinated with other capital projects.

Table 26: Overview of Phasing for the AT Network

SHORT TERM (2019 – 2024)

Facility Type	Town Total KM[1]	Town Routes KM	CWATS Network			ERCA KM	Developer KM	Total KM
			Town KM	County Connecting Links KM	County KM			
Off-Road Recreational Trail	**0**	0	0	0	0	0	0	**0**
In-Boulevard Pathway	**1.8**	0	1.4	0.4	0	0	14.5	**16.3**
Separated Bike Lane	**3.3**	0	0	3.3	0	0	0	**3.3**
Bike Lane	**0**	0	0	0	0	0	9.1	**9.1**
Buffered Paved Shoulder	**0**	0	0	0	0	0	0	**0**
Paved Shoulder	**0**	0	0	0	0	0	0	**0**
Signed Route with Edgeline	**0**	0	0	0	0	0	0	**0**
Signed Route	**0**	0	0	0	0	0	0	**0**
Total	**5.1**	0	1.4	3.6	0	0	23.6	**28.6**

Note:
1. Total Town length of 5.1 km = Town routes within the CWATS network (1.4 km) + County Connecting links within the CWATS network (3.6 km).

MEDIUM TERM (2025 – 2031)

Facility Type	Town Total KM[1]	Town Routes KM	CWATS Network			ERCA KM	Developer KM	Total KM
			Town KM	County Connecting Links KM	County KM			
Off-Road Recreational Trail	**14.6**	14.6	0	0	0.0	0.1	0	**14.7**
In-Boulevard Pathway	**20.4**	17.3	2.2	0.9	0.0	0.0	1.1	**21.5**
Separated Bike Labe	**0**	0	0	0	4.6	0	0	**4.6**
Bike Lane	**2.6**	2.6	0	0	0	0	0.1	**2.7**
Buffered Paved Shoulder	**0**	0	0	0	4.6	0	0	**4.6**
Paved Shoulder	**13.7**	11.9	1.8	0	4.0	0	0	**17.7**
Signed Route with Edgeline	**1.5**	1.5	0	0	0	0	0	**1.5**
Signed Route	**5.2**	3.2	2.0	0	0	0	0	**5.2**
Total	**58.0**	**51.1**	**6.0**	**0.9**	**13.1**	**0.1**	**1.2**	**72.4**

Note:
1. Total Town length of 58.0 km = Town routes (51.1 km) +Town routes within the CWATS network (6.0 km) + County Connecting links within the CWATS network (0.9 km).

LONG TERM (2032 AND BEYOND)

Facility Type	Town Total KM[1]	Town Routes KM	CWATS Network			ERCA KM	Developer KM	Total KM
			Town KM	County Connecting Links KM	County KM			
Off-Road Recreational Trail	**9.3**	9.3	0	0	0	0	0	**9.3**
In-Boulevard Pathway	**3.4**	3.4	0	0	0	0	0	**7.6**
Separated Bike Labe	**0**	0	0	0	0	0	0	**0**
Bike Lane	**0**	0	0	0	0	0	0	**0**
Buffered Paved Shoulder	**0**	0	0	0	7.5	0	0	**7.5**
Paved Shoulder	**0**	0	0	0	3.3	0	0	**3.3**
Signed Route with Edgeline	**0**	0	0	0	0	0	0	**0**
Signed Route	**0**	0	0	0	0.1	0	0	**0.1**
Total	**12.7**	12.7	0	0	12.6	0	2.6	**27.9**

Note:
1. Total Town length of 12.7km = Town routes within the CWATS network (12.7 km).

Figure 64: Proposed AT Phasing – Full build-out (All phases)

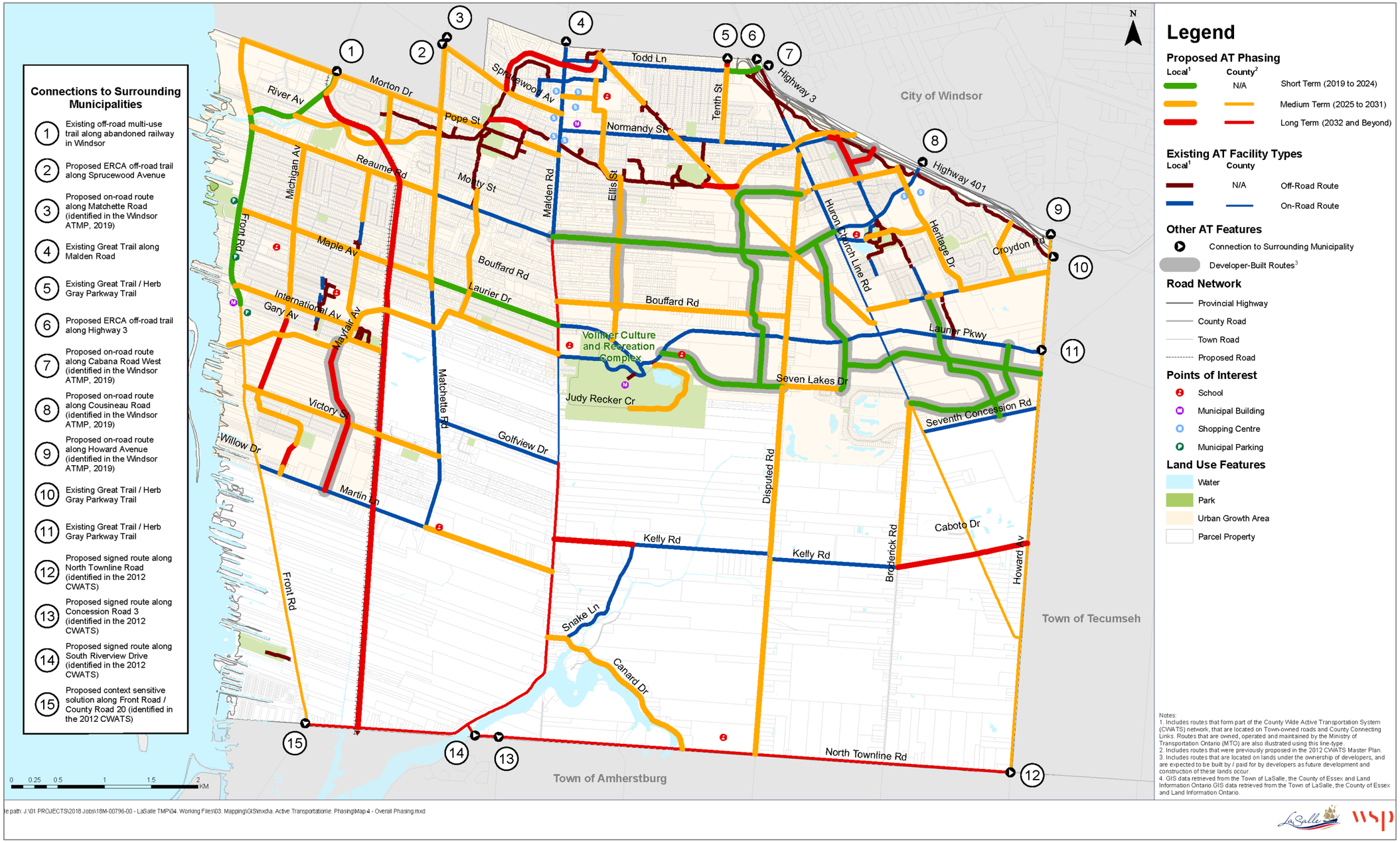


Figure 65: Proposed AT Phasing – Short Term (2019 to 2024)

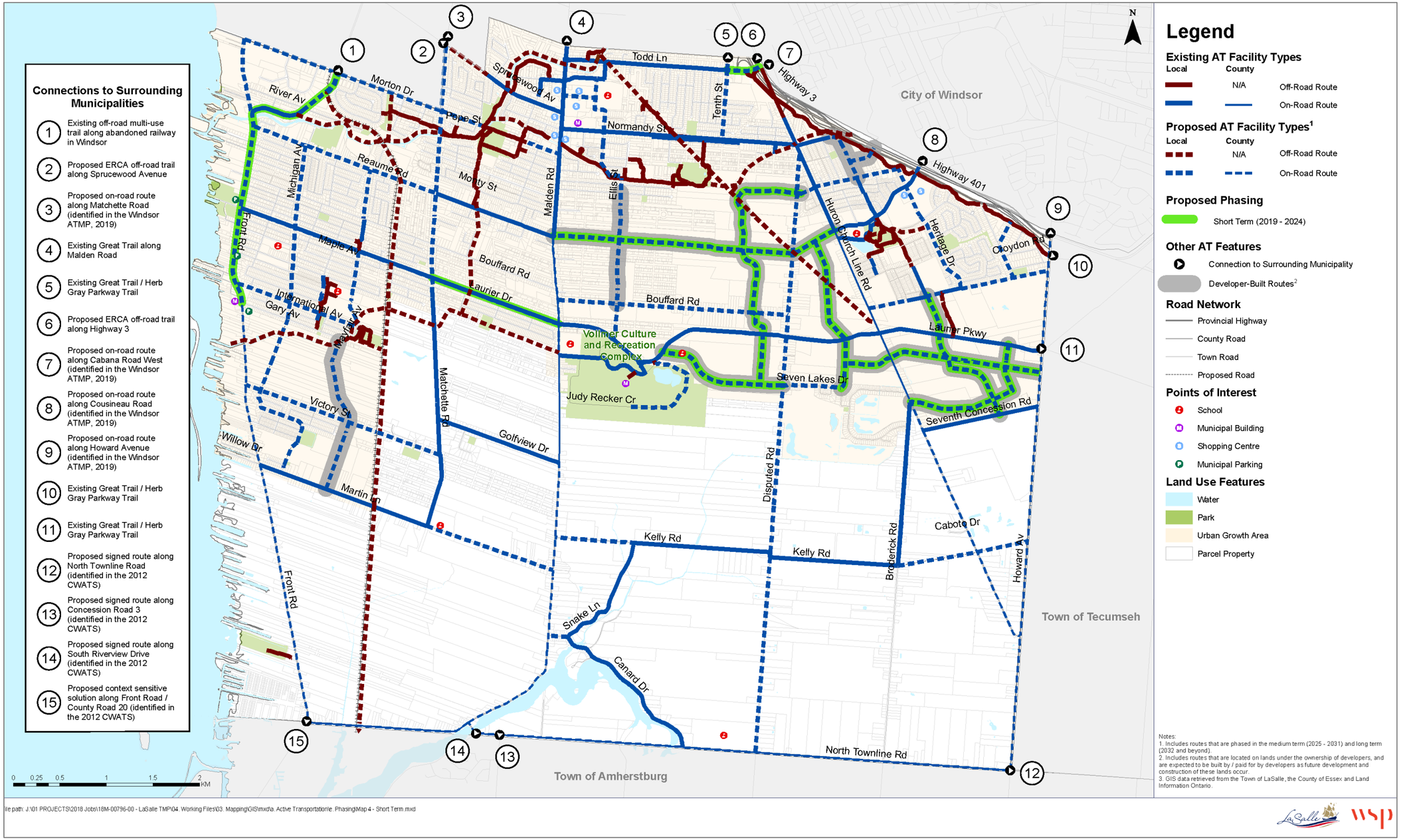


Figure 66: Proposed AT Phasing – Medium Term (2025 to 2031)

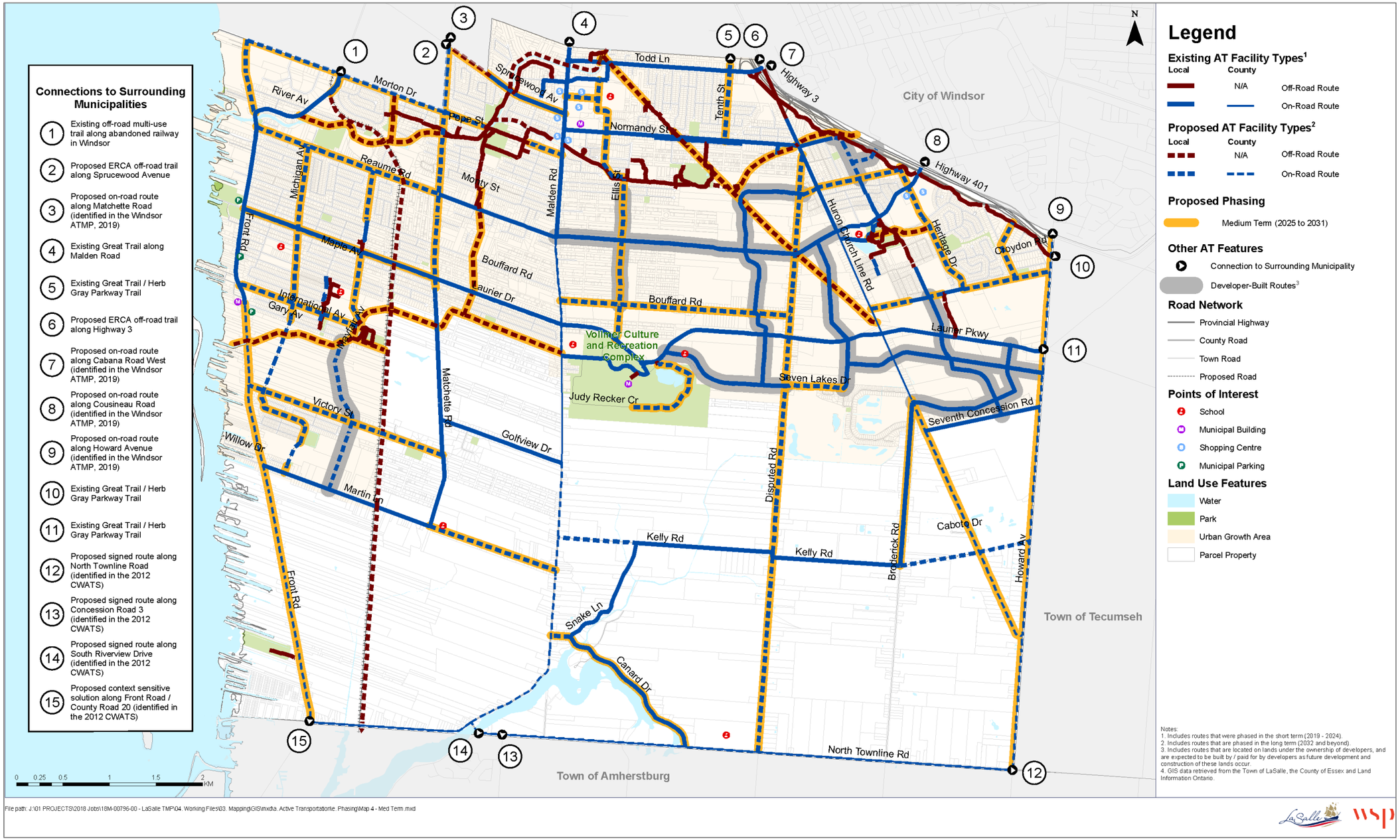
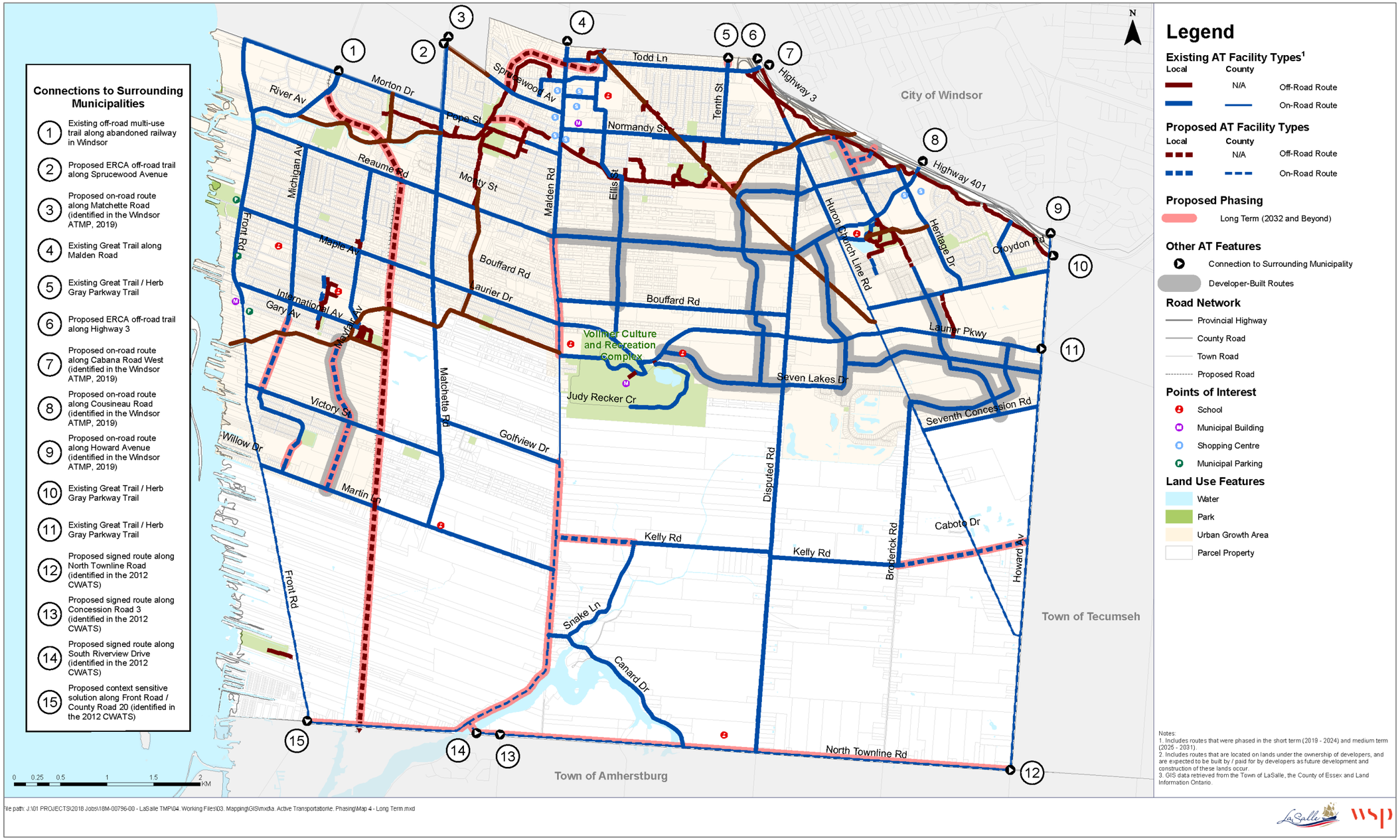


Figure 67: Proposed AT Phasing – Long Term (2032 and beyond)



Phasing for Front Road

A pilot project proposed for Front Road has been identified as a short-term project (2019-2024). As part of the pilot project, it is recommended that Town staff implement temporary measures to achieve the vision for Front Road: a main economic and commercial corridor that is a complete street and destination in itself. As noted in **Section 4.3.2**, the intent of a 1 to 2-year pilot project is to:

- Reduce the current cross-section from 4 to 2 lanes with a continuous centre left-turn lane;
- Promote off-street municipal parking lots adjacent to Front Road;
- Implement separated bike lanes on both sides of the road; and
- Encourage the use of alternate routes such as Howard Avenue and Highway 401.

Temporary measures that could be implemented as part of the pilot project to enhance the public realm, specifically for vulnerable road users including pedestrians and cyclists could include:

bike lane symbols and signs

painted buffer

flexible bollards

pre-cast concrete curb

benches / seating area

tactile walking surface indicators

Prior to any implementation, a Front Road pilot project would require Council approval. Should the pilot project be approved by Council, it is recommended that Town staff undertake key next steps including data collection, consultation with local businesses and public opinion surveys (additional details on next steps are outlined in section 4.3.2).

At the end of the pilot project, Town staff are encouraged to report to Council on the findings and recommendations whether to make the pilot project permanent or not. Should the findings and recommendations support implementation of a permanent project, it is recommended that a future study be completed to confirm the feasibility and details of the preferred design. It is recommended that a future study be completed in the medium-term horizon (2025-2031) followed by implementation in the long-term (2032 and beyond) in conjunction with a scheduled roadway / infrastructure project to achieve economies of scale and efficiencies.

5.1.3 Maintenance and Operations

Investing in maintenance from the onset of projects can help leverage capital investments, support user safety and increase the lifespan of infrastructure. It is important that Town resources, time and funding be allocated for the implementation and necessary maintenance of active transportation projects and connections.

The Town has an Asset Management Plan that outlines how infrastructure will be managed to ensure there are appropriate levels of services to support LaSalle's goals while maintaining a reasonable budget in both current and future years. The plan contains a set of performance targets to be monitored on an annual basis to ensure the Town remains on track to the established goals. Key assets that are included in this plan include the Town's road network, sidewalks, pathways and trails.

Though maintenance practices vary by municipality and the requirements are typically different for on and off-road routes, many municipalities shape their maintenance practices based on the Provincial Minimum Maintenance Standards (MMS) for Municipal Highway Regulation 239/02. The MMS standards were recently updated in May 2018 and provide guidance for winter maintenance on roadways, bicycle lanes and sidewalks. It is recommended that the Town review and update, if necessary, the current on and off-road route maintenance practices so that they are consistent with MMS and assess the impact to operating budgets, equipment needs and resources.

Table 27 outlines the MMS for Municipal Highway Regulation 239/02 to address snow accumulation on sidewalks and bicycle lanes based on the roadway class. Based on the MMS for Municipal Highway Regulation 239/02, the standard for addressing snow accumulation is:

- After becoming aware of the fact that the snow accumulation on a roadway is greater than the depth set out in the table below; or
- After the snow accumulation has ended, reduce the snow to a depth less than or equal to the depth identified in the table and within the time set out in the table below.

Table 27: MMS guidelines for addressing snow accumulation

Roadway Class	Depth	Time
1	2.5 cm	4 hours
2	5 cm	6 hours
3	8 cm	12 hours
4	8 cm	16 hours
5	10 cm	24 hours
Sidewalk	8 cm	48 hours

To support year-round use of active transportation routes, additional consideration should be given to maintenance costs and potential enhancements to current practices. Enhanced maintenance could include repairs to potholes, shoulder drop-offs, pavement cracks and line markings, replacement of route signage as well as the removal or sweeping of debris. **Table 28** summarizes typical annual maintenance costs for the Town of LaSalle's active transportation network.

Table 28: Active transportation route maintenance cost assumptions

Item	Unit Price	Assumptions
Painted Line Markings	$2.5 / m	Unit price is for a single 100 mm wide painted line marking, therefore assume - $5 / m for both sides of the road. Maintenance cost assumes that painted line markings are fully replaced / renewed on an annual basis.
Cold Plastic Line Markings	$5 / m	Unit price is for a single 100 mm wide cold plastic line marking, therefore $10 / m for both sides of the road. Maintenance cost assumes that plastic line markings are replaced every 5 years (or 20% annually). See calculations below: ► $5 / m x 20% = $1 / m
Painted Stencils	$50 / m	Assumes stencils are placed every 75m as per OTM Book 18, therefore 26 stencils / kilometre on both sides of the road (13 signs on each side of the road). Maintenance cost assumes 30% of painted stencils will need to be replaced / renewed on an annual basis. This equates to $400 per year. See calculations below: ► $50 x 26 = $1,300 ► $1,300 x 30% = $400
Cold Plastic Stencils	$275 each	Assumes stencils are placed every 75m as per OTM Book 18. 26 signs in 1 kilometre on both sides of the road (13 signs on each side of the road). Maintenance cost assumes 30% of painted stencils will need to be placed / renewed on an annual basis. This equates to $2,200 per year. See calculations below: ► $275 x 26 = $7,150 ► $7,150 x 30% = $2,200
Route Signs	$200 / each	Assumes 26 signs per kilometre (13 on both sides of the road / route). Maintenance cost assumes 5% of all signs will need to be replaced annually. This equates to $260 annually. See calculations below: ► $200 x 26 = $5,200 ► $5,200 x 5% = $260
Sweeping Costs	$2,400 to $4,000 / km	Assumes sweeping frequency of 6 times a year per roadway km (uni-directional, one side of the road).

Year-round maintenance costs for on-road facilities are estimated to range from $4,000 to $10,000 per kilometre per year. Annual maintenance of on-road facilities can include but is not limited to the reapplication of pavement markings, replacement of signs, minor asphalt repairs (pothole patching and crack sealing), sweeping, snow plowing and replacement of older style catch basin grates with bicycle friendly grates.

Year-round maintenance of off-road multi-use trails can range from $2,500 to $4,500 per linear kilometre of trail per year. Annual maintenance can include drainage and storm channel maintenance, sweeping, clearing of debris, trash removal, weed control and vegetation management, mowing of grass along shoulders, minor surface repairs, repairs to trail fixtures (benches, signs) and other general repairs.

Annual maintenance costs for on and off-road facilities will vary depending on a number of factors including:

- Level of service standard and whether the maintenance of a facility can be incorporated into the Town's current maintenance budget / program for roads or trails;
- Type of facility (the cost to maintain an on-road facility is expected to be incorporated into the overall road maintenance budget except for additional sweeping that may occur 1-2 times per year); and
- Context and location of the route.

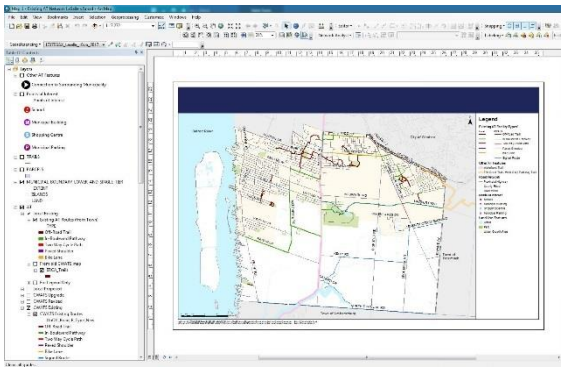
Todd Lane construction in 2015, LaSalle
Source: https://windsorstar.com/news/local-news/windsor-shut-out-of-border-road-money

5.1.4 Network Management Tools

Effective management of the active transportation network will require on-going coordination and tools to support and facilitate future implementation, maintenance and operations. A set of network management tools as shown in **Figure 68** have been prepared that can be used beyond the lifespan of the strategy by Town staff and its partners. The three components are described below.

Figure 68: Network management tools

Geographic Information System (GIS) Database



The management of the active transportation network information is contained within a GIS database. The database was developed using information provided by Town staff and contains updated information including proposed routes, facility types and phasing. that make up the active transportation network.

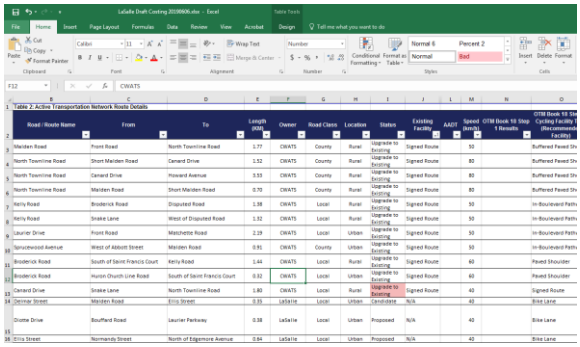
Following the completion of the TMP, the Town is encouraged to use the GIS database to effectively manage municipal assets and communicate project outcomes.

Waypoints and photos

During field investigation, photographs were taken at specific locations. Together with the GIS database these photographs can be used to develop a KML file which geographically positions the photos in Google Earth to highlight their location.

The geo-located photos can be used as a communication tool for staff when proceeding with the assessment of feasibility of select routes to better understand community concerns and questions which may arise as they advance to detailed design and construction of facilities.

Spreadsheet



An Excel spreadsheet has been developed containing the same information as the GIS database. The spreadsheet is meant to be used as a tool for those who do not have access to GIS software. As the GIS database updated, so should the spreadsheet. It contains information related to costing of each of the proposed routes and phasing.

5.1.5 Costing the Active Transportation Network

The estimated cost to implement the active transportation network was calculated using a set of unit prices contained in **Appendix F**. These unit prices reflect 2019 dollars and are based on best practices and recent projects of similar scope in Ontario. It is recognized that the level of effort will vary on a project-by-project basis and some projects could require additional work compared to other projects included in cost estimates. The unit prices are:

- Intended to be used for functional design purposes as they only include the installation of facilities and do not include contingency, design and approvals costs;
- Do not include the cost of property acquisitions, signal modifications, utility relocations, major roadside draining works, or costs associated with site-specific projects such as bridges, railway crossings, retaining walls, and stairways, unless otherwise noted;
- Assume typical environmental conditions and topography; and
- Do not include applicable taxes and permit fees – which are considered additional.

A summary of the estimated capital costs is presented in **Table 29.**

Bridge rehabilitation at Front Road and Turkey Creek, August 2019
Source: WSP

Table 29: Summary of proposed cost by facility type and jurisdiction

Facility Type	Town Total Cost[1]	Town Routes Cost	CWATS Cost			ERCA Routes Cost	Developer Routes Cost	Total Cost
			Town Share[2]	County Connecting Links	County Share			
Off-Road Trail	**$7,548,159**	$7,548,159	$0	$0	$0	$34,044	$0	**$7,582,203**
In-Boulevard Pathway	**$7,912,572**	$5,992,504	$1,510,646	$409,422	$218,503	$0	$5,888,436	**$14,019,510**
Separated Bike Lane	**$1,666,833**	$0	$421,471	$1,245,362	$1,317,508	$0	$0	**$2,984,341**
Bike Lane	**$135,501**	$135,501	$0	$0	$0	$0	$486,923	**$622,423**
Buffered Paved Shoulder	**$86,876**	$0	$86,876	$0	$2,631,479	$0	$0	**$2,718,355**
Paved Shoulder	**$2,190,133**	$1,787,278	$402,855	$0	$951,651	$0	$0	**$3,141,784**
Signed Route with Edgeline	**$18,784**	$18,784	$0	$0	$0	$0	$0	**$18,784**
Signed Route	**$5,877**	$3,868	$2,009	$0	$142	$0	$0	**$6,019**
Total	**$19,564,735**	$15,486,094	$2,423,857	$1,654,783	$5,119,282	$34,044	$6,375,358	**$31,093,419**

Note:

1. Total Town Cost of $19,564,735 = Town routes ($15,486,094) + Town share of CWATS network (2,423,857) + County Connecting links within the CWATS network ($1,654,783).
2. Town Share takes into account the current CWATS cost-sharing strategy:
   - The cost for bike lanes, paved shoulders and in-boulevard pathways that are part of CWATS on all local roads (includes both rural and urban areas) is 100% a Local municipality responsibility.
   - The cost for bike lanes, paved shoulders, in-boulevard pathways that are part of CWATS and located on County roads in urban areas, is to be shared 40% County and 60% Local municipality.

The total estimated cost to implement the active transportation network is approximately $31 million which includes:

- Town's Cost: $19,564,735
  - Town-owned routes (local network): $15,486,094
  - Town's share of CWATS network: $2,4232857
  - County-connecting links: $1,654,783
- County's share: $5,119,282
- ERCA's share: $34,044
- Developer's share: $6,375,358

Based on the cost-sharing strategy identified in the County's council-approved 2012 CWATS Master Plan, the following funding strategy has been applied for CWATS routes:

Table 30: Cost-sharing options for CWATS routes

Facility Type	Local Share	County Share
On-street bike lanes, paved shoulders, multi-use trail with or without separation – on a County Road in an Urban Area	0%	100%
On-street bike lanes, paved shoulders, multi-use trail with or without separation – on a County Road in an Urban Area	60%	40%
On-street bike lanes, paved shoulders, multi-use trail with or without separation – on a Local Road anywhere	100%	0
Signed routes – anywhere on the AT network	0	100%

The current cost-sharing strategy identified in the 2012 CWATS Master Plan also outlines that the cost for on-street bike lanes, paved shoulders, in-boulevard multiuse trails including **County Connecting Links** that are part of the CWATS network (in both rural and urban areas) is 100% a Local municipality responsibility. As such, this cost-sharing formula has been applied as part of the LaSalle TMP to all County-Connecting Links that form part of the CWATS network.

It is important to note that the County's CWATS Master Plan is currently being updated. As part of this update, there could be changes to routes and facility types included in the CWATS network as well as potential revisions to the cost-sharing options identified in **Table 30**. It is recommended that Town staff continue to work with the County and liaise through the CWATS Committee to ensure any modifications to the CWATS network and cost-sharing strategy are reflected in future-decision making and used to inform the implementation of active transportation routes in LaSalle.

Detailed costing information for proposed routes included in the Town's active transportation network is contained in **Appendix F**. It is recommended that Town staff use this appendix as a tool to track implementation of the network and to inform future budgeting / decision making. Though the preliminary costing is meant to inform future decision making, the phasing and costing is not meant to be prescriptive.

5.1.6 Funding the Active Transportation Network

Implementing the active transportation network will require on-going investments to fund the proposed active transportation infrastructure identified in the active transportation network. There are a variety of funding sources that could be utilized by the Town to support implementation of the active transportation network including:

Development charges:

Development charges can be used to help fund infrastructure projects including active transportation initiatives through new developments that are built.

Capital projects:

Active transportation projects can also be funded in conjunction with other large-scale projects that are planned. It is recommended that the Town investigate opportunities to coordinate the implementation of active transportation facilities with other large-scale planned infrastructure projects to achieve economies of scale.

Additional funding:

Monies made available by the Town specifically allocated to the design and construction of active transportation infrastructure through general tax base.

Partnerships:

New and existing partnerships should be explored to help contribute to the funding of active transportation infrastructure.

External funding sources:

There are a number of funding opportunities available at the provincial and federal level. Where possible, external funding sources should be explored, such as:

- Federal Gas Tax
- Provincial Gas Tax
- Federation of Canadian Municipalities Green Municipal Fund
- Federal Infrastructure Programs
- Provincial Infrastructure / Stimulus Programs
- Ontario Trillium Foundation
- Ontario Sport and Recreation Communities Fund
- Tourism Development Fund
- Corporate Environmental Funds (TD Friends of the Environment Foundation Grant and Shell Canada's Social Investment Program)
- Service Club Support
- Private Citizen Donation / Bequeaths

These external funding were available at the time the TMP was prepared, however, they are subject to change, therefore potential funding programs should be monitored regularly.

RECOMMENDATIONS

- Apply and adapt as necessary the prioritization criteria identified in **Table 24** and associated scoring assumptions identified in **Table 25** to inform the phasing of active transportation routes.
- Adopt the proposed phasing identified in **Figure 64** to **Figure 67** as a guide for staff and partners when moving forward to implement the active transportation network.
- Continue working with the County and the CWATS Committee to ensure any revisions to the CWATS network and cost-sharing strategy are reflected in future-decision making and used to inform the implementation of active transportation routes in the Town of LaSalle.
- Manage and update the network management tools on an on-going basis and use the tools to assist in the implementation and management of active transportation infrastructure.
- Review annual budgets to ensure the amount allocated for implementation and operations of the active transportation is sufficient.
- Use the AT Network Database and Costing (**Appendix F**) as a reference to track future implementation, budgeting and costing of the proposed active transportation network.
- Use the estimated capital costs included in **Table 29** as the preliminary costing to inform future budgeting decisions on an annual basis. As needed, the costing should be updated to reflect more accurate estimates based on inflation and other external factors.
- Report to Council on an annual basis to provide an update on the implementation of new infrastructure and to provide Council with an outlook for anticipated projects to be completed in the following year.
- Continue to explore external funding sources and partnerships to help fund implementation of active transportation infrastructure and initiatives.

5.2 Transit Implementation Strategy

The transit implementation strategy addresses phasing, costing, and funding of the recommended transit improvements for the Town of LaSalle.

5.2.1 Phasing Strategy of the Transit Services

The TMP recommends multiple improvements to enhance existing transit services and to provide transit service to accommodate future growth. These improvements have been phased in to five and 10-year horizons to prioritize actions and align with anticipated development patterns.

The following two phases are recommended:

Phase 1: Transit Service Review (5 Year Horizon)

- Review the recommendations of the Transit Windsor Service Review to determine the impacts to the existing LaSalle 25 route, including fleet implications, and future connections to Transit Windsor routes;
- Undertake detailed public consultation discussing potential changes to the transit service and ongoing commentary of the service, including in-bus surveying;
- Undertake a detailed business case for expansion of the service;
- As subdivisions are planned, ensure that roadway geometries on collector roadways are conducive to conventional transit vehicle route alignments and that there is sufficient boulevard real estate for future bus stop pads, along with access opportunities.
- Review ridership volumes of revenue operations annually on the LaSalle 25, including daily counts;
- Complete a travel demand survey to see where riders on the LaSalle 25 are originating and their destinations; and
- Ensure that development applications include forecasts for transit volumes and geometries for transit vehicles as well as active transportation infrastructure to support first and last mile travel.

Phase 2: Service Implementation (10 Year Horizon)

- Review opportunities for on-demand transit (for example, alternative service delivery options) for riders past 7 p.m. and on Sundays;
- Complete dynamic testing along the proposed routes to gauge vehicle running times and simulate fixed-route operations;
- Invest in a new, or used, transit vehicle compatible with the Transit Windsor fleet;
- Implement, with modifications as required, the Option 2 preferred transit network, barring any additional recommendations from the Transit Windsor Service Review report to ensure that developments have transit service upon units closing;
- Ensure that bus stop pads, markers and amenities are available for riders; and
- Re-evaluate and adjust the transit service as necessary, on the basis of ridership volumes, transit operations and delays. Review after one year of revenue operations.

The timing of these phases should be matched towards LaSalle's overall development plans, particularly for the southern route anticipated to service the entire development area between Malden Road and Huron Church Line.

5.2.2 Costing the Future Transit Network

As noted in **Section 4.2**, implementation of Option 2 is anticipated to cost up to $600,000 in capital costs for a new or used transit bus, as well as an additional $240,000 in operational costs. These should be revalidated when the proposed route is implemented.

5.2.3 Funding Opportunities

Potential funding streams for contributing to capital and operating costs for the transit service are available in federal, provincial and local level of funding opportunities. Some of the programs are available for application based on the types of transit projects proposed for the Town of LaSalle.

Federal

- Federal Gas Tax; $4,744,000 from 2019 to 2023
- Public Transit Infrastructure Fund (PTIF); $55,000 (based on Phase I contribution)
- Green Municipal Fund; $30,000
- Investing in Canada Infrastructure Program (ICIP); up to $28,000

Provincial

- Provincial Gas Tax; $52,000

Local

- Municipal property tax; $480,000 (Town approved 2019 budget)
- Development charges

5.3 Roads Implementation Strategy

The road implementation strategy addresses phasing, costing, and funding of the recommended Alternative 3 road improvements.

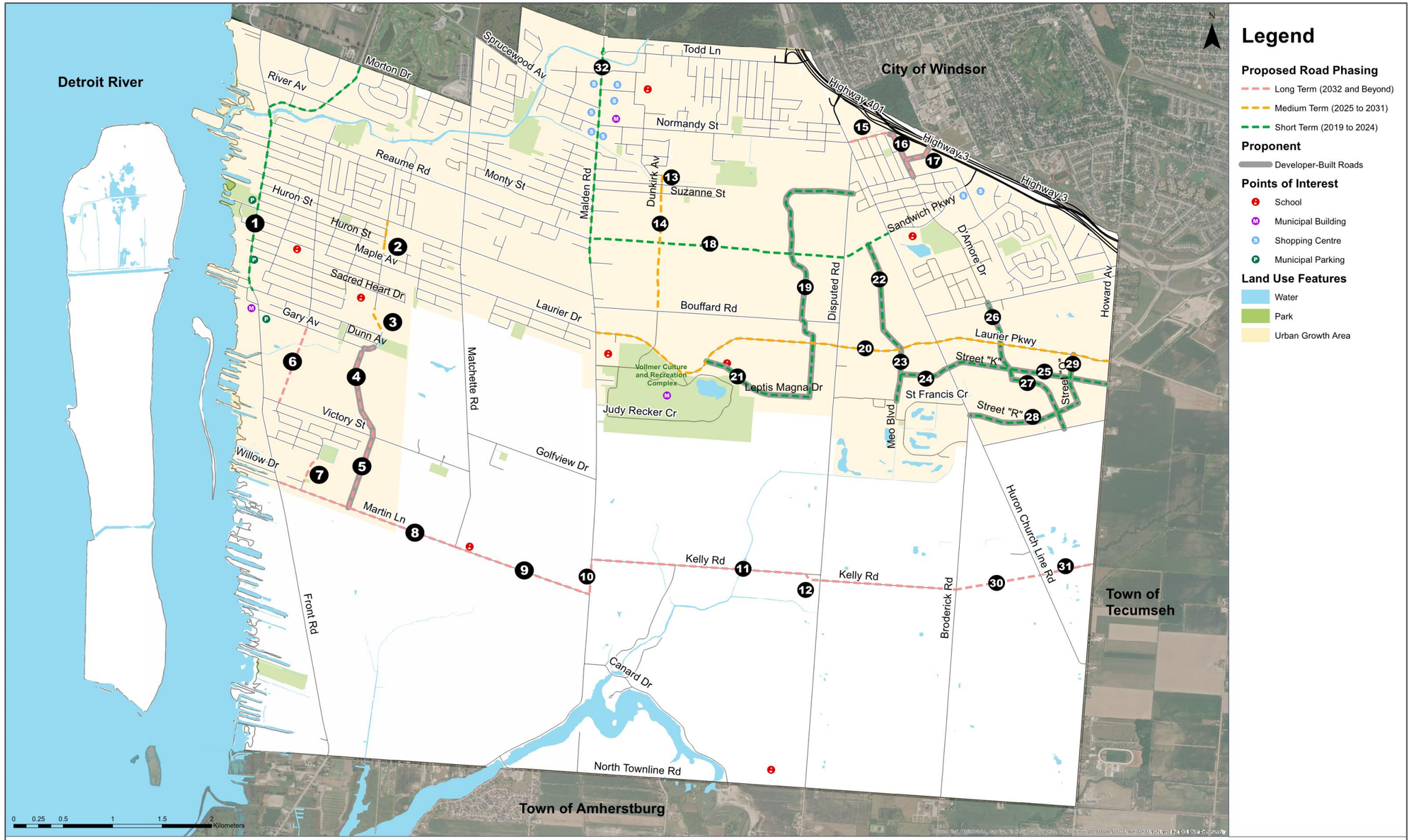
5.3.1 Phasing Strategy of the Road Network

The phasing plan for the proposed road improvements includes three horizon years that considers the available budget and timing of the required development. This phasing plan is to reflect the residential and employment development patterns and transportation network needs. The timeline for the short-term horizon is the next five years (2019-2024), the medium term horizon is to the year 2031 (2025-2031), and the long term horizon is 2032 and beyond. The improvement types include modifying current road structure such as resurfacing and grading, lane reductions, road widening, and proposing new roads.

The advancement of new collector roads will be mostly development-driven which will consist of continuous collaboration and communication with the developers. The Town will assess as applications for these developer-driven roadways are being submitted to ensure these corridors provide connectivity to the network as a whole. Once some of these new collector roadways are established, and depending on the timing, the Town may contribute to drive the overall municipal growth.

The road improvements recommended in Alternative 3 are shown in **Figure 69** based on the phasing plan. The proposed improvements that are developer-driven are also shown with underlaying grey colour.

Figure 69: Proposed road network improvements



Short Term Horizon (2019-2024)

The improvement projects in the short term are to accommodate the expected future growth within the new residential developments and to provide additional east-west capacity to enable traffic movement towards available capacity on the eastern edge of the Town and help relieve the traffic on the northwest side of the town.

The Front Road revitalization project is recommended to be completed as a pilot project to implement and analyze the impact of the proposed lane configuration. The Front Road pilot project is designed to help revitalize the area with all modes of transportation in mind.

The proposed intersection improvements will be completed as a part of the coinciding road improvement processes. Currently, there is an Environmental Assessment (EA) project for Malden Road underway. The design of the intersection improvements along Malden Road and associated construction cost will be determined as part of this EA project.

The short term road improvements are listed in **Table 31**.

Table 31: Short term road improvements

Project #	Short Term Road Improvements	Lead Proponent
1	Front Road Revitalization Project	Town
18	Sandwich W Parkway from Huron Church Line Road to Malden Road	Town
19	LaSalle Woods Road Extension from Cousineau Road to Leptis Magna Drive	Developer
21	Leptis Magna Drive from Laurier Parkway to Disputed Road	Developer
22	Meo Boulevard from Sandwich W Parkway extension to Laurier Parkway	Developer
23	Meo Boulevard from Laurier Pkwy. to Donato Drive	Developer
24	Street “K” from Meo Boulevard to Huron Church Line Road	Developer
25	Street “K” from Huron Church Line Road to Howard Avenue	Developer
26	D’Amore Drive from terminus to 6th Concession Road	Developer
27	D’Amore Drive from Laurier Parkway to 7th Concession Road	Developer
28	Street “R” from Huron Church Line Road to Street “O”	Developer
29	Street “O” from Laurier Parkway to Street “R”	Developer
32	Enhancement of Malden Road based on the EA update from Todd Lane to Meaghan Drive	Town

Medium Term Horizon (2025-2031)

The medium term improvements are designed to provide better connectivity between the west and east side of the town and to Highway 401. Laurier Parkway currently provides connections to Volmer Culture and Recreation Complex and access to Highway 401. The widening of Laurier Parkway from two lanes to four lanes will increase the capacity of the road and continue to drive the establishment of the proposed collector roads on the east side of Malden Road. The Town should continue to work with the developers to complete the road network since the proposed collector roads will be mostly developer-driven.

The new collector road and resurfacing along Mayfair Avenue will fill the gap between neighbourhoods and provide better connectivity within the road network on the western portion of the Town.

Table 32: Medium term road improvements

Project #	Medium Term Road Improvements	Lead Proponent
2	Mayfair Avenue Extension between Bouffard Road and Laurier Drive	Town
3	Mayfair Avenue Extension between Sacred Heart Drive and International Avenue	Town
13	Dunkirk Avenue Extension from Ellis Street to Suzanne Street	Town
14	Diotte St Extension from Buffard Road to Suzanne Street	Town
20	Laurier Parkway Widening from Malden Road to Howard Avenue	Town

Long Term Horizon (2032 and beyond)

The long term road projects are designed to provide connectivity and capacity. These include the extensions to Mayfair Avenue, Michigan Avenue, and Runstedler Drive, resurfacing of Villa Maria Boulevard, new collector road extension to D'Amoure Drive, Durocher Drive and St. Clair College Drive and rural road improvements. Martin Lane is a rural road that provides east-west connection. The improvements include resurfacing, grading, and jog elimination to help route through traffic towards Highway 401. The long term road improvements are listed in **Table 33**.

Table 33: Long term road improvements

Project #	Long Term Road Improvements	Lead Proponent
4	Mayfair Avenue Extension between Gary Avenue and Martin Lane	Developer
5	Mayfair Avenue Extension between Victory Street to Martin Lane	Developer
6	Michigan Avenue Extension between Gary Avenue and Victory Street	Town
7	Runstedler Road Connection to Dossenbeach Drive	Town
8	Martin Ln Resurfacing and Grading from Front Road to Matchette Road	Town
9	Martin Ln Resurfacing and Grading from Matchette Road to Malden Road	Town
10	Malden Road Resurfacing and Grading from Martin Lane to Kelly Road	Town
11	Kelly Road Resurfacing and grading from Malden Road to Broderick Road	Town
12	Kelly Road Jog elimination to continuously connect Kelly Road at Disputed Road	Town
15	Villa Maria Blvd Resurfacing and Grading from Huron Church Line Road to D'Amore Drive	Town
16	D'Amore Drive Extension from Villa Maria Blvd. to Cousineau Rd.	Developer
17	"New Road Link 1" from Geraedis Dr. to D'Amore Ext.	Developer
30	Kelly Road Extension from Broderick Road to Huron Church Line Road	Town
31	Kelly Road Resurfacing and Grading from Huron Church Line Rd. to Howard Ave.	Town

5.3.2 Costing the Future Road Network

The cost for each project was based on the unit cost for recent local projects and the proposed road segment length. The total expected cost is approximately $42.7 million, with the estimated input from the Town of $15.5 million and from the developers of $29.1 million as shown in **Table 34**. The breakdown of each project based on its improvement type, phasing horizon and the proponent is shown in **Table 35**.

Table 34: Cost estimate summary by proponents

Horizon	Town	Developer	Improvement Total
Short Term	$4,826,400	$16,665,000	**$21,491,400**
Medium Term	$7,965,000		**$7,965,000**
Long Term	$9,287,500	$3,885,000	**$13,172,500**
Total	**$15,628,900**	**$27,000,000**	**$42,628,900**

Table 35: Cost estimate breakdown for road improvement projects

Short Term Horizon Road Improvement Projects				
Project #	Description	Type of Improvement	Proponent	Estimated Project Cost
1	Front Road Revitalization Project	Road Revitalization	Town	$191,400
18	Sandwich W Parkway from Huron Church Line Road to Malden Road	New Collector (2lanes)	Town	$4,635,000
19	LaSalle Woods Road Extension from Cousineau Road to Leptis Magna Drive	New Collector (2lanes)	Developer	$4,305,000
21	Leptis Magna Drive from Laurier Parkway to Disputed Road	New Collector (2lanes)	Developer	$1,710,000
22	Meo Boulevard from Sandwich W Parkway extension to Laurier Parkway	New Collector (2lanes)	Developer	$1,740,000
23	Meo Boulevard from Laurier Pkwy. to Donato Drive	New Collector (2lanes)	Developer	$765,000
24	Street “K” from Meo Boulevard to Huron Church Line Road	New Collector (2lanes)	Developer	$757,500
25	Street “K” from Huron Church Line Road to Howard Avenue	New Collector (2lanes)	Developer	$2,452,500
26	D’Amore Drive from terminus to 6th Concession Road	New Collector (2lanes)	Developer	$652,500
27	D’Amore Drive from Laurier Parkway to 7th Concession Road	New Collector (2lanes)	Developer	$1,807,500
28	Street “R” from Huron Church Line Road to Street “O”	New Collector (2lanes)	Developer	$1,710,000
29	Street “O” from Laurier Parkway to Street “R”	New Collector (2lanes)	Developer	$765,000
		Total		**$ 23,381,400**

Medium Term Horizon Road Improvement Projects				
Project Number	Description	Type of Improvement	Estimated Project Cost	Proponent
2	Mayfair Avenue Extension between Bouffard Road and Laurier Drive	New Collector (2lanes) Resurfacing and Grading	Town	$250,000
3	Mayfair Avenue Extension between Sacred Heart Drive and International Avenue	New Collector (2lanes)	Town	$390,000
13	Dunkirk Avenue Extension from Ellis Street to Suzanne Street	Resurfacing and Grading	Town	$45,000
14	Diotte St Extension from Buffard Road to Suzanne Street	New Collector (2lanes)	Town	$1,770,000
20	Laurier Parkway Widening from Malden Road to Howard Avenue	Widening (2 to 4 lanes)	Town	$5,510,000
		Total		**$ 7.965,000**

Long Term Horizon Road Improvement Projects				
Project #	Description	Type of Improvement	Proponent	Estimated Project Cost
4	Mayfair Avenue Extension between Gary Avenue and Martin Lane	New Collector (2lanes)	Developer	$1,140,000
5	Mayfair Avenue Extension between Victory Street to Martin Lane	New Collector (2lanes)	Developer	$1,500,000
6	Michigan Avenue Extension between Gary Avenue and Victory Street	New Collector (2lanes)	Town	$1,215,000
7	Runstedler Road Connection to Dossenbeach Drive	New Collector (2lanes)	Town	$435,000
8	Martin Ln Resurfacing and Grading from Front Road to Matchette Road	Resurfacing and Grading (Urbanize)	Town	$950,000
9	Martin Ln Resurfacing and Grading from Matchette Road to Malden Road	Resurfacing and Grading	Town	$725,000
10	Malden Road Resurfacing and Grading from Martin Lane to Kelly Road	Resurfacing and Grading	Town	$87,500
11	Kelly Road Resurfacing and grading from Malden Road to Broderick Road	Resurfacing and Grading	Town	$1,775,000
12	Kelly Road Jog elimination to continuously connect Kelly Road at Disputed Road	Jog Elimination	Town	$2,550,000
15	Villa Maria Blvd Resurfacing and Grading from Huron Church Line Road to D’Amore Drive	Resurfacing and Grading	Town	$107,500
16	D’Amore Drive Extension from Villa Maria Blvd. to Cousineau Rd.	New Collector (2lanes)	Developer	$765,000
17	“New Road Link 1” from Geraedis Dr. to D’Amore Ext.	New Collector (2lanes)	Developer	$480,000
30	Kelly Road Extension from Broderick Road to Huron Church Line Road	New Collector (2lanes)	Town	$1,305,000
31	Kelly Road Resurfacing and Grading from Huron Church Line Rd. to Howard Ave.	Resurfacing and Grading	Town	$137,500
			Total	**$ 13,172,500**

5.3.3 Funding Opportunities

The potential funding opportunities for the road improvements are available under local, provincial and federal jurisdiction. The following funds available are approved and listed by the government for transportation network-related expansions and improvements. These funding opportunities are available now however at the time of application, there may be different funding available based on the types of improvement projects and the qualifications.

Federal

- Federal Gas Tax: $915,500 (used to fund eligible infrastructure projects)
- The Community Improvement Fund consisting of the Gas Tax Fund and the incremental Goods and Services Tax Rebate for Municipalities
    - Provides over $32 billion to municipalities across Canada for projects such as roads, public transit and recreational facilities, and other community infrastructure

Provincial

- Provincial Gas Tax: $60,000 (used to fund transit related expenses)
- Ontario Community Infrastructure Fund: $739,000 (used to fund eligible infrastructure projects)
- Ontario Community Infrastructure Fund
    - Awarded $130 million in grants to 426 communities across Ontario in 2018, estimated to allocate $200 million in 2019
    - All small municipalities with populations < 100,000 are eligible
    - Grants are determined using census data (average household income) and upon review of submitted comprehensive asset management plans
- New Building Canada Plan/ Fund (NBCF)
    - $10 billion Provincial-Territorial Infrastructure Component (PTIC) for projects of national, regional, and local significance.
- Of this amount, $1 billion is dedicated to projects in smaller communities (populations fewer than 100,000)

Local

- County Gas Tax: $549,000
- Development charges – growth ($1,000,000 - used to fund growth related capital projects)

5.4 Multimodal Transportation Monitoring Strategy

Setting a multimodal monitoring strategy to gauge the impact of the TMP implementation is important to measure progress toward the transportation vision. A monitoring strategy can keep track of the implementation process, help determine where resources need to be allocated, and help in future planning with measurable goals and key indicators. These measures should align with LaSalle's vision of continuously enhancing a healthy community where all residents can move, work, and play.

Reviewing of the existing database is a starting point for developing a list of clearly defined indicators. These indicators can be built into methods to uniquely measure performance of each mode. **Table 36** lists recommended indicators based on its mode of transportation, data source and the frequency of data collected.

Table 36: Key indicators of the multi-modal data collection

#	Mode	Indicator	Unit	Data Source	Frequency
1	Active Transportation	Total kilometres of on-road and off-road cycling facilities	Km	Town of LaSalle County of Essex	Every 2 years
2	Active Transportation	Total kilometres of new sidewalks	Km	Town of LaSalle	Every 2 years
3	Active Transportation	Number of collisions or accidents to pedestrians or cyclists	Unit Frequency	LaSalle Police	Every year
4	Active Transportation/ Transit	Number of existing and new bicycle end-trip facilities (bike parking, bike share, bus units with bike racks)	Unit Frequency	Town of LaSalle	Every year
5	Transit	Number of kilometres of existing and new transit routes (Transit coverage)	Km	Town of LaSalle Windsor Transit	Every 2 years
6	Transit	Ridership	Ridership	Town of LaSalle Windsor Transit	Every year
7	Car	Number of collisions or accidents (motorists)	Unit Frequency	LaSalle Police OPP	Every year
8	Car	Total lane kilometres of new, repaved or newly-treated roads	Lane km	Town of LaSalle County of Essex	Every 3 years
9	All modes	Modal split (commuting)	Percentage of trips	Statistics Canada	Every 5 years

6.0 SUMMARY OF RECOMMENDATIONS

Active Transportation

- Apply and adapt as necessary the prioritization criteria and associated scoring assumptions to inform the phasing of active transportation routes.
- Adopt the proposed phasing as a guide for staff and partners when moving forward to implement the active transportation network.
- Continue working with the County and the CWATS Committee to ensure any revisions to the CWATS network and cost-sharing strategy are reflected in future-decision making and used to inform the implementation of active transportation routes in the Town of LaSalle.
- Manage and update the network management tools on an on-going basis and use the tools to assist in the implementation and management of active transportation infrastructure.
- Review annual budgets to ensure the amount allocated for implementation and operations of the active transportation is sufficient.
- Use the AT Network Database and Costing as a reference to track future implementation, budgeting and costing of the proposed active transportation network.
- Use the estimated capital costs as the preliminary costing to inform future budgeting decisions on an annual basis. As needed, the costing should be updated to reflect more accurate estimates based on inflation and other external factors.
- Report to Council on an annual basis to provide an update on the implementation of new infrastructure and to provide Council with an outlook for anticipated projects to be completed in the following year.
- Continue to explore external funding sources and partnerships to help fund implementation of active transportation infrastructure and initiatives.

Transit

- Based on the evaluation criteria, transit frequency, network connectivity, travel time, operating cost and ability to serve future demands, implement transit route Option 2, North and South Circuits, as the preferred option. The Option 2 splits the route into north and south branches, allowing for transfers along Front Road, the Civic Centre and at St. Clair College.
- Conduct a Transit Needs Study to assess transit demand and identify underserved areas to further develop an implementation plan.
- To enhance the transit experience, provide additional amenities such as schedule information screens where multiple routes merge.
- Consider cross-municipal boundary travel to areas of interest such as University of Windsor, St. Clair College, VIA Rail station, employment districts in Windsor to provide further connectivity locally and regionally.
- Continue to promote fare reduction during high-profile events to increase exposure to LaSalle's transit services and increase ridership.

Road

- Based on the quantitative, screenline and qualitative analysis, implement Alternative #3 as the preferred road network option. The road network alternative #3 provides connections through an integrated arterial and collector road network. Alternative #3 supports active transportation and transit facilities as well as this alternative maximizes opportunities to connect new development areas with the existing network of main collector and arterial roads.
- Consider implementing as a limited time pilot project the Front Road revitalization as a complementary strategy to help revitalize the Waterfront District. The reduction to three lanes of vehicular traffic would be expected to result in lower vehicle speeds and provide space to accommodate separated walking and cycling facilities to encourage walking or biking between shops or other destinations.

Road Design Standards

- Update the road design standards to enhance a multi-modal and complete streets approach. The integration of the complete streets approach allows for a cohesive road network within the available right-of-way and connectivity throughout the Town's network.
- Update the design standards with four additional sections for each road classification: pedestrian, cyclist, transit, and goods movement.
- Update the Development Standards cross-sections to:
    - Provide as much physical separation between the cyclists and vehicles with facilities like cycling tracks or buffered bike lanes;
    - Provide pedestrian facilities on both sides;
    - Provide parking lanes on both sides for commercial roads wherever possible;
    - Minimum bike lanes are at 1.5 metre as per OTM book 18;
    - Minimum travel lane of 3.25 metres; and
    - Minimum parking lane of 2.5 metres for residential roads, and 3.0 metres for commercial roads.

Emerging Trends and Autonomous Vehicles

- Develop an ITS strategic plan to identify any gaps or opportunities for the Town to act upon to better position the Town to benefit from these systems.
- Consider how alternative transportation methods such as ridesharing can provide potential options for residents.
- Continue to install electric vehicle charging stations to promote environmentally friendly travel options.
- Continue the expansion and maintenance of active transportation infrastructure to help with the first and last mile concerns.
- Engage Essex County to keep abreast with the developments of the MACAVO and consider any actions to be taken to facilitate AV implementation.

Travel Demand Management

- Develop a plan for implementing Travel Demand Management as a sustainable and effective way to manage congestion and enhance the multimodal transportation network without widening and adding new roads. A well-planned guideline includes TDM measures, implementation plan, monitoring strategies and long-term goals to ensure effective and resilient solution.

Traffic Calming

- Implement LaSalle's first Traffic Calming Policy to address speed and volume concerns in the residential areas to help maintain safety of all road users.
- Utilize the Traffic Calming Policy flowchart, which clearly outlines the procedure from initiation to implementation and a warrant system to determine appropriate measures to be considered for each location.

Implementation Strategy

The recommended improvements by short, medium and long term are shown on the following page.

	Short Term (2019-2024)	Medium Term (2025-2031)	Long Term (2032 and beyond)

Active Transportation	▸ Approximately 30 km of active transportation facilities are proposed on the new collector roads
	  ○ 16km of in-boulevard pathway
	  ○ 3 km of separated bike lanes
	  ○ 9 km of bike lanes
	▸ Incorporate separated bike lanes as a part of the Front Road revitalization project
		▸ Over 80 km of proposed active transportation facilities are proposed on existing and proposed roads including approximately:
		  ○ 18 km of off-road trail;
		  ○ 25 km of in-boulevard pathway;
		  ○ 5km of buffered paved shoulder;
		  ○ 5 km of separated bike lanes;
		  ○ 20 km of paved shoulder;
		  ○ 5 km of bike lanes; and
		  ○ 8 k of signed routes.
			▸ Over 25 km of proposed active transportation facilities are proposed on existing and proposed roads including approximately:
			  ○ 10 km of off-road trail;
			  ○ 8 km of in-boulevard pathway; and
			  ○ 8 km of buffered shoulders.

Transit	▸ Review the recommendations of the Transit Windsor Service Review to determine the impacts to the existing LaSalle 25 route, including fleet implications, and future connections to Transit Windsor routes; ▸ Undertake detailed public consultation discussing potential changes to the transit service and ongoing commentary of the service, including in-bus surveying; ▸ Undertake a detailed business case for expansion of the service; ▸ As subdivisions are planned, ensure that roadway geometries on collector roadways are conducive to conventional transit vehicle route alignments and that there is sufficient boulevard real estate for future bus stop pads, along with access opportunities such as sidewalks; ▸ Review ridership volumes of revenue operations annually on the LaSalle 25, including daily counts; ▸ Complete a travel demand survey to see where riders on the LaSalle 25 are originating and their destinations; and ▸ Ensure that development applications include forecasts for transit volumes and geometries for transit vehicles as well as active transportation infrastructure to support first and last mile travel.	▸ Review opportunities for on-demand transit (for example, alternative service delivery options) for riders past 7 p.m. and on Sundays; ▸ Complete dynamic testing along the proposed routes to gauge vehicle running times and simulate fixed-route operations; ▸ Invest in a new, or used, transit vehicle compatible with the Transit Windsor fleet; ▸ Implement, with modifications as required, the Option 2 preferred transit network, barring any additional recommendations from the Transit Windsor Service Review report to ensure that developments have transit service upon units closing; ▸ Ensure that bus stop pads, markers and amenities are available for riders; and ▸ Re-evaluate and adjust the transit service as necessary, on the basis of ridership volumes, transit operations and delays. Review after one year of revenue operations.	
Roads	▸ Construct new collector roads to fill the gaps in residential areas, in particular the Mayfair Avenue Extension; ▸ Continue to work with developers to expand new residential developments to accommodate the expected future growth such as Leptis Magna Drive and LaSalle Woods Extension; ▸ Implement corridor projects to enhance the transportation and overall experience such as the Front Road Lane Revitalization Project and Malden Road enhancement EA.	▸ Widen Laurier Parkway from two lanes to four lanes to increase the capacity of the road and to provide better connectivity between the west and east side of the town and to Highway 401; and ▸ Continue to drive the establishment of the proposed collector roads on the east side of Malden Road	▸ Build additional capacity and connectivity in rural areas through improving Martin Lane and Kelly Road; and ▸ Develop eastern area of the Town to expand residential developments. ▸

Our Next Move

Appendix A

Policy Review

Policy Review

The Town of LaSalle's Transportation Master Plan (TMP) is supported by various interrelated policies at all levels of government. Relevant policies, with respect to transportation, are detailed in this appendix.

Federal Planning Documents

Federal Sustainable Development Act (2008)

The Federal Sustainable Development Act (FSDA) requires the Government of Canada to establish a sustainable development strategy, providing a framework through which to conduct sustainable planning and reporting within the federal public service. The FSDA focuses on clean air and water, natural protection, and shrinking the environmental footprint of government. The strategy aims to produce:

- An integrated view of federal actions and results to achieve environmental sustainability;
- Effective measurement and monitoring of sustainability progress to Canadians; and
- Equal footing of environmental with economic and social considerations in federal decision-making.

Relevance to the Transportation Master Plan: The FDSA sets a policy precedent at the federal level, asking other orders of government commit to the strategic goals and targets for sustainable development. This is to ensure that policies are effective and federally aligned. The FDSA's guiding principles for upholding environmental integrity and evaluating the costs of proposed actions will be included in LaSalle's Transportation Master Plan.

Strategies for Sustainable Transportation Planning: A Review of Practices and Options (2005)

The Strategies for Sustainable Transportation Planning identifies guidelines that should be considered when incorporating sustainable transportation into municipal policies. The report includes principles that support the promotion of active transportation as a mode of sustainable transportation at the federal level and the promotion of active transportation as a viable form of transportation.

Relevance to the Transportation Master Plan: Potential strategies identified in the Transport Canada guidelines that have been considered and included in the TMP include those that:

- Encourage desirable land use form and design (i.e. compact, mixed-use, pedestrian/bike friendly) through transportation plan policies;
- Set goals and objectives for reducing the need to travel, improving transit mobility, and preserving minimum levels of service on roadways; and
- Increase walking, cycling, other active transportation, transit, ridesharing and teleworking.

Communities in Motion: Bringing Active Transportation to Life Initiative (2008)

This report was developed by the Federation of Canadian Municipalities (FCM), which is considered the national voice for municipal government since 1901, representing 1,775 members under federal jurisdiction. Members include Canada's largest cities, small urban and rural communities, and 18 provincial and territorial municipal associations. The organization fosters sustainable communities enjoying a high quality of life by promoting strong, effective and accountable municipal governments. "Communities in Motion: Bringing Active Transportation to Life Initiative" is a key resource for all Canadian municipalities because it sets out goals for promoting active transportation options, eliminating barriers to different travel mode choices and promoting active transportation modes such as walking and cycling as part of everyday life. The document recommends focusing on improving facilities for active transportation including off-road options, improved connections for transit and more infrastructure for long-distance commuters and travelers.

Relevance to the Transportation Master Plan: Many of the ideas in the "Communities in Motion" document are relevant and applicable to LaSalle and will be reflected in the TMP. With regards to the provision of on- and off-road walking and cycling facilities, the FCM notes that some pedestrians and cyclists stick to city streets to reduce travel time and distance, while others prefer less stressful off-road routes to connect with nature. The document also notes that off-road routes are also important for recreation, and many communities are expanding their trail systems to boost tourism. As such, they promote the design and development of walking and cycling facilities including both on and off-road alternatives.

National Vision for Urban Transit to 2020 (2001)

The National Vision for Urban Transit report was commissioned by Transport Canada, focusing on public transportation as having numerous benefits to the environment beyond the reduction of greenhouse gas emissions. It proposes a vision for urban transit policy in Canadian communities in 2020 featuring:

- A reduced level of motorized travel per person;
- Less dependence on the private automobile;
- Improved transit accessibility for those who by reason of age, income or physical desirability are unable to drive;
- More competitive transit service delivered in an effective and cost-efficient manner that attracts users from their cars for a wider variety of trip purposes; and
- Resulting from the above, more capable, compatible, clean, conserving and cost-effective urban transit and transportation systems.

Relevance to the Transportation Master Plan: Urban transit's benefits are significant, and many of the key elements of the transit identified in the National Vision are shared by and further support the objectives of the TMP. Some key points that reflect this are:

- A reduced need for new road construction;
- Improved air quality due to fewer vehicles on the road;
- Reduced traffic congestion;
- Healthier downtowns;
- Improved social mobility; and
- Positive impacts on economic sectors such as tourism and export development.

Transport Canada

Transport Canada develops and oversees the Government of Canada's transportation policies and programs. They strive to create effective, safe and secure transportation systems that uphold environmental integrity. This is done through developing regulations and standards, overseeing and conducting inspections of activities, as well as promoting and educating the public about safety or security issues. Transport Canada supervises air, rail, marine, and road safety. Key elements of their vision are to:

- Enable efficient flow of people and goods;
- Protect people from accidents and exposure to dangerous goods;
- Act sustainable and protect the environment from pollution; and
- Contribute to a healthy population and prosperous economy.

Relevance to the Transportation Master Plan: Transport Canada, as an organization, monitors and ensures that there are safety and security measures in place to prevent or reduce risks and threats before they occur. The LaSalle TMP will reflect the national priorities and conform to the policies set out by Transport Canada.

Windsor-Detroit Bridge Authority

The Windsor-Detroit Bridge Authority (WDBA) was created in 2012 as a not-for-profit Crown corporation. Reporting to the Minister of Infrastructure and Communities, WDBA is structured like a company and operates independently from the government to manage, construct and operate the new bridge between Windsor, Ontario and Detroit, Michigan. The current project is the Gordie Howe Bridge. As of 2018, the bidding process is still underway.

Relevance to the Transportation Master Plan: Due to the close proximity of the international crossing to the Town of LaSalle, the TMP should reflect an increase in the number of vehicles crossing the Town to the bridge. As the governing organization over the operations of the bridge, WDBA will ensure safe travel and movement between the two countries. The TMP will echo the national visions of the bridge and future projects that the Authority will take on.

Provincial Planning Documents

Provincial Policy Statement (2014)

The Provincial Policy Statement (PPS) is a legislative document outlining the land use and development regulations within Ontario. It provides policy support for appropriate and context-sensitive urban and rural development, environmental and resource protection, and social equity in planning matters. An overarching vision for Ontario's land use planning system is articulated in the PPS, stating that the "long-term prosperity and social well-being of Ontarians depend on maintaining strong communities, a clean, healthy environment and a strong economy."

Relevance to the Transportation Master Plan: The PPS promotes transportation choices that facilitate pedestrian and cycling mobility as well as other modes of transportation. Under the PPS, "transportation systems" are defined as systems that consist of corridor and rights-of-way used for the movement of people and goods as well as the related infrastructure. Specifically, the PPS requires the following:

- Design of "healthy, active" communities that support active transportation and existing, planned, or future transit services (1.1.3.2; 1.5.1), and reduce lengths and numbers of vehicle trips (1.6.7.4);
- Promotion of inter-governmental policy coordination in multimodal planning (1.2.1);
- Provision of facilities for people and goods that meet projected needs (1.6.7.1);
- Use of transportation-demand management strategies to make efficient use of existing and planned infrastructure (1.6.7.2);
- Connectivity within and among systems and modes (1.6.7.3);
- Integration of transportation and land use considerations at all stages in the planning process (1.6.7.5); and
- Long-term corridor planning, and mitigation of their negative impacts (e.g. pollution, noise) (1.6.8).

These policy directions should be shared by the Transportation Master Plan, and should be reflected in its policy recommendations.

Planning Act Reform: Bill 51

Approved in January 2007, Bill 51 reforms the Planning Act, which provides the legislative framework for land use planning in Ontario. Bill 51 outlines changes to the planning process that are intended to support intensification, sustainable development and protection of green space by giving municipalities greater powers, flexibility and tools to use land, resources and infrastructure more efficiently. This focuses on environmentally sustainable design and adds sustainable development as a provincial objective in the PPS.

Relevance to the Transportation Master Plan: The idea of sustainable developments that support intensification is a strategy that is reflected in the TMP report. In addition to the PPS, Bill 51 ensures that the Planning Act is updated to ensure that provincial goals reflect the advancements in technology and social involvement.

Ontario Ministry of Transportation Transit Supportive Guidelines (2012)

In 1992, the Ontario Ministries of Transportation and Municipal Affairs and Housing published the Transit-Supportive Land Use Planning Guidelines document. The focus of the document was to provide guidelines for the development of transit-friendly land use and urban design. More recently, the MTO undertook an update to the guidelines to support continued progress in the development of more compact, transit-supportive communities. The updated 2012 report documents the most current thinking on transit-supportive urban planning and design in addition to current best practices in transit planning and the delivery of custom-oriented transit service throughout the Province of Ontario. The document builds upon the policies, plans and initiatives developed by the Ministry including the updated PPS.

The document consists of guidelines and specific strategies to guide urban planners, transit planners, and developers in creating a transit supportive environment. The document also supports the development of pedestrian and cycling connections throughout urban and rural communities to help enhance transit infrastructure and usage. Specific guidelines and strategies can be identified throughout the document which references the application of a complete street approach when designing transportation facilities.

Relevance to the Transportation Master Plan: The guidelines provide direction on how to integrate all modes of transportation to create complete streets and support active transportation. This document complements the TMP and will be reflected in the design and development of active transportation facilities throughout the Town to ensure that communities are transit supportive and are implementing the best design practices, including the provision of safe and accessible pedestrian and cycling connections to and from transit stops and stations.

Highway Traffic Act (1990)

Bicycles

The Municipal Act in Ontario provides municipalities with the authority to regulate vehicle type, direction of travel and other uses of municipal roads and highways, including cycling along roadway shoulders. Bicycles in Ontario are recognized as a vehicle, as defined in the Ontario Highway Traffic Act (HTA), and are permitted to operate on public roadways with the same rights and responsibilities as a motor vehicle. However, bicycles are not permitted on controlled access freeways such as the 400 series highways and/or on any roadway, trail or sidewalk designated for “no cycling” by a municipal bylaw. The HTA contains many policies relating to bicycles, including bicycle lanes on municipal roadways, vehicles interacting with bicycles, bicycles being overtaken, and regulating or prohibiting bicycles on highways.

E-Bikes

Electric or power assisted bicycles (e-bikes) in Ontario are defined as a bicycle and are permitted everywhere bicycles are permitted, unless restricted by a municipal bylaw. In Ontario operators of e-bikes are not required to have a driver’s license, license plate, or liability insurance. However, unlike standard bicycles, e-bike operators must be 16 years of age or older and must wear an approved bicycle or motorcycle helmet. Most municipalities in the Greater Toronto and Hamilton Area (GTHA) permit e-bikes within on-road cycling facilities, but not typically on off-road multi-use trails.

Relevance to the Transportation Master Plan: The emphasis on active transportation will create more concern for safety and security on highways for users on bicycles and e-bikes, which are permitted on public roadways. LaSalle’s close proximity with Highway 401 Herb Grey Parkway as well as Highway 3 will influence the local policies and TMP.

Ontario Cycling Strategy #CycleON (2013)

In April 2018, the Ontario Ministry of Transportation (MTO) published *#CycleON Action Plan 2.0*, the second installment in the series of action plans continuing from *#CycleON: Ontario’s Cycling Strategy* initiated in September 2013. Action Plan 2.0 will be implemented between 2018 and 2023. The strategy acknowledges the importance of developing cycling facilities to help reduce greenhouse gas (GHG) emissions, ease gridlock, benefit the economy, increase tourism, and increase the health quality of life of Ontarians. The strategy is intended as a guide to ensuring the vision is achieved. Key elements of the Province’s vision include:

- Develop a safe cycling network that connects the province:
- Continue to reduce collision and injury rates and injuries; and
- Empower everyone from occasional cyclists to daily commuters to feel safe when they get on a bicycle in Ontario.

The initiatives completed under Action Plan 1.0 include investing in the Ontario Municipal Cycling Infrastructure Program, engaging with stakeholders and communities across the province as well as introducing legislative and regulatory amendments to promote cyclist safety. Action Plan 2.0 continues to promote cycling through a series of consultations with the Advisory Panel to provide recommendations on the next phase of development. Key elements from this wave of initiatives include:

- Working with municipalities to ensure active transportation policies are included in their official plans, specifically in northern Ontario;
- Continue to promote cycling safety and increase awareness of cycling rules and procedures; and
- Showcase Ontario as a cycling tourism destination through road cycling events.

Relevance to the Transportation Master Plan: The Cycling Strategy outlines a 20-year vision for cycling in the province, with proposed cycling infrastructure, educational components, and legislation (including a set of proposed changes to the Highway Traffic Act). This strategy, in concert with other provincial documents including MTO's Sustainability Implementation Plan (2012), aims to promote and strategically develop sustainable transportation infrastructure across Ontario.

Ontario Trails Strategy

The Provincial government developed the Ontario Trails Strategy in response to the increasing popularity of trail activities and infrastructure, the need for government leadership, the need to protect provincial investment in trails and the need to mitigate significant provincial trail issues or challenges. The Ontario Trails Strategy is a long-term plan that will establish a strategic direction for government and stakeholders involved in the planning, management, promotion and use of trails, toward a healthier and more prosperous Ontario. Developed in collaboration with other ministries and stakeholders, the strategy supports continued cooperation among governments and the not-for-profit and private sectors. There are five strategic directions that are outlined in the Ontario Trails Strategy:

- Improving collaboration among stakeholders;
- Enhancing the sustainability of Ontario's trails;
- Enhancing the trail experience;
- Educating Ontarians about trails; and
- Fostering better health and a strong economy through trails.

Relevance to the Transportation Master Plan: Various goals and strategies have also been identified to support each of the five strategic directions. The Ontario Trails Strategy recommends that trail organizations develop common standards to guide the development and use of trails. This would help the trail system evolve to meet the needs of new users. Trail organizations also need more effective tools and better ways of distributing information to Ontarians. As these challenges require coordination at all levels, the provincial government and the public, not-for-profit and private sectors

will continue to cooperate on priorities, roles and responsibilities, timeframes, and methods to strengthen and enhance existing and future trails. This collaborative approach will be reflected in the TMP.

Accessibility for Ontarians with Disabilities Act (2005)

The Accessibility for Ontarians with Disabilities Act (AODA) was passed on June 13, 2005, and is a provincially legislated policy that calls on the business community, public sector, not-for-profit sector and people with disabilities or their representatives to develop, implement and enforce mandatory standards. This policy is a first of its kind in Canada to apply to both the private and public sectors. These accessibility standards are the rules that local governments, agencies and businesses in Ontario should follow to identify, remove and prevent barriers to accessibility. An amendment, known as Part IV.1 Design of Public Spaces Standards, was made to the AODA and has been in effect as of January 1, 2015. These standards only apply to new construction and planned redevelopments or significant renovations to ensure that there are no barriers to activities in public and private spaces. Some highlights of the proposed technical requirements for recreational trails under the new regulation 80.9(1) include:

- A recreational trail must have a minimum clear width of 1,000 millimeter;
- The surface of the recreational trail must be firm and stable;
- The entrance to the recreational trail must provide a clear opening of between 850 and 1,000 millimeter, whether the entrance is a gate, bollard or other entrance design; and
- A recreational trail must have at its start signage that provides the following information: the length of trail; the type of surface of which the trail is constructed; the average and the minimum trail width; the average running slope and maximum cross slope and the location of amenities, where provided.

Relevance to the Transportation Master Plan: The development of active transportation routes is not a one-size-fits-all approach. The "Built Environment" component of the AODA is the most relevant standard that can be applied to the planning, design and construction of transportation-related facilities including pedestrian crossings, public accesses, parking, transit stations, transit shelters, stops and signage. This policy provides direction on the appropriate design and location of these facilities, and will be a key reference document in the development of the LaSalle TMP. A key objective is the development of Complete Streets – streets designed, constructed, operated and maintained for all road users and all types of transportation modes, including the mobility impaired and those using mobility devices. The principles of complete streets have been incorporated throughout the TMP.

Ministry of Health and Long-term Care

The former Ministry of Health Promotion and its functions have been integrated into the Ministry of Health and Long-Term Care, and serve as the lead Ministry for trail development in Ontario. The Ministry has the responsibility for the co-ordination of recreational trail issues, policy development and planning. The Ministry of Health and Long-Term Care's mission is to:

- Champion health promotion in Ontario, and inspire individuals, organizations, communities and governments to create a culture of health and wellbeing;
- Provide programs, services, tools and incentives that will enhance health and well-being;
- Make healthy choices easier;
- Harness the energy and commitment of other ministries, other levels of government, community partners, the private sector, the media and the public to promote health and wellbeing for all Ontarians; and
- Make Ontario a leader in health promotion within Canada and internationally.

Relevance to Transportation Master Plan: The Ministry of Health Promotion drafted a vision for trails in Ontario which can be used as a reference when establishing a system of off-road facilities in the Town of LaSalle. Its goal is to develop a system of quality, diverse, safe and accessible trails that effectively integrates Ontario's natural and built cultural resources. People and places through trails across urban, rural and wilderness areas for recreation and tourism development. The expansion of the trails system throughout LaSalle is a key consideration when designing a comprehensive and connected system for various users or uses.

Municipal Act (2001)

The Municipal Act gives municipalities the flexibility to deal with local circumstances, and to react quickly to local, economic, environmental or social changes. It recognizes municipalities as responsible and accountable governments with respect to matters within their jurisdictions. The Municipal Act provides policies relating to municipal jurisdiction over municipal highways and the maintenance of those highways.

Relevance to the Transportation Master Plan: The Municipal Act provides direction for the Town when making decisions regarding future transportation alternatives. The Town is responsible for improvements made to on and off-road facilities under their jurisdiction. The TMP will address these improvements, include the recommended active transportation network with proposed routes and facilities as well as the operation and maintenance recommendations identified to support the network. These policies that municipalities develop will have an impact on the design and development of the active transportation within LaSalle.

County Policies

Essex-Windsor Regional Transportation Master Plan (2005)

The Essex-Windsor Regional Transportation Master Plan was completed in 2005 and addresses the region's transportations needs to 2021. When the plan was created, the City of Windsor and the County of Essex combined was expected to grow by 92,000 residents and 53,000 jobs. Due to the expected growth to the region, the Regional TMP focused on improving the capabilities of the existing transportation system, primarily on the major roadway system, to ensure that it can keep up with the growing travel needs. The approach emphasized the integration of land use with transportation planning. There are five transportation planning principles that were established for this plan:

1. Optimize arterial roadway network capacity
2. Select appropriate levels of service and standards
3. Ensure transportation improvement affordability
4. Ensure transportation system sustainability
5. Ensure roadway network enhancement achievability

Relevance to the Transportation Master Plan: As the neighbouring town to the City of Windsor, the primary urban area, LaSalle is categorized as being approximately half rural, half urban. With the Regional TMP's strong focus on the relationship between land use and transportation, the Town's TMP will reflect this focus as well. Windsor will have a strong influence on the growth that LaSalle will experience. The Regional TMP identified that there will be a continued growth in the low density suburban areas of LaSalle. Furthermore, the Town TMP will need to take into consideration the influence that the inter-municipal bus routes from Transit Windsor will have on the modal choice for the residents. LaSalle and Tecumseh were identified as being able to reduce its automobile demand by 5% with the expansion of Transit Windsor by 2021. The Town TMP should reflect this as an option to reducing the vehicular congestion on busy county roads.

Essex County Transit Assessment Report (2011)

This report investigated the feasibility of a wider range of transportation options in the County. Drawing from the County TMP, the vision for this study was to "provide sustainable mobility options for all rural and urban residents, contributing to quality of life, economic and environmental economic development and a healthy natural environment". The Transit Assessment Report identified three key strategies along with next steps to achieve the goal of implementing a public transit service in the County of Essex (pg. 69-70):

- Commitment to service
- Identify the appropriate governance structure for the service
- Determine resource requirements for this organization
- Determine appropriate cost allocation and funding sources
- Incremental implementation
    - Consult with key market groups, especially post-secondary students and commuters for input into specific service requirements
    - Develop specific service plans for initial service implementation including specific routes, schedules, destination points
    - Develop specific fare structures and a revenue management plan
- Marketing and promotion
    - Develop partnerships with customer markets, funding partners and agencies
    - Identify and promote specific benefits of the proposed service among potential partners, including the broad spectrum of public policy elements supporting by the plan, including economic, environmental, health and mobility benefits
    - Build understanding and support for the required funding based on this broad spectrum of benefits

Relevance to the Transportation Master Plan: The Report identified that many residents in the County are travelling to and from Windsor, particularly for work. The Town of LaSalle makes up the largest proportion of employment-based commuters to the City. Currently, the major mode of

transportation is with personal vehicles as the existing bus service is very limited. Two proposed routes by the report should be considered for the Transportation Master Plan:

- Amherstburg-LaSalle-Windsor as an Urban Connector; and
- Local Service route along the Southern Urban Fringe which serves portions of LaSalle with connections to Transit Windsor.

Essex County Wide Active Transportation Study Master Plan (2012)

The Essex County Wide Active Transportation Study (CWATS) Master Plan builds on the Essex-Windsor Regional Transportation Master Plan to encourage more pedestrian and bicycle friendly facilities. As of June 2018, CWATS is undergoing an update by WSP. This plan includes a proposed network of cycling routes that was identified through public and stakeholder inputs throughout the study. It is recommended that the County work with the Essex Region Conservation Authority and local municipalities to implement the CWATS network in phases.

Relevance to the Transportation Master Plan: The study found on and off-road candidate routes that are recognized as key destinations throughout the County. Using a route selection process, the routes were further investigated and studied for its feasibility. This process for route selection criteria can be adopted when identifying key locations in LaSalle. An interim, context sensitive solution is recommended between Amherstburg and LaSalle, which was identified as being "considered highly desirable active transportation routes". This should be reflected in the TMP.

Essex County Official Plan (2014)

The County Official Plan (OP) creates a policy framework for managing the County's decisions up to 2031. Generally, it contains objectives and policies that implement the County's approach to managing growth, growing the economy, protecting the natural environment, resources and heritage, providing infrastructure and making land use decisions. Furthermore, the OP establishes a framework for coordination and cooperation between municipalities within and surrounding the County. The long-term goal is to create a healthy county, which depends on the sustainability and resilience of the community.

Relevance to Transportation Master Plan: As a lower-tier municipality, LaSalle is guided by the policies from the County's Official Plan. One of the County's overarching goals is to invest in a county-wide transportation system that connects urban areas with each other and with nearby communities. Under Section 2.8 Transportation, the topic is broken down into objectives for roads, right-of-way widths and road widenings, airports, rail, and active transportation. The goals in this section should be reflected in LaSalle's Transportation Master Plan. Several relevant objectives include, but are not limited to (pg. 27):

- To facilitate a safe, energy efficient and economic movement of people and goods throughout the County;
- To develop a hierarchy of roads through periodic updates to the County TMP;
- To plan for and protect corridors for transportation, transit and infrastructure; and
- To promote the continual development and improvement of the active transportation system.

Town Policies

Town of LaSalle Official Plan (2018)

LaSalle's Official Plan provides a strategic direction for the future growth and development for the Town within a 20-year horizon to 2038. There is a focus on providing direction towards the formation of healthy, complete communities that accommodate residents of all ages. The purpose of the plan also includes protecting and enhancing natural heritage areas, encourage all non-agricultural development to be within designated urban areas, establish land use patterns and control urban sprawl.

Relevance to the Transportation Master Plan: Under 6.5 Mobility and Active Transportation, the OP identifies the need to promote an age-friendly multi-modal transportation system. The objective of the Town is to create a safe and efficient network that links to key points of interest within the Town as well as to connecting transportation systems from the surrounding areas. The following are a few of the policies that should be applied to the development of the transportation network as a result of the TMP:

- Sidewalks, walkways and bikeways shall be considered as integral parts of all new developments to facilitate increased active transportation throughout the Town;
- The Town should align transit routes with sufficient densities or density projections to make transit feasible and efficient in the long term;
- All development within the Urban Area should contribute to the development of a walkable network and active streetscaping; and
- The Town should encourage transportation demand management measures to reduce the auto-reliance.

Town of LaSalle Community Profile (2006)

The Community Profile was written by the Windsor-Essex County Development Commission in 2006. Based on past trends at the time, the towns overall population was predicted to around 32,400 to 44,500, which is a growth rate of 2.5-4.0%. Since the early 1970s there has been an increase of mature adults and seniors primarily due to the large number of residents in the baby boom generation. Many of LaSalle's residents are working in other communities, with almost 9,000 commuting to Windsor for their employment. The economy in the Town has continued to increase rapidly when compared to the growth rate for the region. As for transportation infrastructure, Country Road 20 forms the main corridor to link the town to Windsor, Amherstburg and the E.C. Row Expressway. Highway 3 is another major route that connects to Highway 401 and a major artery to the southern part of Essex County. Safe and convenient transportation infrastructures, such as additional bridges, are expected to increase.

Relevance to the Transportation Master Plan: The majority of LaSalle's residents travel by car, truck or van as the driver for their primary mode of transportation. This makes up of around 92% of the total percentage of mode options. Almost 6% of the total employed residents fall under the category of using cars, trucks or vans but as a passenger. Walking, cycling, public transportation and other methods represent the minority. LaSalle's TMP should reflect the current transportation mode preferences and focus on how to provide incentives or encourage and promote a more multimodal system.

Town of LaSalle Transit Feasibility Study (2016)

In June of 2016, the Phase 2 Report of the Town of LaSalle's Transit Feasibility Study was released. The Transit Study is an assessment on the current public transit network and identified how it should be adapted to accommodate population growth, support the needs of the growing aging population and create more intensified urban communities. Phase 1 focused on the feasibility, which includes current travel needs, potential transit solutions and levels of interest in investing in a new transit service. Phase 2 consisted of a development plan, including service concepts and designs, fare structures and policies as well as implementation strategies.

Relevance to the Transportation Master Plan: After conducting the Phase 1 study, it was seen that there is a need and enough support to introduce new service transits. The TMP should reflect the interest and support for other modes of transportation, primarily for the Town's youth, seniors and people without access to cars. Section 2.2 of Phase 2's report showed three different options for service routes. Option one is a town loop concept, which provides good coverage but is a long and indirect route for the passengers on the bus. Option two includes a one-way loop servicing the western part of the Town and a two-way route for the rest of the Town. This provides good coverage with moderate travel times but does not have flexibility to extend services to Devonshire Mall without additional busses. Lastly, option three shows a two-way service with a small loop in western LaSalle. This provides the most direct and fastest travel times but has poor coverage and low flexibility to adapt the route without additional busses. The report concluded that option two is the best compromise. As a result, The TMP should anticipate or promote expansion of the transit route in this recommended route.

Our Next Move

Appendix B

Consultation Summary

Consultation Supporting Documentation

In Appendix A, relevant supporting information collected during the consultation and engagement process is documented. As part of the consultation methodology, the feedback obtained during online and in-person events were analyzed and incorporated into the recommendations provided in this transportation master plan. The overview of this section is:

- **B-1.** Notice of Study Commencement
- **B-2.** Sample of project webpage
- **B-3.** Display boards utilized for Public Information Centre 1
- **B-4.** Display boards utilized for Public Information Centre 2
- **B-5.** Stakeholder comments received during engagement round 1
  - **B-5a.** Issue priority ranking
  - **B-5b.** Mapping challenges and opportunities
  - **B-5c.** Cycling facility preferences
  - **B-5d.** Additional comments from online survey
- **B-6.** Stakeholder comments received during engagement round 2
- **B-7.** Additional stakeholder comments received

B-1. Notice of study commencement

Our Next Move

Town of LaSalle - Transportation Master Plan

NOTICE OF STUDY COMMENCEMENT & PUBLIC INFORMATION CENTRE #1

In August 2017, the Town of LaSalle put forth a plan to update the "LaSalle Age-Friendly Active Transportation Plan" as part of a comprehensive Transportation Master Plan. WSP Canada Group Limited was retained in April 2018 to develop the Transportation Master Plan and the LaSalle Age-Friendly Active Transportation Plan, which will be used as a guiding document for enhancing and facilitating a comprehensive multi-modal transportation network in the Town of LaSalle.

The Plan will encompass the entire Town of LaSalle including interfacing with the City of Windsor and the County of Essex. The plan will encompass all modes of transportation, including active transportation (such as walking and cycling), transit and automobile travel. Strategic improvements and recommendations will be provided for each mode to achieve an economically and technically feasible multi-modal future for the Town's residents, visitors and employers. Particular focus will be placed on the development of an age-friendly active transportation plan.

As the study progresses, the Town will engage with residents, stakeholders, and businesses to shape the overall master plan and contribute towards the preferred solutions and recommendations identified within the plan. We would like to invite you to attend and participate in an upcoming Public Information Centre (PIC) where we will present information about the project, gain your feedback and ideas, and answer any questions you may have. Details for the event are provided below:

Date: Tuesday, June 19, 2018

Time: 3 p.m. to 7 p.m. = come anytime it is convenient for you

Location: LaSalle Civic Centre, 5950 Malden Road

If you have any questions about the Transportation Master Plan or would like to discuss the details of the project or the Public Information Centre with a study representative, please contact the below:

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Can't make it? Check out these other ways to get involved!
1. Visit the Town's website at lasalle.ca
2. Contact a study representative

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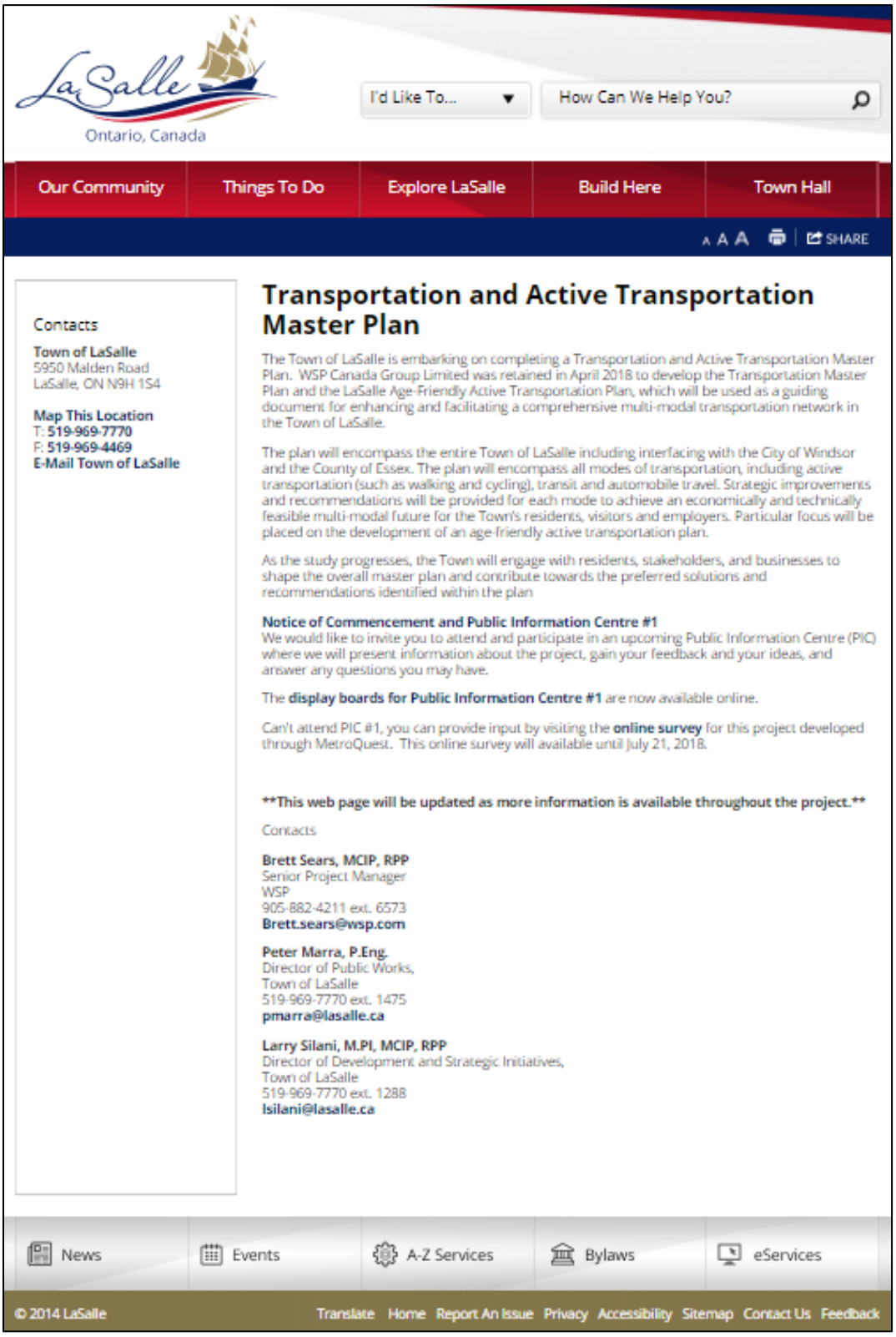
B-2. Sample of project webpage



LaSalle
Ontario, Canada

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How Can We Help You?

Our Community | Things To Do | Explore LaSalle | Build Here | Town Hall

A A A | SHARE

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Map This Location
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E-Mail Town of LaSalle

Transportation and Active Transportation Master Plan

The Town of LaSalle is embarking on completing a Transportation and Active Transportation Master Plan. WSP Canada Group Limited was retained in April 2018 to develop the Transportation Master Plan and the LaSalle Age-Friendly Active Transportation Plan, which will be used as a guiding document for enhancing and facilitating a comprehensive multi-modal transportation network in the Town of LaSalle.

The plan will encompass the entire Town of LaSalle including interfacing with the City of Windsor and the County of Essex. The plan will encompass all modes of transportation, including active transportation (such as walking and cycling), transit and automobile travel. Strategic improvements and recommendations will be provided for each mode to achieve an economically and technically feasible multi-modal future for the Town's residents, visitors and employers. Particular focus will be placed on the development of an age-friendly active transportation plan.

As the study progresses, the Town will engage with residents, stakeholders, and businesses to shape the overall master plan and contribute towards the preferred solutions and recommendations identified within the plan

Notice of Commencement and Public Information Centre #1
We would like to invite you to attend and participate in an upcoming Public Information Centre (PIC) where we will present information about the project, gain your feedback and your ideas, and answer any questions you may have.

The **display boards for Public Information Centre #1** are now available online.

Can't attend PIC #1, you can provide input by visiting the **online survey** for this project developed through MetroQuest. This online survey will available until July 21, 2018.

****This web page will be updated as more information is available throughout the project.****

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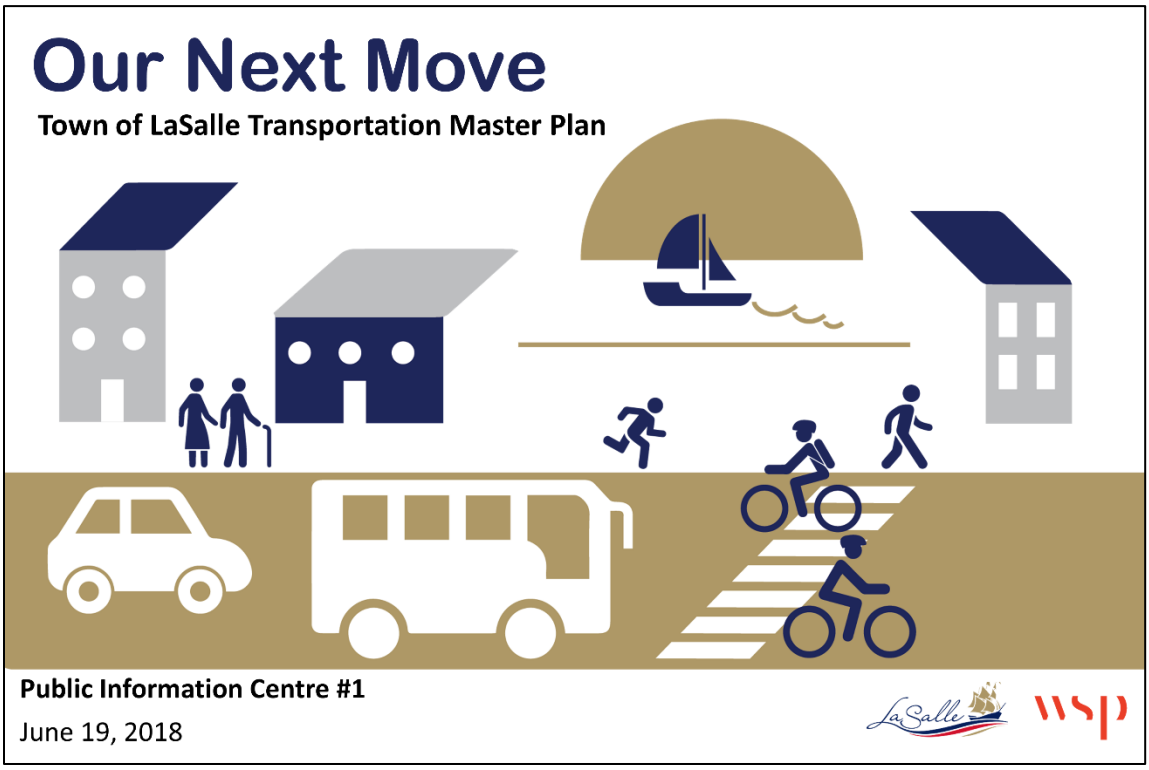
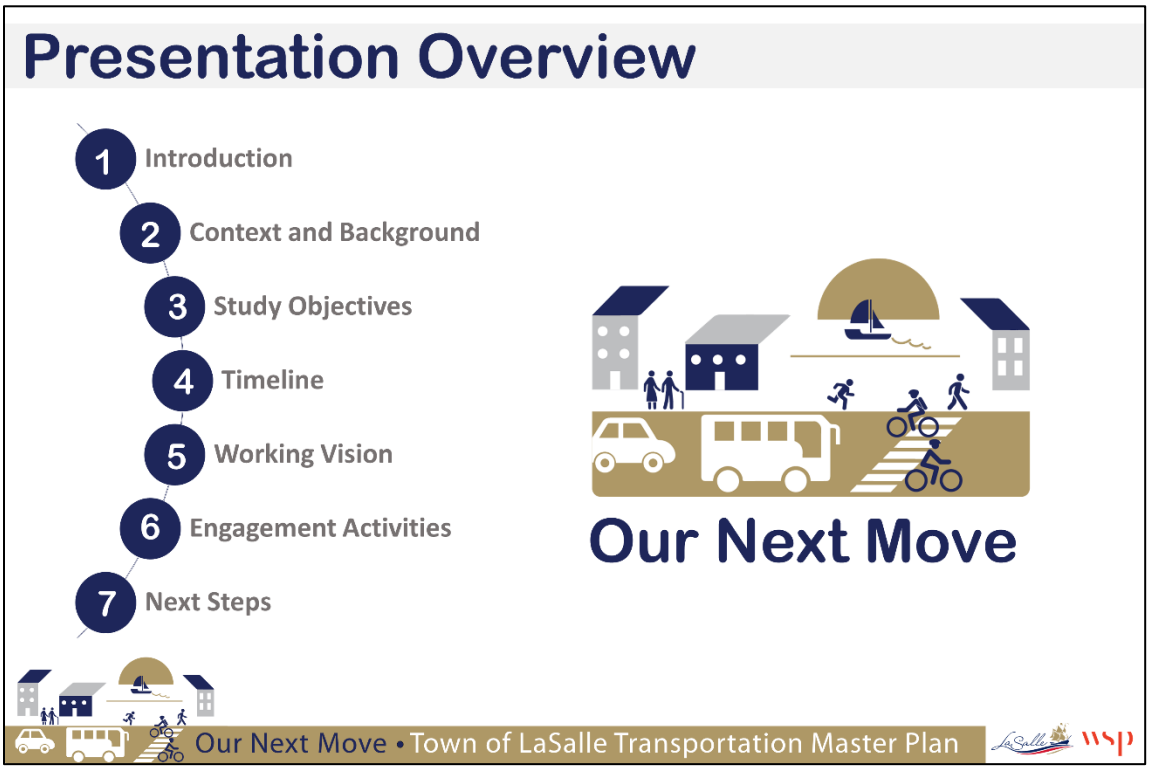
B-3. Display boards utilized for Public Information Centre 1





What is a Transportation Master Plan (TMP)?

Why develop an TMP?

- **Proactively plan** for all modes
- **Provide options** for how people get around
- Support goals for a **vibrant and connected community**
- **Enhance the quality of life** for people who live, work and play in the Town
- **Accommodate** future generation needs

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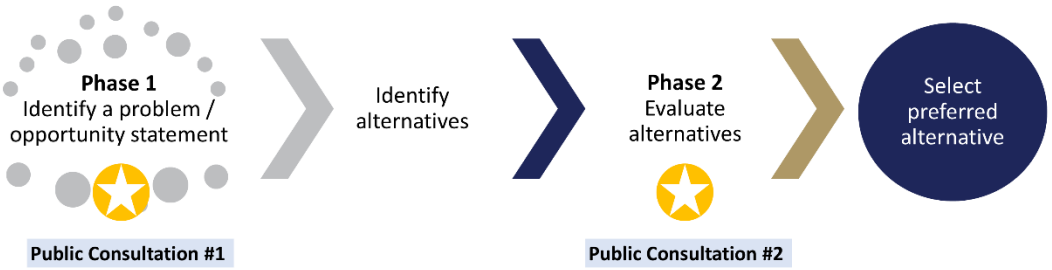
The Environmental Assessment Process (E.A.)

The **Municipal Class Environmental Assessment** (E.A.) **provides a process** in accordance with the E.A. Act for municipal **infrastructure projects**.

Master plans, such as this Transportation Master Plan, are **required to complete Phases 1 and 2** of the five phases of the Municipal Class E.A. process. The **plan is being completed consistent** with approach 1 of the E.A. Master Planning process and will include:



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Background – Existing Policy Framework

County

- Essex-Windsor Regional Transportation Master Plan (2005)
- Essex County Transit Assessment Report (2011)
- Essex County Wide Active Transportation Study Master Plan (2012)
- Essex County Official Plan (2014)

Local

- Town of LaSalle Official Plan (2016)
- Town of LaSalle Community Profile (2006)
- Town of LaSalle Transit Study (2016)

Background – Town Context

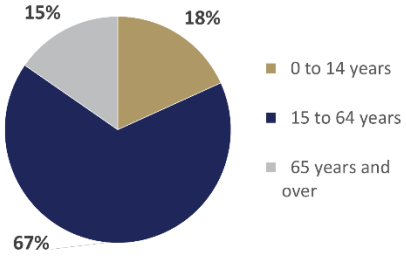
LaSalle Population

28,600 (2011) → **30,200** (2016)

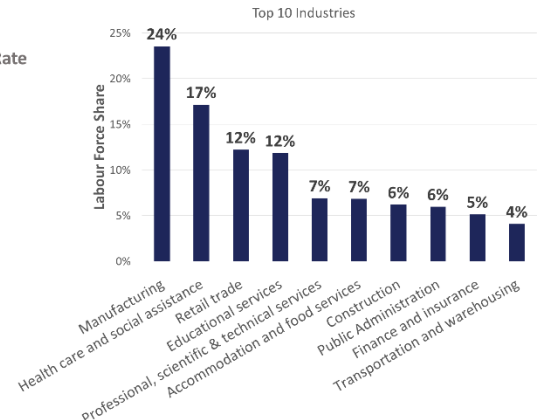
1.1% LaSalle Annual Growth Rate

0.5% Essex County Annual Growth Rate

LaSalle Age Group Distribution



LaSalle Top Employment Industries

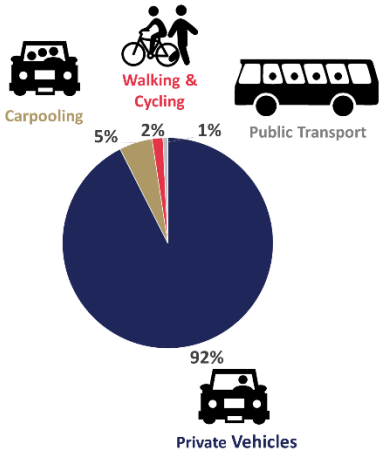


Total Employed Labour Force: ~15,500

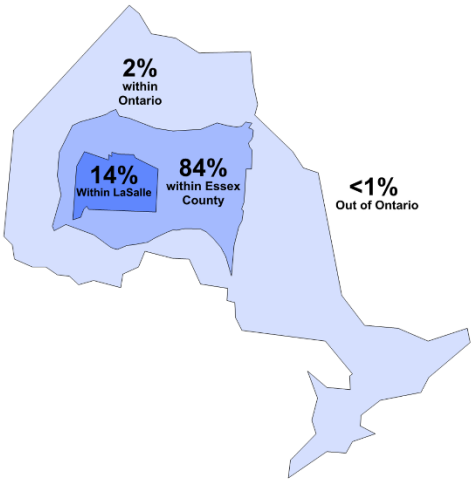
Source: Census Canada (2016)

Background – Existing Travel Patterns

LaSalle's Mode of Commuting



LaSalle Commuting Destination



Source: Census Canada (2016)

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Study Objectives

LaSalle Age-Friendly Active Transportation Plan

Improve and enhance the safety, convenience and comprehensiveness of both pedestrian and cycling networks, so that residents of all ages and abilities can travel to/from places for utilitarian and recreational purposes Town-wide.

Specific Objectives

- Identify:
  - Existing conditions
  - Gaps in the local network
  - Network connection opportunities with neighbouring municipalities
  - Facility types and design guidelines
  - Financial costs and funding sources
- Develop:
  - An asset management and maintenance strategy
  - A prioritized implementation strategy

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Study Objectives (continued)

LaSalle Multimodal Transportation Assessment

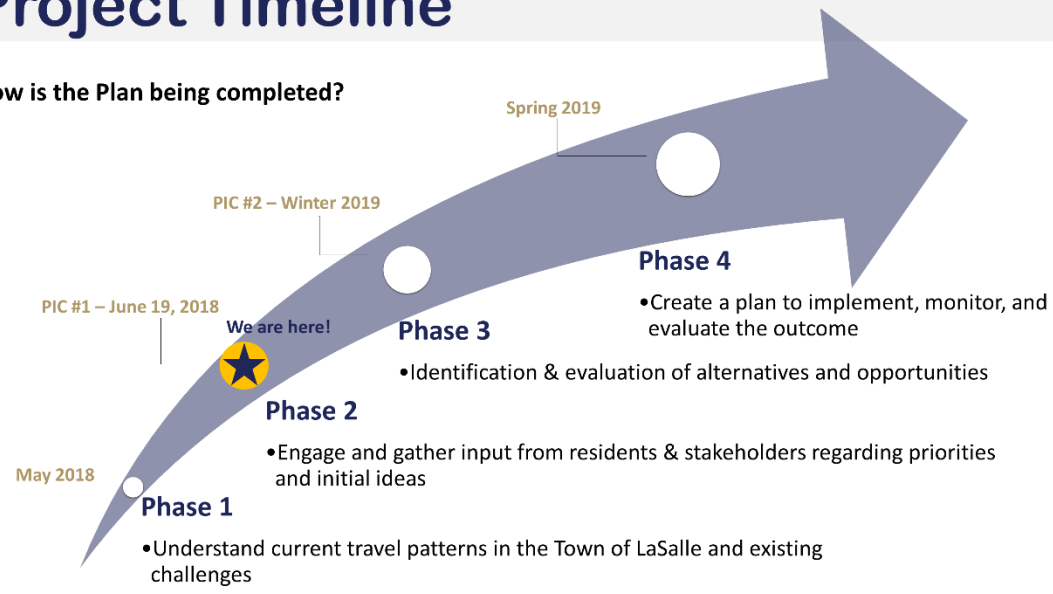
Protect the natural assets and support the local economy with well integrated streets and facilities that promote multimodal travel and seamless transfers across all transportation modes.

Specific Objectives

- Identify
  - Existing conditions
  - Gaps in the network
  - Assess Town's future road needs
  - Assess Town's transit needs
- Develop
  - Roads and trails design standards
  - Policy recommendations to address future impacts of autonomous vehicles
  - Cost effective implementation strategy (priority actions)

Project Timeline

How is the Plan being completed?



Working Vision

*"The Town of LaSalle envisions an **accessible, well-connected, age-friendly** transportation network that supports **sustainable** and **multimodal travel** for pedestrians, cyclists, transit users and motorists. Planning, designing, constructing and maintaining the network acknowledges the **mobility needs** of numerous users of **all ages and abilities**, meeting the needs of today and tomorrow"*

The vision for LaSalle's transportation future integrates 4 key principles:

Promote active lifestyles by providing safe and comfortable facilities for walking and cycling

Provide accessible streets for all ages and abilities in established and new neighbourhoods

Encourage seamless multi-modal travel and transfers across different transportation modes

Maintain and enhance the quality of life through a well-integrated transportation system

Engagement Activity – Priority Ranking

Which of the items below should be **prioritized** to enhance the transportation network in LaSalle?
Rank your **top 5 items** using the stickers provided and place them in the respective boxes:

Road Improvements	**Traffic Calming**
Cycling Facilities Improvements	**Transit Improvements**
Pedestrian Facilities Improvements	**Parking**
Road Maintenance	**Road Safety Education**

Engagement Activity– Mapping

When traveling around LaSalle, are there **any places where transportation can be improved**?
Mark these places on a map and share what can be improved. You may include, but are not limited to, any of the following:

Gap: An area where there is a missing link or gap for pedestrians, cyclists, transit users, or motorists.

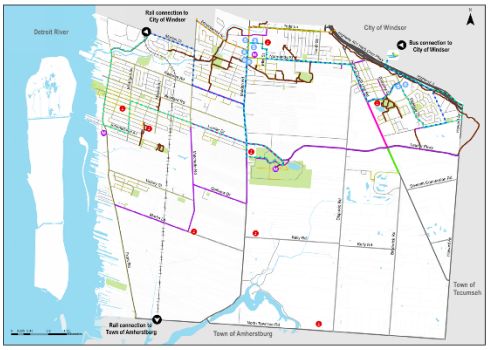
Barrier: An area/element that is blocking the circulation or movement for pedestrians, cyclists, transit users, or motorists.

Congestion: Area where traffic congestion is usually experienced.

Safety Issue: Location where there is a high risk or safety exposure for pedestrians, cyclists, transit users, or motorists.

Opportunity: An area where there is the opportunity to enhance the connectivity, accessibility, coverage, or integration applicable to any mode of transport.

Existing Transportation Network



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Engagement Activity– Cycling Facilities Preferences

Please review the following facility types for each class, **paste one sticker** next to the **facility you feel most comfortable** using :

Facility Class

Shared Facilities	Typically on **low traffic volume, low speed roads** whereby cyclists and motorists share the road space.	**Signed Bike Route** 	**Signed Bike Route with Sharrow** 	**Signed Bike Route with Edgeline** 
Designated Facilities	Typically on roads with **low to moderate traffic volumes and speeds** whereby cyclists have a designated space on the road.	**Bike Lane** 	**Buffered Bike Lane** 	**Buffered Paved Shoulder** 
Separated Facilities	Typically along **high traffic volume, high speed roads** whereby the cyclists is physically separated from the road. A separated facility can also include an **off-road route** that is located out of the road right-of-way	**Cycle Track** 	**In-Boulevard Trail** 	**Recreational Trail** 

Next Steps

What is next for LaSalle's TMP?

1. **Summarize** and process input received
2. **Identify** potential transportation alternatives
3. **Prepare** draft recommendations for Public Consultation Round #2

We would like your feedback!

Visit us online at:
www.lasalle.ca/tmp

Important Future Events

Event	Date
✓ Online Engagement Round #1	June 19 – July 21, 2018
✓ Public Consultation Round #2	Winter 2019

Our Next Move • Town of LaSalle Transportation Master Plan

THANK YOU!

Our Next Move

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B-4. Display boards utilized for Public Information Centre 2

Our Next Move

Town of LaSalle Transportation Master Plan

Public Information Centre #2

March 7, 2019

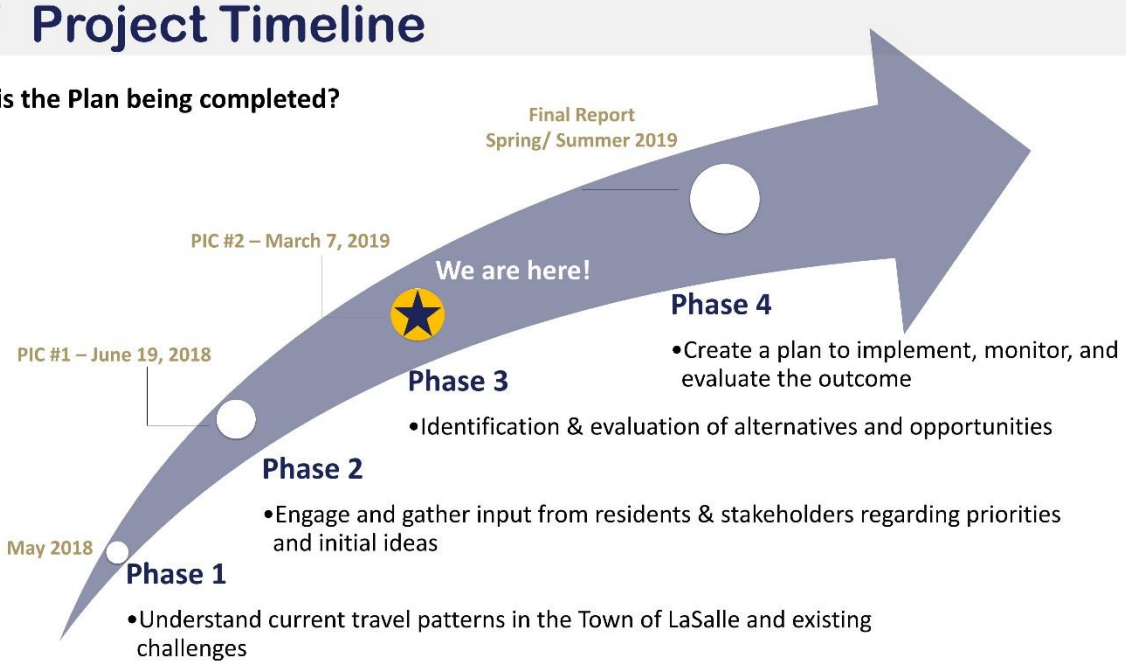
Presentation Overview

1. Introduction
2. Project overview and timeline
3. Who have we engaged and what have we heard?
4. Draft recommendations
5. Engagement activities
6. Next Steps

Our Next Move

Project Timeline

How is the Plan being completed?



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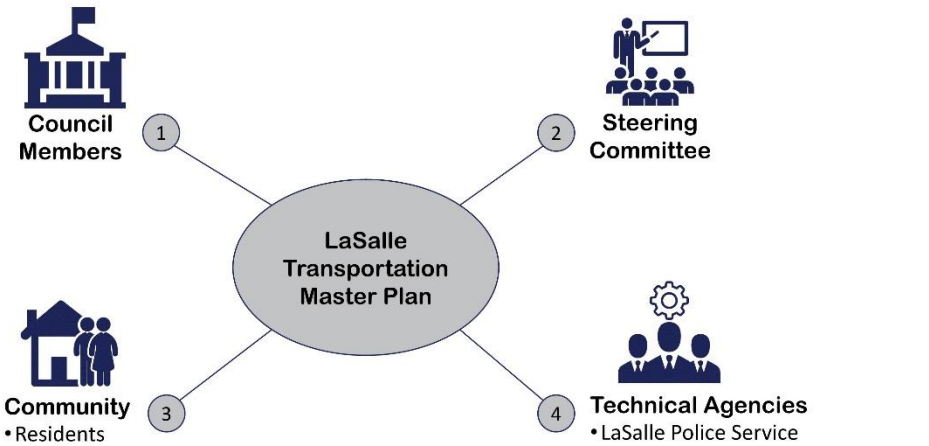
Stakeholders Engaged



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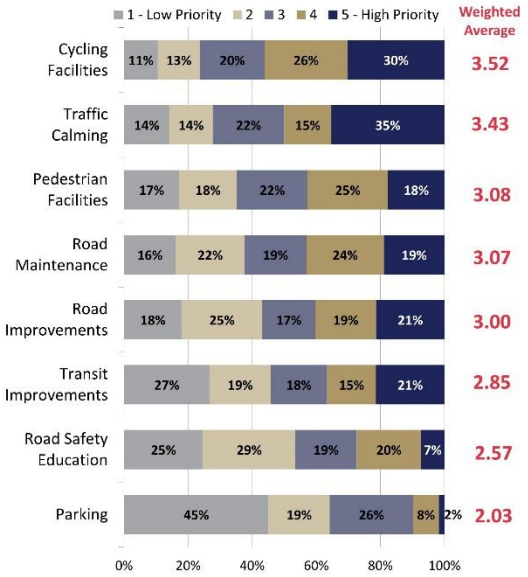
Community and Stakeholder Feedback

Cycling Facility Preferences (n=667)

Ranking Investment Priorities

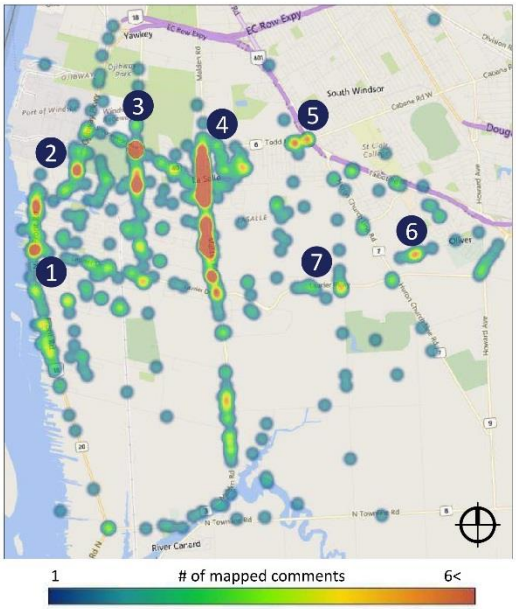


Community and Stakeholder Feedback

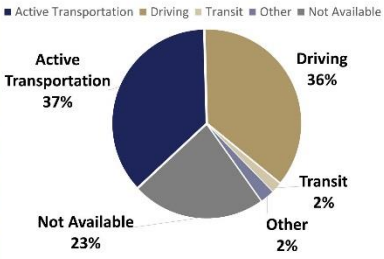
Geo-location of Stakeholder Feedback

Challenges & Opportunities

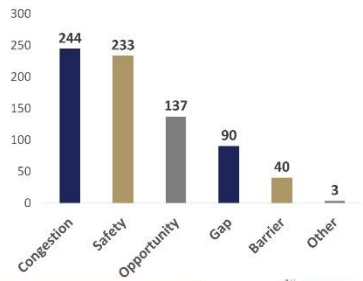
1. **Front Rd.** Opportunity to develop waterfront area and add safer AT facilities.
2. **Ojibway Pkwy/Morton Dr.** Acute congestion and speeding pose safety concerns to pedestrians/cyclists.
3. **Matchette Rd.** Opportunity to integrate cycling facilities to Windsor and review intersection operations with Morton Dr. and Sprucewood Ave.
4. **Malden Rd.** Review traffic and intersection operations, evaluate need for greater separation for cycling facilities.
5. **Todd Ln.** Opportunity to connect AT gap and enhance connections to Windsor and Herb Gray Parkway Trail.
6. **6th Concession Rd.** Safety AT concerns due to speeding; opportunity to enhance connections.
7. **Laurier Pkwy.** Opportunity to relieve pressure from Malden Rd. and activate corridor with enhanced streetscape.



Mode Referenced in Comment



Marker Type



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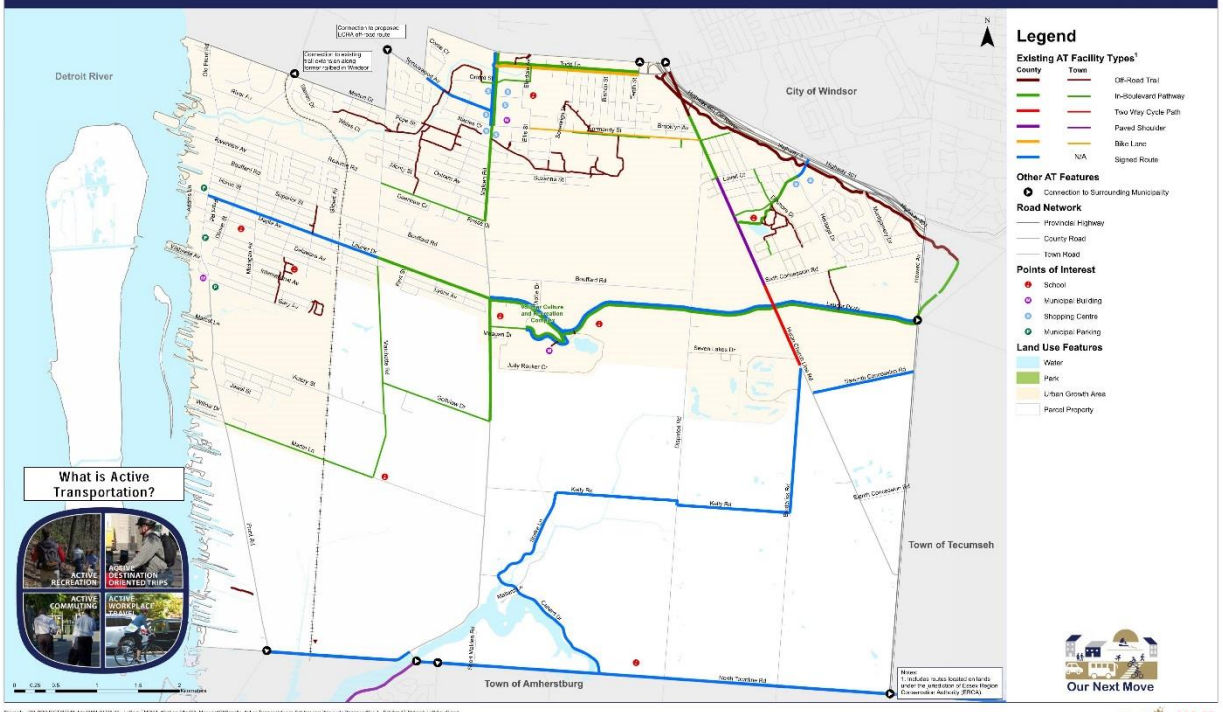
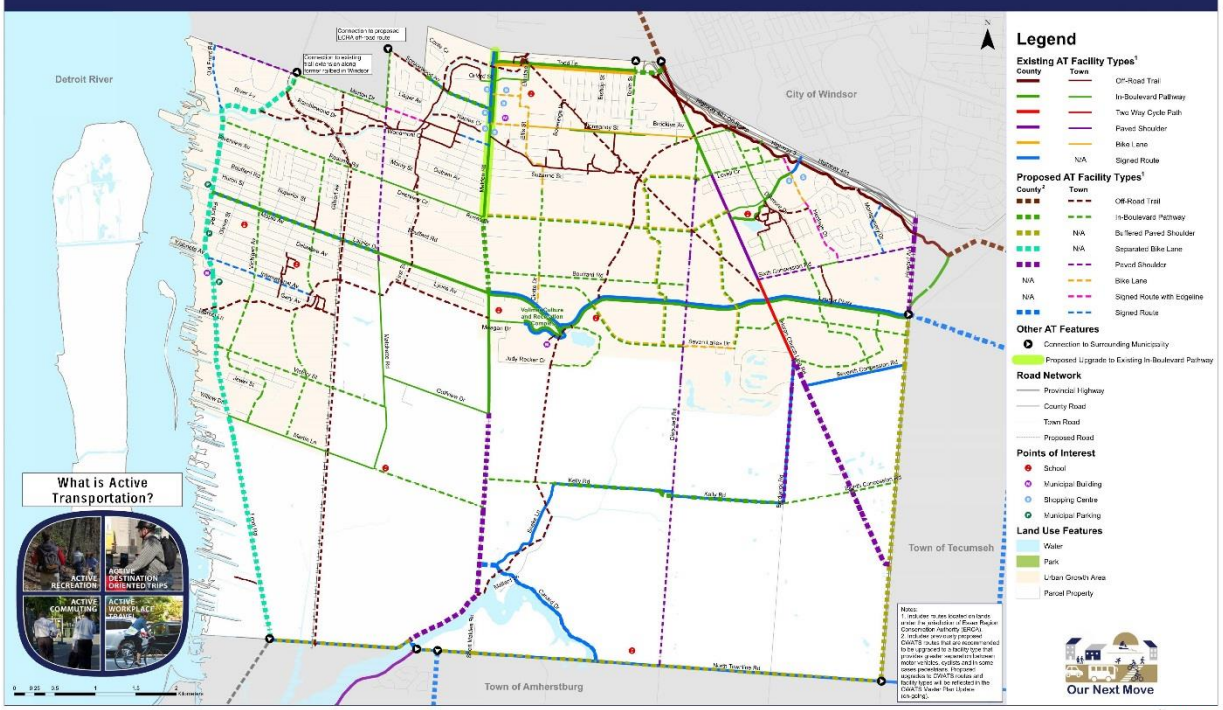
Existing Active Transportation Network

TOWN OF LASALLE TRANSPORTATION MASTER PLAN



Preferred Future Draft Active Transportation Network

TOWN OF LASALLE TRANSPORTATION MASTER PLAN



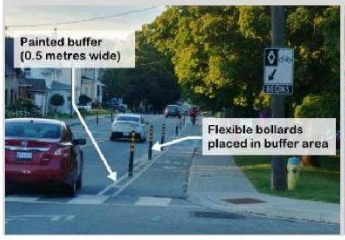
Front Road Vision - Pilot Project

Pilot Project Objective: Test a **context sensitive solution** (as identified in the County-Wide Active Transportation Plan) to improve local and regional **A.T. connectivity** and **enhance Front Road** as a main commercial corridor, a 'Complete Street' and an attractive destination for the community.

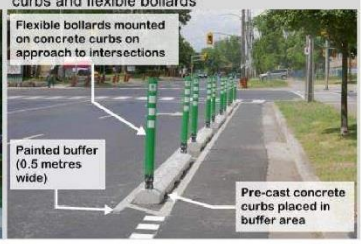
- Reduce the travel lanes from four to two lanes with a continuous centre left-turn lane (this could impact driving habits and have a natural traffic calming effect)
- Promote off-street municipal parking lots adjacent to Front Road
- Implement separated bike lanes on both sides of the road and sidewalks
- Encourage through / commuter vehicle traffic that originates and is destined outside of LaSalle, to use alternate routes such as Howard Avenue and Highway 401

What could separated bike lanes look like?

Buffered bike lane with flexible bollards



Separated bike lane with pre-cast concrete curbs and flexible bollards



Front Road Vision

Front Road Vision - Cross Section

Front Road Vision - Concept

Evaluating the Pilot Project: What happens next?

1. Seek Council approval to **undertake a pilot project** on Front Road for **1-2 years**. If approved, implement the measures.
2. During the pilot duration:
   - Undertake **data collection** to motor vehicle traffic and parallel corridors including Machette Road and Malden Road.
   - Work with **local businesses** to understand concerns and potential improvements to improve daily operations.
   - Undertake **public opinion surveys** to understand public perception and support from residents
3. **Report findings to Council** and recommend whether to make the pilot project permanent or not. If results do not meet expectations, then revert Front Road to prior roadway configuration.

Please provide your feedback

Active Transportation Supportive Programs

Which initiatives are most important to you? Choose your top three favorite ideas and place the stickers provided next to each picture!

Group Rides		Organize Group Rides as a fun way to increase education about active transportation including safe practices and raise awareness of existing routes in the Town.
Active and Safe Routes to School		Promote programs to increase the number of children walking or biking to and from school. These can be supplemented with other initiatives and planned road projects to create community support.
Bike to Work Day		Host this annual event celebrated across Canada to promote cycling as a viable mode of transportation to work. Bike to Work Day is typically held during Bike Month in May.
Online Hub		Maintain an active transportation page on the Town's website as a central source of information including maps, how-to guides, upcoming events and updates on new infrastructure.
Open Streets Events		Close a street for part of a day or an event to encourage walking, cycling and other forms of active transportation. The event can showcase existing amenities and help to create a greater sense of community.
Other: Please comment		**Please provide your feedback here!**

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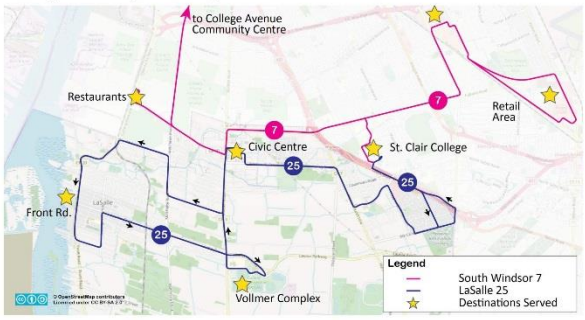
Future Transit Network

What transit plan would you like to see implemented in the future to help increase coverage and enhance service for the Town? Please choose you preferred option and provide input in the blue boxes.

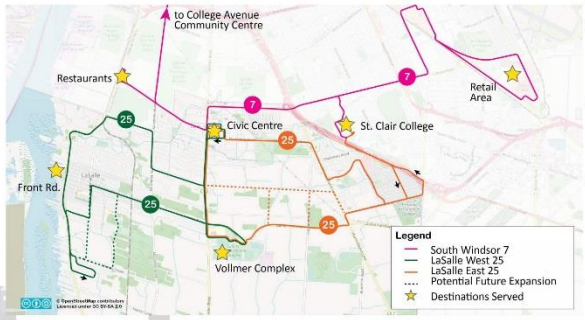
Continue or Upgrade Existing Transit



- Keep current transit route
- Upgrade to 30 minutes frequencies or have bidirectional service added (1-2 new buses)
- Connections to routes 5, 6 and 7 are maintained
- Currently serves all major destinations
- Does not serve new developing areas

Please provide your feedback here

Preferred Option: Split Line 25 into East & West routes



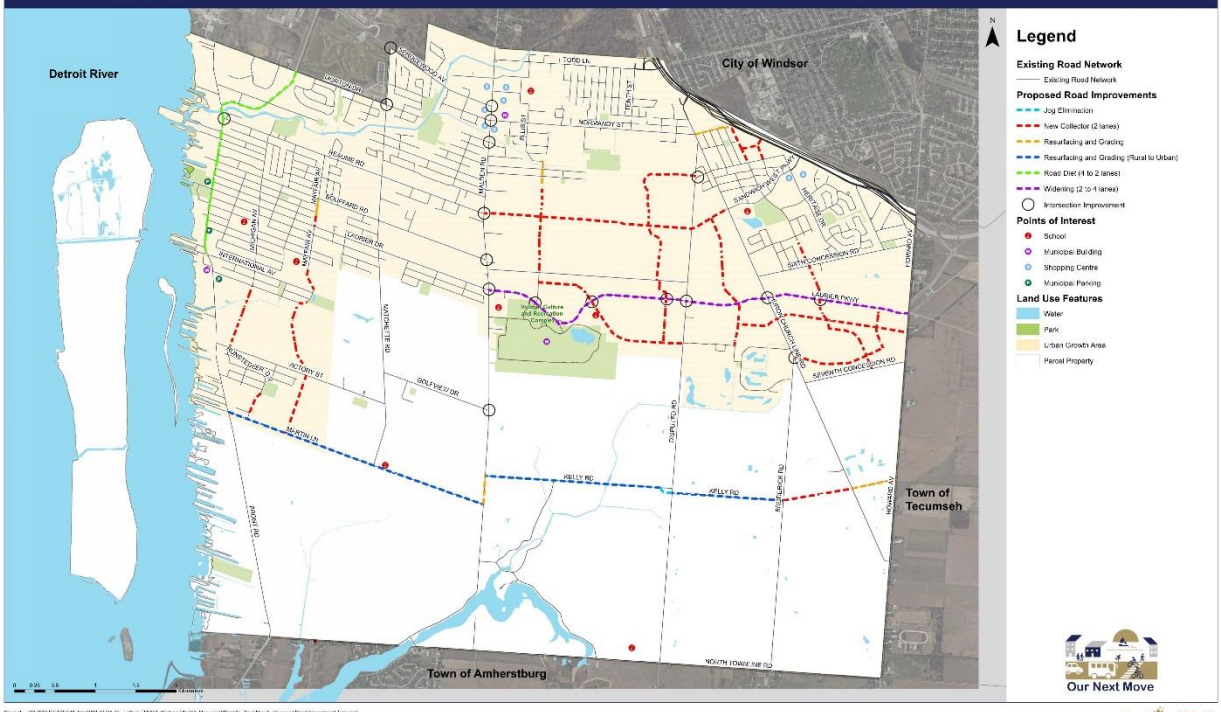
- Split current transit route
- Keep current 45-min frequencies but have bidirectional service (2 new buses)
- Connections to routes 5, 6 and 7 are maintained for the east route. Only route 7 connects with the west route.
- Transfers would be needed to get to St. Clair College from the west route, which may increase travel time for those users
- Provides new connections and serves new development areas

Please provide your feedback here

Our Next Move • Town of LaSalle Transportation Master Plan

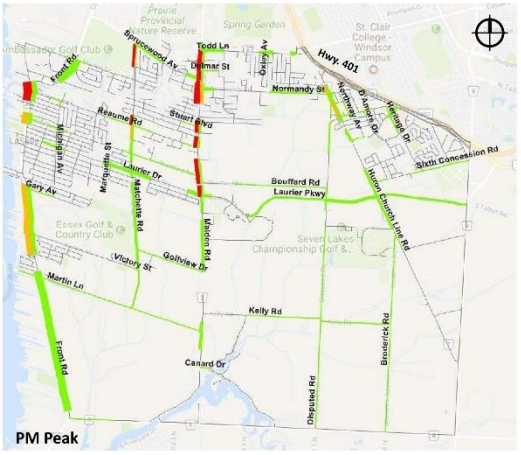
Proposed Future Draft Road Network

Town of LaSalle Transportation Master Plan

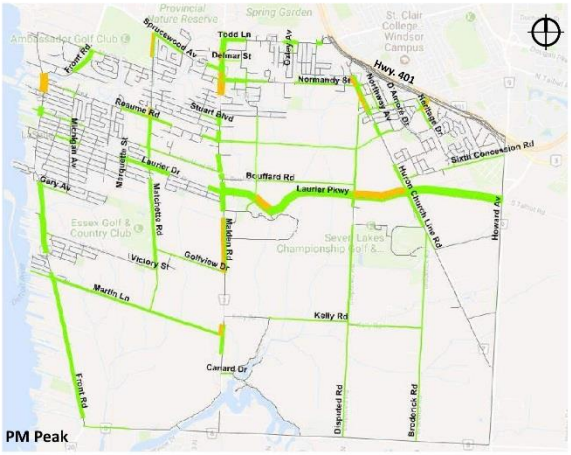


Future Road Network Assessment

2031 Road Network Do Nothing Alternative



2031 Road Network Preferred Alternative



Good Level of Service - No/Low Congestion
Fair Level of Service - Medium Congestion
Poor Level of Service - High Congestion

Legend
Volume to Capacity Ratio
0 - 0.79
0.80 - 0.99
1 <
Volume (vehicle trips)
2,500 1,250 0
0 1 2 3
Kilometers

The **preferred road network alternative** is able to accommodate the future forecasted vehicular volume and improve service levels at key corridors. A comprehensive communication and transportation demand management plan will be adopted to encourage residents and commuters to **use Highway 401** and Laurier Parkway as the main corridors in and out of Town.

Traffic Calming Measures

Traffic Calming provides a framework for analyzing, reviewing, implementing, and monitoring initiatives **to help reduce speeding and enhance safety** for all transportation users in local and collector residential neighbourhood streets.

Which measures would you like to see implemented to achieve this? Use the stickers provided to choose your **preferred type of traffic calming measure** in the boxes below.

Vertical Deflections

Measures that cause a vertical upward movement of the vehicle. These measures typically result in lower vehicle speeds.

Speed Bumps

Raised Crosswalk

Horizontal Deflections

Measures that cause a lateral shift in the travel pattern of vehicles. These measures discourage short-cutting and through traffic.

Narrower Lanes

Chicanes

Other Measures

Alternative measures used to educate and control drivers and hopefully discourage reckless driving behavior.

Speed Radar Signage

Enforcement

Our Next Move • Town of LaSalle Transportation Master Plan

Traffic Calming Process

1 Initiation

- Receive and Assess Request
- Initial Screening
- Road Classification
- Block Length
- Posted Speed Limit
- Minimum Volume
- Emergency Response
- Neighbourhood Survey
- Develop Problem Statement

2 Development

- Warrant Screening
- Speed
- Volume
- Pedestrian Presence of Sidewalk
- Collision History
- Stakeholder Mapping
- Traffic Calming Alternatives

If initial and the warrant criteria are not met, other alternative measures may be considered

3 Approval

- Assessment of Eligible Alternatives
- Public Consultation Process
- Council Approval
- Resident Notification

4 Implementation

- Prioritization Methodology
- Design and Construction

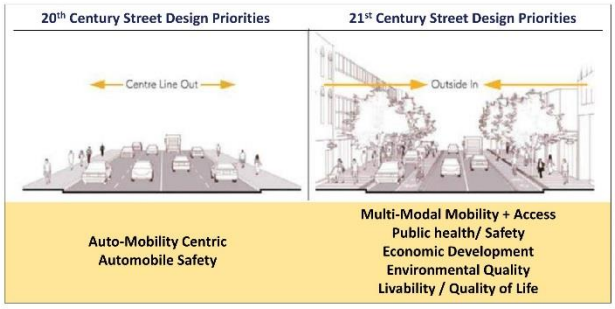
5 Evaluation

- Monitoring Program
- Evaluation and Follow-up

Please provide your feedback here!

Our Next Move • Town of LaSalle Transportation Master Plan

Supporting Policies – Complete Streets



Adopt a Complete Streets policy with a design approach that requires streets to be planned, designed, built and maintained **for all users and abilities.** Some benefits associated include:

- Increased **health benefits** by promoting active transportation.
- Enhanced **safety** for all users by acting as complementary **traffic calming measures**
- Increased **livability** by promoting attractive streetscapes.
- Improve **environmental quality** by reducing congestion and pollution.

Please provide feedback to improve this policy

Supporting Policies - Emerging Mobility Technologies

Prepare for emerging mobility technologies to facilitate the integration and operation of **ride-sharing, electric vehicles and driverless vehicles**. Some associated benefits to this policy include:

- Increased efficiency and transfers of multi-modal operations.
- Improved environmental conditions by reducing pollution and congestion.
- Reduce need for parking facilities.

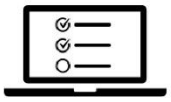
Please provide feedback to improve this policy

Next Steps

What is next for LaSalle's TMP?

1. **Summarize** and process input received
2. **Finalize preferred** transportation network and supporting recommendations
3. **Prepare** for Council Presentation

We would like your feedback!



Visit us online at:

www.lasalle.ca/tmp

Important Future Events

Event	Date
✓ Online Engagement Round #2	Spring 2019
✓ Council Presentation	Spring/Summer 2019

Our Next Move • Town of LaSalle Transportation Master Plan

THANK YOU!

Our Next Move

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B-5. Stakeholder comments received during engagement round 1

B-5a. Issue priority ranking

Comment	Issue
Pedestrian/cyclists cross walks need to be a priority in the area from the bend in Front Road @ Turkey Creek Bridge to the only safe crossing @ Laurier. Why is it that there is a crossway every 2 blocks for Malden Road, where the traffic is slower and none for the busiest road in our town? Not acceptable, the children of this town are crossing the roads and dodging cars in an unsafe manner. Some one is going to get killed.	Cycling Facilities
Why don't the trails match up with Windsor's? Mountain Bike trails please	Cycling Facilities
Cycling facilities must be more than recreational. The trail network needs to connect employment areas like Windsor Crossing on the east side of LaSalle and the industrial park on the west side of LaSalle.	Cycling Facilities
Cycling facilities must be more than recreational. The trail network needs to connect employment areas like Windsor Crossing on the east side of LaSalle and the industrial park on the west side of LaSalle. A greater police presence is also required on the trail system.	Cycling Facilities
The cycling paths are non-existent on most main roads and if they do exist they are either blocked by cars or not maintained properly to ensure a safe hazard free ride. The ones that do exist so bot connect well with existing paths.	Cycling Facilities
although the trail system is nice ... i drive on roads because in many cases they are the fastest way to get somewhere ... more bike lanes are needed ... not just markings in a lane meant for cars ... but specific bike lanes ... example ... Sprucewood, recently repaved ... and all I thought was, how hard would it have been to at 2 feet to each side of the road to protect me from vehicles that routinely travel at 60+kmh	Cycling Facilities
We have done an amazing job with pathways in a community- a real asset to value and enjoy! Further expansion? Parking for bikes.	Cycling Facilities
Paved trails all along Malden road.	Cycling Facilities
I would love a sidewalk or bike lane be put in at the curve from highway 18 to front road. The sidewalk ends in front of River. Kids in our neighborhood could ride their bikes from our subdivision on Ramblewood to Front road. It is so dangerous around that curve.	Cycling Facilities
I understand $30,000 was spent on painted lines and a few signs for "bike lanes" on Normandy. In less than a year, the lines have disappeared. Who is being held accountable for that boondoggle? We need CURBED bike lanes, not lines that put bikers in danger from the many distracted drivers. Please don't waste any more money on painted lines. Also, the lines just suddenly end at intersections and roundabouts. That is simply setting up a tragedy.	Cycling Facilities
Also include links with adjacent communities	Cycling Facilities
All major roads need to have bike lanes.	Cycling Facilities
Bike lane along front road and Ojibway parkway (to meet with existing path that starts across from McDonalds, although that short section may be Windsor?). As a cyclist, I am scared to ride on all sections of Front Road, but especially where speed increases to 70km. Also suggest extending Laurier bike lanes to the river (Gil Maure park area). The existing paths (Lasalle woods and other trails) are fantastic and are one of the reasons I want to remain in LaSalle, close to trails!	Cycling Facilities
More cycling lanes, especially connecting to Windsor cycle lanes to enhance bike commuting to work (e.g., on Matchette).	Cycling Facilities
It is NOT safe to ride your bike or walk up our part of Malden Rd. We need a paved trail!	Cycling Facilities

Map to me is very confusing and nowhere to leave comment, I live on Broderick 3 traffic lights were put in place on Huron church, unnecessarily. Crossing Malden from any side street ex. Monty is ridiculous. Can't think of a solution unless you put more lights which there are way too many now, Wasting money	Parking
May be a sign such as this one and a very visible walkway such as this one might help this intersection at Laurier and Highway 18. We need it desperately. The drivers are not considerate towards pedestrians. I have had several experiences as I cross that street to get to the marina. It is very very scary. We need something done....thank you	Pedestrian Facilities
I am a walker. I walk to get groceries. I feel that there should be no right turns on pedestrian crosswalks at the intersection of traffic lights. I had many encounters with vehicles turning right when I am walking.	Pedestrian Facilities
Intersection on Normandy and Malden the vehicle are turning right when a pedestrian is going straight. It doesn't matter if I am walking or cycling. On busy intersections there should be "no right turn on red".	Pedestrian Facilities
I live in an established part of town and feel that there needs to be improvement in road crossings from the River/Rivervilla/Old Front Road area to the east side of Front Road. Due to the amount and speed of traffic there is NO safe crossing. A pedestrian or cyclists must travel all the way down to Laurier for a secure crossing. Pedestrians and cyclists, of all ages and abilities have been forced to dodge traffic to get across the road to the other side. This is not acceptable. Also the sidewalks on Old Front, Turkey Creek Bridge are not cleared in the winter, causing people in danger themselves maneuvering over ice and snow build up, or taking a chance by walking on the side of a very busy and dangerous Front Road,	Pedestrian Facilities
More connectivity for trails. Specific areas are pedestrian or cycling crossings for Malden. Bike lanes on Matchette. There is no way to safety cross Malden from Reaume to the bike lane on Malden. There are no trail connections from Malden to laurier where there are lights. More connectivity and natural trails. Single dirt track trails would be amazing.	Pedestrian Facilities
Must work with the County of Essex to make CWATS routes actual multimodal transportation corridors. Most CWATS routes in LaSalle have a blue sign and no amenities for cyclists or pedestrians. So what's the point.	Pedestrian Facilities
sadly watched a man and his two kids trying to cross front road near the Macs about a week ago. Too much traffic, travelling at 60+kmh and this family waited ... should they have gone to the light at Laurier - probably ... Is that realistic to try to make small children walk that far ... no!! ... WE HAVE A HIGHWAY ON FRONT ROAD IN TOWN ... this is unsafe and requires several crosswalks to be installed ... please do this before someone gets hurt badly	Pedestrian Facilities
I feel there should be a pedestrian crossing close to the Macs on Front Road. I have seen on several occasions kids leaving the park and running towards Macs then they realize there is no light to cross.	Pedestrian Facilities
Pedestrian crossing at Malden and Reaume is badly needed. Children have no way of crossing busy Malden in this area except for going out of the way to laurier or Normandy.	Pedestrian Facilities
There is no sidewalk on the east side of Front Road beyond International. The sidewalk on the west side is dangerous and unusable. There are thousands of families with small children cut off from the community because of this.	Pedestrian Facilities
Improved pedestrian crossing at Malden and Reaume.	Pedestrian Facilities
Sidewalk on Morton to hwy 18 for safety. Also sidewalk from Morton to Normandy on Matchette for safety. Link the sidewalk from Villa Maria to the herb gray trails. Safer protected sidewalk from along herb gray to laurier pwy	Pedestrian Facilities
side walk entrances to TD,Tim Horton's, Rexall for walking, baby strollers, wheel chair, children.....now have to share car entrances.	Pedestrian Facilities

side walk entrances to TD,Tim Horton's, Rexall for walking, baby strollers, wheel chair, children.....now have to share car entrances. Side walk on Newman from Sprucewood to Normandy to connect to our great trails. The narrow street is a safety hazard. Waiting for a fatality.	Pedestrian Facilities
More sidewalks where none currently exist, especially on school bus routes, on transit bus routes, and near schools.	Pedestrian Facilities
More sidewalks where none currently exist, especially on school bus routes, on transit bus routes, and near schools (e.g., Morton).	Pedestrian Facilities
Keeping the Malden walking paths clear of service vehicles and dirt etc from construction/telephone/small yard businesses sites etc. Would be appreciated. It's a safety hazard.	Pedestrian Facilities
We live on Malden Rd in river canard...it is very dangerous to walk or ride your bike. We need a paved trail!!	Pedestrian Facilities
Morton Drive from the highway east to Matchette requires a sidewalk on the LaSalle side of the street. With increased housing in the neighbourhoods off Morton, the number of families accessing school bus stops have very little space to safely wait prompting parents to park at intersections blocking traffic and visibility during the school year.	Pedestrian Facilities
Crossing Highway 18 and Laurier...is terrible. It is an extreme busy intersection that needs improvement. Many accidents and I had many personal experiences where I was almost struck with cars as I am crossing the street. It does not matter the time of day either. The law insisting to not proceed until pedestrians have cross the street fully does NOT EXIST. I have to put up my hand up as I am holding my dogs to cross so I can go to the marina. I am scared! Hope this is taking into consideration the need is urgent. I want to feel safe as a pedestrian. Thank you	Road Improvements
I need to turn left on Malden Rd., It took me five minutes on Morton. I think it would really help if you opened up the Newman St. to Sprucewood.	Road Improvements
Front Road	Road Improvements
need for roundabouts instead of signalization on Laurier at Disputed and especially Huron Church (there is a ridiculous amount of pavement there!) and instead of a four-way stop at Matchette/Sprucewood	Road Improvements
Synchronized traffic lights to improve traffic flow at peak times. Consideration of roundabouts at Reaume/Malden, Malden/Sprucewood. Widen Malden further South.	Road Improvements
There are way too many lights on Malden road (near zehrs). It takes forever to get through the area. Dedicated right turn lanes would help tremendously.	Road Improvements
A roundabout at Sprucewood and Matchette would help a lot. If Ojibway is closed with an accident all alternate routes are very impractical. With it being connected to ec row it needs to flow better.	Road Improvements
Roundabout at the Sprucewood and Matchette intersection.	Road Improvements
Also, suggest better enforcement of keeping bike lane clear from garbage containers, cars and other blockages.	Road Improvements
Malden rd between Normandy and Laurier Parkway needs to be 4 landed immediately	Road Improvements
Traffic at Matchette and Sprucewood is horrible. We either need turning lanes or traffic lights.	Road Improvements
Sidewalks on Short Disputed Road are a huge safety concern. Existing sidewalks are uneven, causing significant tripping hazards. Decreased speed in school zones should only be decreased during school hours (perhaps using flashing lights to indicate when reduced speeds are in effect). Need a cross walk on Huron Line at the new street between Normandy and Cousineau (not sure of the street name).	Road Improvements
Turning left from Morton Drive onto Matchette is dicey at the best of times, especially during rush hours. Either make it a four way stop or put a traffic light there. Same issue on Front Rd and Reaume which really should have a light.	Road Improvements

I have recently noticed that in road construction sites, there is only notice of construction ahead signs just immediately before the event, not giving the traffic to slow down and merge safely. There has also been a lack of snow removal on the sidewalks along Front Road, over Turkey Creek Bridge.	Road Maintenance
Disputed road at the turn around full of mud on street for 2 years have builder clean roads or pay to clean everyones cars. It's ridiculous they get away with this and I have to wash cars every day.	Road Maintenance
Overall LaSalle road maintenance seems good. But I would want to keep it that way.	Road Maintenance
Front road and Morton drive is terrible	Road Maintenance
Many Intersections on the municipal boundary shared with Windsor are generally in need of resurfacing.	Road Maintenance
Front road is barely ever shoveled in the winter and grass is growing over half of the side walk in summer.	Road Maintenance
Snow removal is #1 !! Thank you! Some road maintenance utilizing a company who cares about the quality of the materials used, would be ideal. There are roads that were paved one year, that are a mess the next. This is 100% the cause of poor workmanship and supplies. Also, on Front Road, a job was completed. Rather than properly completing the asphalt job, the company put a sign to indicate that there was a bump in that spot. How about getting rid of shoddy workmanship!	Road Maintenance
I believe the LaSalle Police Service along with the Town of LaSalle do a great job, especially with the kids i.e. Bike Rodeo etc. Adults not driving safely need to be educated i.e. not letting seniors fully cross the road before driving quickly through behind them.	Road Safety Education
Awareness of bicycle traffic. Passing on right onto pathways. Roundabout education.	Road Safety Education
LaSalle has come along way with trails and cycling lanes. However we need cycling lanes (and improvement to existing ones) on Malden going out to River Canard. Regular maintenance (sweeping) of cycling lanes is important for cyclists, rollerbladers and strollers. Existing lanes need better entry and exit points off of intersecting roads (smoother). More N-S lanes added based upon actual usage. Finally, light at Laurier and Disputed needs a push button to allow N-S cyclists to turn the light. That signal is also extremely short for N-S drivers. Thanks.	Road Safety Education
Teach basic roundabout rules. Signal upon exiting or the entire system falls apart.	Road Safety Education
better education/signage at crosswalks	Road Safety Education
Turn signals are often not used giving other drivers no information on a vehicle's intentions resulting in missed opportunities at crucial corners such as Morton and Matchette.	Road Safety Education
Addition of more trails for pedestrians and cyclists (Golfview to North Town Line)	Suggest another
Bring back the commuter train, linking Windsor to Leamington - there are so many jobs in the Greenhouse industry that our youth can not access - we are forced to buy cars - then Windsor roads are so bad - they incur advanced wear and tear. Implement "BUS ONLY" lanes - like Ottawa - Implement commuter cycle routes	Suggest another
removing traffic lights, we have too many	Suggest another
Add another traffic light on Malden	Suggest another
Environmental impacts	Suggest another
Making Malden Rd four lanes wide	Suggest another
Policing driving ... people are blowing through stop signs many times without even slowing to yield ... especially Abbott and Sprucewood in morning traffic. People cutting through residential streets to avoid Malden and Sprucewood light.	Suggest another
Traffic Flow - Avoiding Delays	Suggest another

A dog park	Suggest another
Light or roundabout at Malden and Reaume.	Suggest another
Bike paths through natural green spaces. Ex. Mulch or pave paths through maple bush. This area leads to a school and would be much safer for children to walk through if maintained like Normandy/Morton/Sprucewood area pathways.	Suggest another
More lanes or traffic lights on Malden Road. Very difficult to make left hand turns from side streets onto Malden.	Suggest another
Laurier and Highway 18. Traffic calming may help but I think it needs more!	Traffic Calming
Zip lane on Malden Rd. and Normandy St. Does not work as driver of the vehicle 99% of the time is speeding up to pass you on the right.	Traffic Calming
Zip lane on Malden Rd. and Normandy St. Does not work as driver of the vehicle 99% of the time is speeding up to pass you on the right. We need more flashing yellow lights after certain hours of the night ie new traffic light by Elmdale St. I was stopped at ten pm for a car that was turning on Todd Lane.	Traffic Calming
Zip lane on Malden Rd. and Normandy St. Does not work as driver of the vehicle 99% of the time is speeding up to pass you on the right. We need more flashing yellow lights after certain hours of the night ie new traffic light by Elmdale St. I was stopped at ten pm for a car that was turning right on to Todd Lane. Why is there a stop sign on Ellis and Angeline. I have not seen one car in that intersection that warranted the signage. Does some vip member live on that street?	Traffic Calming
Unfortunately the only time I see the traffic on Front Road calming is when a Police Cruiser is sitting in the median. There is a tremendous amount of traffic flowing into Lasalle from both ends of Front Road. The south end is only calmed by traffic @ International and the other, the Indy 500 section, the bends in Front Road entry from the north, are travelling at high speeds with dangerous driving, with no lights until Laurier. There are not enough lights or crosswalks or turning lanes to keep the community safe.	Traffic Calming
The first block of Lafferty Ave. has about 20 kids that reside there. People keep trying to beat the light at Laurier and front..by speeding by our house. run the stop sign at Divine and at Laurier. WE need to do something soon before one of the kids gets hurt!! I have been bugging the town for YEARS for speed bumps.. But only the rich roads seem to get them They are $800- $1000 for a speed bump! C'mon! The danger with this is.. Most of the time the street is quiet.. The kids get used to it... Then all of a sudden you get a bunch of speeding cars beating the light... It being sporadic as it is, it is hard for Police to patrol this issue. Please feel free to contact me at 226 787 1186 in regards to this issue.. Jason Trealout 120 Lafferty. I can get signatures from the neighbors. They all complain about it!	Traffic Calming
The town needs to find solutions to reduce the speed of vehicles whether it is increased policing or some type of barriers such as signage, roundabouts, humps. What we are currently doing is obviously not working	Traffic Calming
In the 100 block of lafferty, motorist will speed to try and beat the light. If there were speed bumps in the road to help with the traffic flow it would be a lot safer for our children.	Traffic Calming
reduce the speed on Laurier Dr. more stop signs and more police presence	Traffic Calming
Sandwich WP is 30 around Holy Cross and very rarely followed, especially non school hours. Calgary has 30km for all school and park areas and is enforced.	Traffic Calming
LaSalle commuter traffic must be on designed roads for this i.e. Ojibway Parkway - not Machete and Malden Roads - they need to be repurposed to become "Yawkey Bush Commemorative Trail" & "Spring Garden Commemorative Trail" Commuter traffic is killing the Ojibway area, and the cost of developing to accommodate LaSalle is Windsor's to bear. The Yakey and Spring Garden will be cycle commuter routes on a raised "boardwalk" - let all the species be able to move back and forth underneath.	Traffic Calming

as a general rule ... speed limits are to high and are not enforced ... a 50kmh speed limit means drivers routinely travel 60+ ... research has shown that 40kmh speed limits provide safer travel for pedestrians and cyclists, and reduce the severity of car accidents ... best way to enforce ... mobile photo radar ... politically feared .. but tickets (and insurance increases) are the only thing that slows people down	Traffic Calming
Need more police enforcement of speeding. Bad on all roads	Traffic Calming
Malden area is getting more congested all the time. Doesn't make sense that there is a traffic light before the roundabout on Malden as well as on Todd Lane, why have roundabouts and lights. Wasn't the roundabout installed to do away with the need for traffic lights?	Traffic Calming
Speed limit along Morton needs to be enforced regularly.	Traffic Calming
The traffic along Malden needs to be looked at. A traffic light at Reaume and Malden would be beneficial not only to the pedestrians but the residents along that stretch. Lowering the speed limit to 50 for Malden road entirely would slow down the traffic to a more reasonable limit.	Traffic Calming
Turning onto Malden road is extremely hazardous anywhere from Laurier to Normandy. A stop light should be at resume and Malden	Traffic Calming
Front road is like walking on ec row...one wrong move by a kid on their bike and game over...	Traffic Calming
Walking on front road road is dangerous. Cycling is worse. Traffic moves TOO fast!!	Traffic Calming
Maintenance of bus shelter seems non existent eg.near rexall filthy	Transit Improvements
get rid of the big buses and get the smaller ones	Transit Improvements
Cancel bus. No one wants it	Transit Improvements
The current public transit system (Transit Windsor Route #25) is useless. It is a limited service model designed to fit a predefined budget. It doesn't provide adequate or timely connections to the main Transit Windsor network, therefore it can't be used to access the main destinations identified by its intended users (ie: University of Windsor students), despite the fact that all University students in LaSalle are subsidizing the service with a $134 surcharge on their tuition.	Transit Improvements
Need a wider range. Still have to drive kids to bus	Transit Improvements
Glad this has been implemented	Transit Improvements
transit needs to run in two directions ... to catch a bus at Morten and ramble wood requires me to snake through town and take a very long journey to get to my destination ... two way travel would greatly speed up my trip	Transit Improvements
By not running the buses past International you have cut off a quickly growing segment of the community. One which is already limited with almost no pedestrian access and only dangerous cycling options.	Transit Improvements
A longer run time would be awesome! Love transit being in the town though!!!	Transit Improvements
I see kids walking from LaSalle to Windsor via Matchette and Malden at various times of the day because we need better bus transportation. Very dangerous at night with limited street lights. It's also a very long walk. We need later buses and Sunday buses too.	Transit Improvements
There are still parts of LaSalle that do not get serviced by transit. Its GREAT for younger people that can walk, but older individuals that cannot drive also cannot walk the distances to get to a bus stop. It would be great if there was some greater coverage!!!	Transit Improvements

B-5b. Mapping challenges and opportunities

Comment	Marker Type	Mode
AT gap between LaSalle and Parkway trails	Gap	Active Transportation
AT gap between LaSalle and parkway	Gap	Active Transportation
Mayfair connectivity needed	Gap	Active Transportation
connect with Windsor cycling routes	Opportunity	Active Transportation
high cycling volume to HGT, poor access, dangerous route	Safety Issue	Active Transportation
need a cycling route across the town	Gap	Active Transportation
need connection to ride north-south	Gap	Active Transportation
lots of cyclists to and from the HGT. poor, sometimes dangerous route	Safety Issue	Active Transportation
no connecting trails on Front Rd from Turkey Creek to Morton	Barrier	Active Transportation
It is difficult for bicycle/pedestrian traffic to reach Matchette Road from this area. My son attend Mgr. Augustin Caron so can't ride a bicycle or would have to go to Maple - Matchette or Front Road which is unsafe. It would be great to have a path of some kind to be safe.	Barrier	Active Transportation
Bicycling on Front Road is unsafe.	Safety Issue	Active Transportation
The whole of front road is in desperate need of a cycling and/or mixed use lane. The sidewalk is deplorable in some parts, especially the further south you go. This would be an extremely popular route for cycling if it wasn't such a death trap.	Safety Issue	Active Transportation
heavy traffic and pedestrian safety	Safety Issue	Active Transportation
Very dangerous to cycle and walk here	Safety Issue	Active Transportation
Keep the limited natural areas and plant more trees to prepare for climate change impacts. Cyclist and pedestrians need more shade.	Opportunity	Active Transportation
Plant more trees to prepare for climate change I.e. Protect pedestrians and cyclists from extreme heat.	Opportunity	Active Transportation
The bike trail ends just before this corner. In order to catch the trail at the end of Morton, you have to cross here. This can take five minutes or more on some nights.	Congestion Zone	Active Transportation
The light doesn't give enough time to walk across the street (front rd)	Safety Issue	Active Transportation
Malden road from Golfview to Martin and then to Matchette is simply dangerous for pedestrians and cyclists.	Safety Issue	Active Transportation
shoulders too narrow for bikes / walkers around the bend here. Cars go too quickly around the bend and not enough room for bikes	Safety Issue	Active Transportation
No sidewalks or bike paths. Road is too narrow to accommodate cyclists. Traffic is always congested from 4 way stop.	Safety Issue	Active Transportation
Bike Trail down Laurier to GII Maure park	Opportunity	Active Transportation
No bike lanes between LaSalle and Amherstburg along Front Road	Gap	Active Transportation
Traffic to fast, sidewalks not cleaned in winter and NO safe crosswalk from Morton to Laurier.	Safety Issue	Active Transportation
No cross walk, cars driving on pedestrian/cyclist through way and unable to make any left hand turns off of Bouffard on either side of Malden.	Safety Issue	Active Transportation
Speeding traffic coming down River Avenue, this appears to co-inside with the companies located off/on Morton. There are no sidewalks.	Safety Issue	Active Transportation
As seniors cross the road cars shoot through behind them and do not wait until they have crossed.	Safety Issue	Active Transportation

Cars do not wait for seniors or kids to full cross the road before driving behind them closely...	Safety Issue	Active Transportation
There should be a cross walk here or at Suzanne for students or adults to safely cross... very difficult to cross here and it would slow traffic down	Safety Issue	Active Transportation
Something needs to be done with the cycling gap on Malden between Normandy and the Round-about at Todd Lane.	Safety Issue	Active Transportation
vehicle traffic does not always stop for pedestrian crosswalk lights at this spot. I'm not sure if there is warnings of the lights ahead of time, but if not, there should be.	Safety Issue	Active Transportation
Why does the trail just stop here?	Opportunity	Active Transportation
trail ends at D'amore, doesn't extend to HOWARD	Gap	Active Transportation
Dangerous to cycle in this area, especially at rush hour. Drivers speeding around curve	Safety Issue	Active Transportation
How can people get to bus stops, McDonald's, timhortons, even workplace by bike or walk without being on gravel on a major hwy??!! Need safe trails on both sides	Safety Issue	Active Transportation
Older "first blocks" missing sidewalks. Pedestrians young and old walk on streets to get to sidewalks/paths	Gap	Active Transportation
For Malden being a very busy road, pedestrian walkway only on one side. You have to cross without a light to get to a safe walkway, but the nearest crosswalk at a light is Normandy and Laurier, nothing I. Between. This is a walk way to a town center and schools there should be pedestrian walkways on both sides	Gap	Active Transportation
No safe area to walk (I know it's Windsor but.....	Safety Issue	Active Transportation
Have some beautiful walkways that lead to a beautiful park	Opportunity	Active Transportation
Pedestrians	Safety Issue	Active Transportation
Traffic is moving way too fast around the S Bend for safe cycling	Safety Issue	Active Transportation
Open rail line for walking cycling. Plenty of space beside the rail line to accommodate	Opportunity	Active Transportation
replacing the existing sidewalk on the south side of Reaume with a multi-use path would be great for cyclists and pedestrians (from Matchette to Front)	Opportunity	Active Transportation
this cut-through walkway is in terrible condition, too narrow, dark, and always has weeds/vegetation in it	Safety Issue	Active Transportation
Sidewalk ends	Gap	Active Transportation
No sidewalk no bike path. Children should be able to use this as a school is right there.	Gap	Active Transportation
No sidewalk	Gap	Active Transportation
No sidewalks or bike path. Children should be able to use this road as a school is right there.	Gap	Active Transportation
Crossing Malden from the Reaume trail to the trail on the side of Malden	Safety Issue	Active Transportation
trails on the other side of Malden so you do not need to cross until you get to the lights at laurier	Opportunity	Active Transportation
no trail connectivity down Matchette. travelling this section you are either biking on the sidewalk or waiting to get hit by a car. Riding on the side of the road is not a safe option for children.	Safety Issue	Active Transportation
no trail connectivity to the rail further up Matchette	Opportunity	Active Transportation
tail connectivity to Ojibway ... single track dirt bike trails would be amazing	Opportunity	Active Transportation
gap in trail system. not safe to bike with children on side of road.	Gap	Active Transportation
really need a natural area for biking walking.	Opportunity	Active Transportation

These are beautiful trails but we need more they are getting very busy	Congestion Zone	Active Transportation
drivers seem to be unaware to stop for pedestrians at the circle. drivers also seem unaware of how to signal when leaving the traffic circle.	Safety Issue	Active Transportation
Need to complete bicycle lanes on Malden Road as was originally intended and add signalled pedestrian crossings in the south part of the Malden town centre district.	Safety Issue	Active Transportation
Trail system doesn't reach Windsor Crossing employment area.	Gap	Active Transportation
Trail system doesn't reach industrial area in west end of LaSalle.	Gap	Active Transportation
Side walks and bike lanes should be added due to pedestrians using the shoulder during parts that do not yet have this	Safety Issue	Active Transportation
Often drivers do not pay attention to pedestrians and cyclists at this intersection. Several timesl have been almost struck while crossing here.	Safety Issue	Active Transportation
It would be great if there was a path to Sandwich West Public School from the existing trails here (along the power lines).	Barrier	Active Transportation
Drivers often don't pay attention to pedestrians on the cross walk at this intersection. I have had a few near misses here - I never cross now until I have made eye contact with a driver to make sure he/she has seen me.	Safety Issue	Active Transportation
The lack of bike lanes along Malden is a problem, forcing cyclists either to use the sidewalk, or to risk injury when cars do not heed the 1 metre rule.	Safety Issue	Active Transportation
It would be great if there was a path here for pedestrians and cyclists that could link the existing trails to Sandwich West Public School.	Opportunity	Active Transportation
increase length of bike bath beyond Broderick	Opportunity	Active Transportation
Dangerous road for cycling	Safety Issue	Active Transportation
Dangerous for cyclists	Safety Issue	Active Transportation
sidewalk/bike path ends	Gap	Active Transportation
Bike lanes present, but markings have faded. Very hard to see when driving a vehicle, and unless you see the sign where the lane starts, you can't tell it's a bike lane.	Safety Issue	Active Transportation
A pedestrian crossing or traffic light is needed here. When attempting to go from one trail to the other, you need to cross Malden. There is heavy traffic here all day, and crossing can be difficult.	Safety Issue	Active Transportation
Complete the path between Normandy and Wyoming towards swps	Opportunity	Active Transportation
Connect LaSalle trails with Windsor trails	Gap	Active Transportation
Please extend this trail to the school. Many more children moving in the area. Also, would provide combined access to retail	Gap	Active Transportation
Please find a way to connect the trail across Malden	Gap	Active Transportation
Machete Road is too dangerous - repurpose to connect to a cycle grid that will connect to the Herb Parkway (hopefully future) "Friendship Bridge (Pedestrian, Cycle and Species - Species on the lower tier to connect the Gordie Howe Bridge over Ojibway Parkway ramp to Machete, ramp to Malden then connect to Herb Parkway Trail	Safety Issue	Active Transportation
Ojibway Urban National Park - link Ojibway Shores, Black Oaks, Prairie, Nature Centre, Spring Garden etc...how will LaSalle link to this...how will LaSalle encourage potential eco tourism to stop in and enjoy LaSalle	Opportunity	Active Transportation
Far too busy a road to have cyclist and pedestrians crossing here - overland bridge needed - barrier to species - the big pond on Machete road is attracting wildlife and they are getting slaughtered by the traffic	Barrier	Active Transportation

Matchette Road should be closed at Titcombe to provide a safer and sustainable Ojibway Park.	Safety Issue	Active Transportation
Very congested with bikes and buses with no bike lanes on this part of Malden	Congestion Zone	Active Transportation
No bike lanes but many bikers	Safety Issue	Active Transportation
No sidewalks, no shoulder, ditches, and frequent speeding leave no safe space to travel for pedestrians, cyclists, and bus users and pose a significant risk down this length of Morton. The new bus stop pads do not provide much separation from traffic for anyone that reaches one. Numerous area families must reach side streets such as Wales or Quick daily to access the recreational trail and school bus stops. Traffic of all types is increasing rapidly as the large amount of new housing development is completed and populated (Ambassador Estates, Pope St., Naccarato, etc) so risks are increasing.	Safety Issue	Active Transportation
Intersection is quite busy due to the amount of traffic down Matchette and can be difficult to cross or turn at the stop signs for cars. This means it is extremely difficult to cross as a pedestrian and the lack of sidewalk down one side of Matchette makes it impossible to reach the trail crosswalk instead.	Barrier	Active Transportation
4-way-stop at Sprucewood and Matchette can get quite congested at peak times and many drivers do not do very well at taking turns making this intersection a constant source of intrigue for drivers and a real danger to pedestrians and cyclists.	Congestion Zone	Active Transportation
The trail breaks up at this location preventing it from being an excellent alternative method of getting to businesses on Malden or the remainder of the trail to the east.	Gap	Active Transportation
The trail breaks up at this location preventing it from being an excellent alternative method of getting to businesses on Malden or the remainder of the trail to the east.	Gap	Active Transportation
Drivers occasionally miss the lights changing to red at the trail crosswalk which is obviously extremely dangerous when it happens. This crosswalk sees significant use and the road is quite busy so anything to improve visibility and make drivers aware and prepared to stop will help prevent a serious incident.	Safety Issue	Active Transportation
bike lanes needed	Safety Issue	Active Transportation
high speed heavy traffic with no safe space for cycling ... consider the many businesses along this route and the fact they are cycling destinations ... but the risk forces cyclists to avoid the area	Barrier	Active Transportation
no cycling lanes on machete ... the easiest and most logical route into Windsor by bike Secondly, a bus route going to the U of W is needed ... going to StClair and transfer to get to UofW takes an excessive amount of time	Barrier	Active Transportation
Cycling	Opportunity	Active Transportation
Cycling	Opportunity	Active Transportation
Cycling	Opportunity	Active Transportation
A pedestrian crossing or traffic light is required. When leaving one trail and trying to access the one at the end of Morton, crossing here is dangerous. Heavy traffic almost all day, every day.	Safety Issue	Active Transportation
Bike trail just ends. No signage, no safe place to cross the street if necessary so you can be riding on the proper side. Little choice than to continue riding on the sidewalk, which is extremely dangerous.	Gap	Active Transportation
If wanting to bike in to Windsor or University it is not safe to bike on spruce wood or MATCHETTE. Dedicated bike path is needed	Safety Issue	Active Transportation
Poor access to Windsor by bike -better paths needed	Barrier	Active Transportation
Bike lane needed	Safety Issue	Active Transportation

Increase trail system by connecting brunet part to Bouffard road	Opportunity	Active Transportation
Kids cant cross this busy street	Barrier	Active Transportation
Sidewalk stops, unsafe for pedestrians	Safety Issue	Active Transportation
Very busy, not safe for pedestrians or cyclists. Has the potential to get worse when the big box opens	Safety Issue	Active Transportation
would be nice to see bike trails at this end of town.	Opportunity	Active Transportation
Opportunity to improve parking along Front Rd will help businesses here. Also improves pedestrian safety.	Opportunity	Active Transportation
Right side of roadway has many cycling obstructions from poor road maintenance to sunken sewer grates	Safety Issue	Active Transportation
No cycling facilities on west bound side	Gap	Active Transportation
As a mountain biker, this area is an ideal area for trails. Partner with the local MTB club to maintain the trails.	Opportunity	Active Transportation
as a family we like to cycle to Malden park and Ojibway but there is a no cycling lane past this point	Gap	Active Transportation
would appreciate a multiuse path on Malden that extends south of Golfview as far as Front Rd	Gap	Active Transportation
cycle	Gap	Active Transportation
The road here is frequented by cyclists, but is narrow with a high rate of speed and no bike lane.	Safety Issue	Active Transportation
The transition from the road to the paths can be dangerous for cyclists	Safety Issue	Active Transportation
Improve conditions for cycling	Opportunity	Active Transportation
Improve conditions for cycling	Opportunity	Active Transportation
Improve for cycling conditions	Opportunity	Active Transportation
Improved for cycling	Opportunity	Active Transportation
more access to the riverfront with walking paths	Opportunity	Active Transportation
Wider sidewalks and paths for pedestrians and cyclists	Safety Issue	Active Transportation
bike path ends - no where to ride safely	Barrier	Active Transportation
Front Road (between Morton and Reaume) is a safety issue for pedestrians and bicyclists.	Safety Issue	Active Transportation
Trail ends with no link to Herb Gray Parkway	Gap	Active Transportation
no cycling lanes	Gap	Active Transportation
no cycling lane	Gap	Active Transportation
there should be a bike lane here from snake lane to county road 3. alot of cyclists use this path, there is tons of room to put the bike lane, please.	Safety Issue	Active Transportation
bike lane from snake lane to concession rd 3	Opportunity	Active Transportation
The only way for anyone in this large subdivision to access the abysmal sidewalk on Front Road is to cross FOUR lanes of traffic travelling at 80 km/h on a blind corner. The existing sidewalk has zero buffer to the road (so large vehicles travelling past simply blow people over) and the sidewalk is encroached upon by land and is clearly smaller than regulation. There is no bicycle lane so cyclists and pedestrians often meet in a dangerous game of chicken with nowhere to go on either side. This issue continues to be ignored.	Safety Issue	Active Transportation
Sidewalk needed on park side of road.	Safety Issue	Active Transportation
A bike lane down the side of Reaume or bouffard might be nice.	Opportunity	Active Transportation

Bike lane/pedestrian lane along the road.	Opportunity	Active Transportation
Bouffard bike and pedestrian lane	Opportunity	Active Transportation
Bike and pedestrian lane. I would ride my bike more if there were better routes to ride on.	Opportunity	Active Transportation
Pedestrian walkway located on the road is not safe	Safety Issue	Active Transportation
crosswalks are new and need to be more eductaion	Safety Issue	Active Transportation
Safety concern for crossing along the road that intersects this trail.	Safety Issue	Active Transportation
Gap in trail, provide trail extension from Reaume and Laurier	Gap	Active Transportation
Roadside trail too close to traffic, need separation and curbing for safety	Safety Issue	Active Transportation
Bike lane. I want to bike into Windsor. There's no way to safely connect to the Windsor bike lanes along riverside. Matchette is a scary drive watching cyclists, also sad to watch people struggle to walk on the side of Matchette where there is no sidewalk. I have watched as children get off the bus on Matchette and spruce wood and all the kids will fall, because there's no sidewalk and the shoulder has eroded down so it's such a large drop kid after kid will fall.	Opportunity	Active Transportation
Lasalle trail extends north of Sprucewood (through North Woodmont) ... this is where the pedestrian light should have been placed instead of on the other side of the bridge by the trail entrance along turkey creek. Many pedestrians and North Woodmont traffic meet at this street and trail intersection which makes it dangerous for everyone to cross to the trail. In the very least, pedestrian crossing lines and signage should be installed please.	Safety Issue	Active Transportation
Pedestrian crosswalk light for students walking home from school.	Safety Issue	Active Transportation
Connect a sidewalk from Morton to River Ave area of front road...safety concern.	Gap	Active Transportation
No convenient cycling connection to Windsor in this area	Gap	Active Transportation
Trail just ends here, without convenient access to Front Rd. I guess that's because of railroad tracks.	Barrier	Active Transportation
Bikes do not stop when biking down Malden Road at cross streets..they just keep cycling	Safety Issue	Active Transportation
Pedestrians trying to cross, needs signal to allow for safety	Safety Issue	Active Transportation
Link this trail	Gap	Active Transportation
Need sidewalk from Morton to Normandy followed to Sprucewood and Sprucewood to abbott	Safety Issue	Active Transportation
Pedestrian crosswalk or bridge to connect trails. Continue trail down Morton to Malden	Safety Issue	Active Transportation
Labeled bike trails through the park to follow. Colour coated for ease of direction	Opportunity	Active Transportation
Bike lane along Matchette	Opportunity	Active Transportation
Sidewalks are a must!!!!! Difficult to get to the paths by walking down this road. People do not drive 40 and it's dangerous for people walking down this street. Visibility is poor at night due to the solar street lights... they aren't bright enough!	Opportunity	Active Transportation
side walk to join trail. road to narrow . safety hazard	Opportunity	Active Transportation
crossing Malden to get to connect to trail. Plus trail extension to follow the creek.	Safety Issue	Active Transportation

Kids riding bicycles south on the "pathway" (which is on the wrong side of the road for southbound bicycle traffic, by the way), routinely do not stop at Bouffard. They just keep going. Cars coming from Bouffard East do not see them (the path is obstructed from view to the north), and turning left from Malden southbound onto Bouffard East, drivers normally don't look there (why would you normally?). Had to stop half way through my turn - dangerously in the left lane - as 4 kids mindlessly rode through the intersection - they are supposed to stop - with no warning. Almost hit one at dusk two years ago turning right onto Malden northbound coming unseen, southbound, on that path, and had to slam on the brakes. He gave me the finger! Maybe a traffic light (? - see my suggestion for coordinated lights at Laurier during school-out time to give traffic breaks), and much stricter enforcement of stop signs for cyclists. They *routinely* breeze through stop signs.	Safety Issue	Active Transportation
Matchette Road needs a safe way to travel by bicycle. Sidewalks are forbidden, but it has no shoulder, and it's not wide enough to just paint a "bike lane" safely.	Safety Issue	Active Transportation
No safe way to travel along our riverfront by bicycle. Front Road, with speeding traffic and a curb is a non-starter. Need a riverfront bicycle strategy.	Safety Issue	Active Transportation
Very narrow, no cycling path for a fairly busy street	Opportunity	Active Transportation
Poorly labeled. Never adhered to . CROSS WALK to connect trail and get students to schoo	Safety Issue	Active Transportation
Need biking paths to connect	Gap	Active Transportation
Again need to connect biking paths closer to international street and fields subdivision.	Gap	Active Transportation
Connect biking paths	Gap	Active Transportation
Crossing front road with children on bikes is dangerous. Drivers who want to turn right from Laurier onto Front Road, often don't wait for cyclists to cross.	Safety Issue	Active Transportation
I think there is an opportunity to further develop the waterfront. Would like to see more small businesses and more access to shoreline for pedestrians and cyclists.	Opportunity	Active Transportation
Lack of bike lanes...	Safety Issue	Active Transportation
Lack of bike lanes....	Safety Issue	Active Transportation
Extend Laurier bike path to recreational hub at riverfront.	Opportunity	Active Transportation
No sidewalks or cycle lanes on a busy bus transit street.	Safety Issue	Active Transportation
Add cycle lanes and sidewalks on Morton!	Opportunity	Active Transportation
Was almost hit twice by turning cars as a pedestrian at Sprucewood and Malden	Safety Issue	Active Transportation
No sidewalks on Malden for kids to walk to Prince Andrew school safely	Gap	Active Transportation
bus routes could be improved to avoid long rides	Opportunity	Active Transportation
No bike lanes or shoulders for cyclists	Safety Issue	Active Transportation
Busy intersection for cyclists	Congestion Zone	Active Transportation
Need bike lanes along busy roads	Safety Issue	Active Transportation
The path coming doen the powewrlines should be connected to the parh on Wyoming at Sandwich West PS.	Gap	Active Transportation
Develop paths in the woodlot south of Cahill drain, essentially extending Brunet Park to the south.	Opportunity	Active Transportation
Connect the path along Naples to Malden Road	Gap	Active Transportation
No connection to trail	Gap	Active Transportation
Have to cross Sprucewood. Perhaps a pedestrian/bike tunnel under Sprucewood	Opportunity	Active Transportation
Cars passing on walkway. No signage there as at a Reaume amd Minto.	Safety Issue	Active Transportation

From Laurier Parkway going north and south from Sprucewwod, cars cannot get off Bouffard or Reaume due to increasing traffic backups. Especially from Early am and mid afternoon till early evening. Students walking to highschool cannot cross Malden Rd safely from Bouffard. They have to o walk on graded shoulder of Malden to Laurier Parkway which is not safe as well.	Congestion Zone	Active Transportation
Same as for a Bouffard Rd.	Congestion Zone	Active Transportation
Construction dirt etc in walking path.	Safety Issue	Active Transportation
Too narrow to walk on the side of the road, out of trafiic's way. From Golfview to Martin Lane.	Safety Issue	Active Transportation
Too narrow to walk safely	Safety Issue	Active Transportation
Complete the bicycle trail to be continuous and add a crosswalk on Malden.	Gap	Active Transportation
Cycling opportunities should connect with those in Anderdon, particularly connecting Malden south to River Canard bridge.	Gap	Active Transportation
In order to allow residents to enjoy our waterfront, a solution to safely crossing Front Rd is needed	Safety Issue	Active Transportation
Pedestrian Gap	Gap	Active Transportation
A barrier for Cyclists. So that they dont get hit	Barrier	Active Transportation
For Cyclists so they dont get hit	Barrier	Active Transportation
Connecting trails together	Gap	Active Transportation
Connect trails together	Gap	Active Transportation
Connect trails together	Gap	Active Transportation
Connect trails together	Gap	Active Transportation
Intersection can be very busy at times making entering and exiting Reaume Rd dangerous. Sensored traffic signals would be advantageous. Also allowing for pedestrians and cyclists to cross Front Rd at this point.	Safety Issue	Active Transportation
Intersection can be very busy at times making entering and exiting Reaume Rd dangerous. Sensored traffic signals would be advantageous. Also allowing for pedestrians and cyclists to cross Malden Rd at this point.	Safety Issue	Active Transportation
Paved shoulders for cyclists	Opportunity	Active Transportation
Paved shoulders for cyclists	Opportunity	Active Transportation
Paved shoulders	Opportunity	Active Transportation
Paved shoulders	Opportunity	Active Transportation
Continue two-way cycle path	Opportunity	Active Transportation
Paved shoulders	Opportunity	Active Transportation
Bike path at Bouchard. Danger for cyclists	Safety Issue	Active Transportation
Unsafe to walk or ride bikes	Safety Issue	Active Transportation
Unsafe to walk or ride bikes	Safety Issue	Active Transportation
Unsafe to walk or ride bike	Safety Issue	Active Transportation
Unsafe to walk or ride bikes	Safety Issue	Active Transportation
Unsafe to walk or ride bikes from this point all the way to Golfview. Trucks drive down here and there is a section on Malden where the speed limitt is 70k	Safety Issue	Active Transportation
Transit buses or paved bike trails	Gap	Active Transportation
Bike lane or path	Safety Issue	Active Transportation

Paced pathways, or at least mulched pathways to make pathways safer for users, especially school aged children.	Opportunity	Active Transportation
Visibility on this pathway needs to be improved. The weeds from the ditch make this unsafe.	Opportunity	Active Transportation
Dangerous biking, no shoulder or bike lane	Safety Issue	Active Transportation
Need bike lanes	Safety Issue	Active Transportation
Front rd needs bike lanes.	Gap	Active Transportation
Collision reduction and vehicle speed reduction would result if a light with pedestrian signals was installed at this corner. It would allow pedestrians safer acces to the park at the corner and the creek.	Safety Issue	Active Transportation
Sidewalks would provide a safer area for students boarding or exiting the school bus and pedestrians/cyclists since we have no road allowance for a bike/pedestrian lane.	Safety Issue	Active Transportation
high traffic with small sidewalks make it difficult to walk/cycle safely to the waterfront, parks and restaurants/businesses.	Safety Issue	Active Transportation
widen the sidewalks, add trees and grass as a border between the sidewalk and street, add cycle lanes.	Opportunity	Active Transportation
No sidewalks or trails on Bouffard Rd to link up to the trail system	Safety Issue	Active Transportation
As speed increases the need for separation increases	Safety Issue	Active Transportation
Very few sidewalks, west side = forgotten area, need a connection to get to Laurier	Gap	Active Transportation
Front Rd. for experienced – sidewalk, only on one side	Barrier	Active Transportation
Focus for AT spine	Opportunity	Active Transportation
Gap to HG Pkwy	Gap	Active Transportation
Front road facilities	Opportunity	Active Transportation
Cycling infrastructure along Front Rd	Opportunity	Active Transportation
Active Trail	Opportunity	Active Transportation
Don't forget connections to Windsor infrastructure	Opportunity	Active Transportation
Sneak routes into Windsor	Gap	Active Transportation
Sneak routes into Windsor	Gap	Active Transportation
Trail connection	Opportunity	Active Transportation
Speed, no sidewalks on Normandy, shortcutting traffic	Safety Issue	Active Transportation
Connect trails to "old" LaSalle	Opportunity	Active Transportation
Pedestrian bridges	Safety Issue	Active Transportation
Trail Gap	Gap	Active Transportation
Crossing opportunities	Opportunity	Active Transportation
Trail too narrow safety issue	Safety Issue	Active Transportation
Make sure cycling routes are AAA	Barrier	Active Transportation
No facility	Gap	Active Transportation
No facility	Gap	Active Transportation
Road connection needed	Opportunity	Active Transportation
No sidewalk on east side	Barrier	Active Transportation
Narrow	Safety Issue	Active Transportation
Narrow	Safety Issue	Active Transportation
Path needed	Barrier	Active Transportation

Path needed	Barrier	Active Transportation
Enhancements required	Barrier	Active Transportation
Rural road needing AT facility	Barrier	Active Transportation
Rural road needing AT facility	Barrier	Active Transportation
Need bridge	Barrier	Active Transportation
Need bridge, development to install	Barrier	Active Transportation
AT gap	Gap	Active Transportation
AT gap	Gap	Active Transportation
AT gap	Gap	Active Transportation
Reaume/Malden congestion	Congestion Zone	Driving
Traffic congestion on Malden Rd. Can't access Malden Rd from sidestreets due to traffic	Congestion Zone	Driving
Very congested mornings and around 5 pm. I stay in the left lane so traffic can access businesses from the right lane. They often can't get into/out of driveways due to congestion.	Congestion Zone	Driving
Same congestion issue as above.	Congestion Zone	Driving
Same congestion issue as above.	Congestion Zone	Driving
The four way stop is a congestion zone.	Congestion Zone	Driving
The two lights near Zehrs on Malden road are poorly timed. I understand that this may be a calming issue, but the percentage of time we hit both lights that are a block away from each other is too high.	Congestion Zone	Driving
heavy impatient traffic	Congestion Zone	Driving
need committed roundabout	Congestion Zone	Driving
Difficult to turn on Malden from Reaume	Congestion Zone	Driving
Congestion going down Matchette rd towards amherstburg	Congestion Zone	Driving
Impossible to turn left from Stuart onto Malden most of the time	Congestion Zone	Driving
A roundabout would be perfect here	Opportunity	Driving
Lights to allow for safe turning at this intersection would be helpful.	Safety Issue	Driving
heavy traffic area and very difficult to turn onto Maldern Road off of Reaume	Congestion Zone	Driving
very difficult to get out of tim hortons parking lot and onto Front Road.	Congestion Zone	Driving
Light at Resume road	Congestion Zone	Driving
Light at Sprucewood	Congestion Zone	Driving
Light at Laurier and Matchette	Congestion Zone	Driving
Traffic Circle	Opportunity	Driving
seems like you have to stop for every light	Congestion Zone	Driving
need to find a way to stop the congestion around the school- only one way in and one way out- provide more parking	Safety Issue	Driving
Difficult to turn left onto Malden	Safety Issue	Driving
Dangerous 4 way, and speeding on Spucewood	Safety Issue	Driving
Always congested	Congestion Zone	Driving
Above ground natural gas lines. Excessive speeding by drivers (greater than 70km) a car leaving road stricking gas lines will cause major damage. Control the speed	Safety Issue	Driving

Why would you keep putting in more stop lights right after a round a bout? Malden is brutal at rush hour.	Congestion Zone	Driving
Lafferty Ave, 1st block. has a safety issue with people speeding to beat the light... With several kids on the block at risk.	Safety Issue	Driving
Road surface is unsafe	Safety Issue	Driving
Turning signal on light	Safety Issue	Driving
Traffic calming	Safety Issue	Driving
Impossible to turn left in the after noon from off streets to Malden	Congestion Zone	Driving
Why can't one or more of these roads be an exit from the soccer fields to lessen congestion after games?	Barrier	Driving
Another area after work that gets congested	Congestion Zone	Driving
Traffice speeding down Lafferty to beat the light. Many children live on this street and play outside all the time.	Safety Issue	Driving
Speeding	Safety Issue	Driving
Traffic gets backed up at 4 way stop Matchette /Sprucewood	Congestion Zone	Driving
Rush hour very difficult to make a left hand turn from east boud Matchett	Congestion Zone	Driving
No connection from River Ave to neighbouring neighbourhood (I.e Ramblewood)	Barrier	Driving
The way people speed around this corner is crazy. There is an opportunity to slow down traffic	Safety Issue	Driving
Teach people about the round about rules please	Safety Issue	Driving
the new gas station is difficult to get into and now there's going to be a restaurant as well.. somehow we need to improve this area before it gets too congested	Congestion Zone	Driving
can we put a light here for people to be able to turn without getting into accidents please	Congestion Zone	Driving
traffic issues. no one can turn safely	Safety Issue	Driving
Rush hour is quite backed up at Sprucewood and Matchette and oftentimes people cannot tell who is next to go.	Congestion Zone	Driving
need a right turn lane from #9 onto Laurier	Barrier	Driving
this is a humongous, paved, signalized intersection; why this wasn't constructed as a roundabout is baffling	Opportunity	Driving
roundabout please!	Opportunity	Driving
turning left from Reaume onto Malden is often a pain in the butt (wish there was space for a roundabout)	Congestion Zone	Driving
way overdue for a roundabout here	Congestion Zone	Driving
While the passing on the path has improved, this intersection is still dangerous. A lot of people turning from Reaume will cut into the former ashton's parking lot to make the right if it is backed up. I've also seen people go to the esso to get ahead of others making a left.	Safety Issue	Driving
The lights are not timed well. Adding too many is not always the solution	Congestion Zone	Driving
2 lane traffic ends. Should continue on	Barrier	Driving
Tree on city corner lot. Makes the intersection dangerous. Should be a 4 way stop	Barrier	Driving

Should be a 4 way stop. Tree on city property blocks safety view while entering intersection	Safety Issue	Driving
This new stop light has got to be the worst placement I have ever seen. Really great roundabout ending at a traffic light.????	Safety Issue	Driving
Should have left it the way it was and mad it a no left turn from wyoming onto Malden.	Safety Issue	Driving
Malden Road in the area of Sandwich Secondary School fails at the beginning of the school day. Road needs to be widened with turning lanes.	Safety Issue	Driving
Poor flow of traffic during rush hour, would be improved with a turning lane along Matchette road	Congestion Zone	Driving
Often people speeding and several animals have been hit	Safety Issue	Driving
Drivers often don't seem to understand how to navigate a roundabout. I have seen several misses where traffic entering the roundabout travelling north along Malden don't slow down to give way to other traffic already on the roundabout who have the right of way.	Safety Issue	Driving
Often drivers travelling north along Malden who are entering the roundabout do not give way to traffic already on the roundabout. More education is needed.	Safety Issue	Driving
issues with going from 2 lanes to 1 at this light which has long left turn signals.	Congestion Zone	Driving
slight widening of Bouffard to make a right turn and left turn lanes would help because traffic has long delays when someone tries to go left at a busy time of day	Opportunity	Driving
trees make it hard to see oncoming traffic when turning left from bouffard onto disputed	Safety Issue	Driving
this light favours huron line traffic, causing laurier traffic to stop every time, often waiting with zero cars traveling on Huron line.	Congestion Zone	Driving
To be honest, I don't know LaSalle well enough to comment further - I speak manly to the huge problem of commuter traffic using "sneak" routes of Machete and Malden	Opportunity	Driving
left-turn signals need a sensor installed so they aren't used on every cycle, but only get activated when someone needs to turn left	Congestion Zone	Driving
This traffic light is not necessary. There is not enough traffic travelling east-west direction to justify the light.	Gap	Driving
Intersection road surface is in very poor condition	Safety Issue	Driving
Timing the lights better between the traffic circle and Normandy may help this situation.	Congestion Zone	Driving
Too many lights- a simple roundabout to increase flow or better timed lights would be good	Congestion Zone	Driving
Always really congested in this area	Congestion Zone	Driving
Need another traffic light to break up traffic.	Congestion Zone	Driving
Either add a round about or traffic light	Congestion Zone	Driving
Roundabout or flashing or light needed.	Safety Issue	Driving
Roundabout, light or flashing light.	Safety Issue	Driving
Roundabout or controlled light.	Congestion Zone	Driving
Intersection of resume and Malden would benefit from a traffic light	Congestion Zone	Driving
There is so much traffic it's nearly impossible to make a left onto Malden	Congestion Zone	Driving
Roundabout? Widen? Light?	Congestion Zone	Driving
Synchronize lights for peak traffic time	Congestion Zone	Driving
Right turn lanes badly needed.	Congestion Zone	Driving

Should have round about here. at 4-5 this is very busy spot.	Opportunity	Driving
needs round about or light. (can use the one down the road on Sprucewood that is never used.	Congestion Zone	Driving
Need to replace 4 way stop with round a bout or stop light	Congestion Zone	Driving
Turning onto Malden Rd is very difficult during morning and afternoon rush hours	Congestion Zone	Driving
Exit of businesses and curve in road present greater potential for accidents	Safety Issue	Driving
Excessive speed of vehicles	Safety Issue	Driving
Excessive speed of vehicles	Safety Issue	Driving
I mean Malden Rd.	Congestion Zone	Driving
Malden Rd. around the Zehrs area. Not sure on map.	Safety Issue	Driving
Front Rd. especially coming from Windsor.	Congestion Zone	Driving
Not necessarily a light - but at a minimum a left turn lane is needed on Reaume at Malden. During busy traffic times,cars can sit for 4+ minutes waiting I turn left onto Malden from Reaume, this creates traffic backups on Reaume, when many cars are actually turning right on Malden toward Vollmer and Laurier. Cars routinely cut through the parking lot of the old Ashton's, a private property, to avoid the stop sign/traffic back up, which creates a hazard ad cars from Malden might not anticipate these cars flying across the Ashton's parking lot. Not to mention damage to the private property from traffic crossing the lot.	Congestion Zone	Driving
Traffic	Congestion Zone	Driving
Maybe coordinate the two lights so the traffic can flow instead of stopping at both lights	Congestion Zone	Driving
Please remove the no right turn on red. This intersection is busy and the light is too long	Barrier	Driving
No N-S traffic light button; signal for N-S traffic very short.	Safety Issue	Driving
Many cars run this stop sign.	Safety Issue	Driving
Lights need much better synchronization. Or, add on demand capability to all of these lights so that lights stay green longer on Malden allowing through traffic to proceed with fewer stops.	Congestion Zone	Driving
Needs a three way stop or traffic light at Reaume and Malden	Safety Issue	Driving
Matchette at Sprucewood often congested at 4 way stop	Congestion Zone	Driving
This light is not in sink with Traffic in either direction. It is a major intersection where someone will get hurt.	Safety Issue	Driving
Speeding	Safety Issue	Driving
speeding	Safety Issue	Driving
poor road maintenance	Safety Issue	Driving
Left turn out of Zehrs backs up	Congestion Zone	Driving
Need a light to safely make left turn	Safety Issue	Driving
Light or roundabout needed	Opportunity	Driving
This intersection needs a traffic light or a roundabout immediately. It is a constant source of congestion and frustration and is they key entry point to the community of LaSalle and yet is constantly clogged. Get your heads together with the city of Windsor and come up with a compromise for how to deal with this intersection.	Congestion Zone	Driving

Lots of space for additional present features like a covered picnic area. Or baseball batting cages. Etc.	Opportunity	Driving
4 way stop is silly. A roundabout would help.	Congestion Zone	Driving
Laurie Parkway should have been designed similar to lauzon road with a higher speed limit to provide lasalle residents another quick/direct way through town. Instead it takes longer than meandering more directly through built up residential streets. I would have made it faster with areas zoned commercial next to it to act as a buffer for the residential areas. That way lasalle residents can find more of what they need in town. Also would give the opportunity to take some pressure off Malden road.	Opportunity	Driving
A roundabout here is long overdue. With Matchette connecting to e.c. row it is important to keep traffic moving. Also if Phone at is backed up or there is an accident there needs to be other viable routes.	Opportunity	Driving
Laurie Parkway is a missed opportunity. It should have been set up more like lauzon parkway with a speed limit of 70km. Then it should have been lined with commercial space to act as a buffer from residential. This route is currently almost pointless because it is almost as fast to weave through the existing residential areas of Lasalle. Also by having plazas, shopping, etc. Some pressure could be taken off of Malden road.	Opportunity	Driving
could use a traffic circle	Congestion Zone	Driving
Curves on the road	Safety Issue	Driving
left hand turn on Malden between Normandy and Todd lane	Barrier	Driving
Reaume to Todd during rush hour	Congestion Zone	Driving
Congested after work	Congestion Zone	Driving
Going north, if one person is making a left turn it can back everything up as Malden is busy	Congestion Zone	Driving
Speeders during school time	Safety Issue	Driving
2 lanes become 1 lane in a busy area of town. Then there is a traffic light followed by a roundabout, then another traffic light if you take Todd Lane. Poor planning!	Congestion Zone	Driving
Roundabout! I have heard about one maybe going here but that has been talk for years. This is necessary, it will help with traffic congestion in during peak times of the day.	Opportunity	Driving
peak times makes this a hard intersection for traffic leaving Reaume Road and turning onto Malden Road.	Congestion Zone	Driving
Busy all the time speeders to	Safety Issue	Driving
Possible light needed	Congestion Zone	Driving
Add a round about here, no more lights and stop signs	Safety Issue	Driving
Add a round about!!	Opportunity	Driving
Malden should be four lanes from Sandwich Secondary to Todd Lane. The bike lane is a nuisance.	Congestion Zone	Driving
Street Lights do not sense motorcycles.	Opportunity	Driving
Traffic backups in this area short lights for moments onto Malden	Congestion Zone	Driving
Traffic backups and very hard to turn onto Malden from any side streets in this area south of Normandy	Congestion Zone	Driving
cars making right hand turns	Safety Issue	Driving

Always a huge line at the 4 way stop. When I moved to LaSalle 3 years ago, when I would come to town to see homes, I wasn't impressed by the huge line of traffic to get into town.	Congestion Zone	Driving
There's a sign for a high risk intersection. It's near the school and large trees block visibility. Should be a 4 way stop.	Safety Issue	Driving
This is an extremely long light. To the point that I've watched people drive through it after waiting excessive periods of time.	Congestion Zone	Driving
Cars backed up. Bike lanes cause further dangerous issues. Get painted bikes lanes out. Remove the middle median to allow for car lanes to be moved inward and make CURBED bike lanes. Painted lines for bike lanes are dangerous and not proper use of resources. It must be safe.	Congestion Zone	Driving
Increasing number of vehicles cutting through residential North Woodmont and Sprucewood trying to avoid Malden and Sprucewood traffic.	Safety Issue	Driving
Regularly witness cars going through stop sign entering Sprucewood from Abbott street. Need policing.	Safety Issue	Driving
Could use a roundabout	Safety Issue	Driving
Roundabout for improved traffic flow.	Congestion Zone	Driving
Machette Rd. coming from Windsor congested at end of workday	Congestion Zone	Driving
Dangerous cross over from 401 to Huron Line, and no yield sign on right to slow cars coming off 401	Congestion Zone	Driving
Nightmare congestion mornings and late adternoons	Congestion Zone	Driving
Break in traffic needed, backup on Reaume	Congestion Zone	Driving
Also safety issues	Safety Issue	Driving
Bribing on shoulder, cutting thru to avoid waiting	Safety Issue	Driving
Left off Reaume, long wait	Congestion Zone	Driving
Merging	Safety Issue	Driving
Merging	Safety Issue	Driving
Merging	Safety Issue	Driving
Merging	Safety Issue	Driving
Merging need to put round about or traffic light	Safety Issue	Driving
Merging	Safety Issue	Driving
No barrier from traffic	Barrier	Driving
This area needs re paving	Safety Issue	Driving
Link to Todd lane	Opportunity	Driving
Link to Ojibway along Matchette	Opportunity	Driving
Absolutely need a light or roundabout here!!!	Congestion Zone	Driving
The four way stop is ridiculous. Put a stop light there or traffic circle	Congestion Zone	Driving
Excessive speeding on a daily basis.	Safety Issue	Driving
speeding vehicles on a daily basis	Safety Issue	Driving
speeding vehicles on a dialy basis	Safety Issue	Driving
NIGHTMARE, especially if anyone needs to make a left turn.	Congestion Zone	Driving
need left turn lanes at all major roads	Congestion Zone	Driving
severe congestion continually between 230p and 7p. Need roundabouts.	Congestion Zone	Driving

Can't see on coming traffic, hav3 to creep out into traffic, odd street	Safety Issue	Driving
Need light or something....safety issue, too many accidents	Safety Issue	Driving
Need to widen road...	Congestion Zone	Driving
Need turning lane instead of median....widen the road	Congestion Zone	Driving
Traffic lights should be timed on Malden to give traffic flow at busy rimes	Opportunity	Driving
Widen Malden rd into 2 lanes, too congested	Opportunity	Driving
Very difficult to turn onto Malden road. Lots of traffic both ways. Need a light or a 3 way stop sign.	Safety Issue	Driving
Need a light.	Congestion Zone	Driving
Need a light or 3 way stop!	Congestion Zone	Driving
widen lanes past Shoppers going south,	Congestion Zone	Driving
cars running red lights	Safety Issue	Driving
Need dedicated turning lanes, coordinated traffic lights, and probably more lanes.	Congestion Zone	Driving
When school gets out, it is impossible to make a left turn onto Malden from any of the streets on the west side of Malden, due to non-stop traffic coming from the school, from Laurier, and from Bouffard East side. Adding to the congestion is the "wagon train" of school busses, one after the other that, combined, tie up the whole area for some time. Stongly suggest Malden become at least three lanes (incl centre turning lane) from the Town Centre to south of the highschool, and traffic lights to give traffic breaks on Malden when school gets out. Might also be time to investigate opening the Ellis to Todd Lane corridor, to take a lot of traffic off of Malden completely. There is already a light at Laurier/Malden. Another one, coordinated with that one, at Bouffard E/Malden would allow for breaks in the steady stream of traffic from the high school on Malden, to allow traffic to turn left (north) onto Malden from all of the streets off Malden, on the west side, during this time.	Congestion Zone	Driving
Time to open the corridor from the highschool/Vollmer Complex on Ellis to Todd Lane, to siphon traffic off Malden, and give drivers alternative routes during high traffic periods.	Opportunity	Driving
Open the Ellis corridor to Todd Lane from here to lighten the load on Malden.	Opportunity	Driving
Three lanes (incl a turning lane) from here to the Town Centre area, would do much to streamline traffic flow. As you know, people have been using the bike lane as a substitute centre turning lane. Just put in the turning lane that we all know we need.	Opportunity	Driving
Dedicated right turn lane into the Zehrs plaza. Five cars who want to turn into the plaza ar4e held up by thee one car who is going straight through. That "right turn optional" lane doesn't cut it, increasingly.	Opportunity	Driving
A smart light here, to keep traffic flowing when the cross road is empty.	Opportunity	Driving
A smart light here, to keep traffic flowing when the crossroad is empty.	Opportunity	Driving
A smart light here, to keep traffic flowing late at night when nobody is coming out of Zehrs, or when one car wanting to come out of zehrs sits there looking at an empty Malden Road for no reason. Also coordinate this light with the light at Normandy for busy times, so traffic turning onto Malden from the plaza doesn't immediately face a parking lot on Malden, of cars backed up by the light at Normandy.	Opportunity	Driving
a 4 way stop replaced a traffic light. Reinstall the traffic light.	Safety Issue	Driving
Extend the barrier right to Montgomery Drive.	Barrier	Driving
Better information regarding use of the round about.	Safety Issue	Driving

With no left turn lanes can back up traffic in high traffic times	Congestion Zone	Driving
There is an opportunity to give chance for individuals to turn left on Malden rd with a light here	Opportunity	Driving
Need light or round about.	Congestion Zone	Driving
Need a light horrible trying to turn left off Reaume	Congestion Zone	Driving
Signal when the advance green is on.	Congestion Zone	Driving
Congested morning commute	Congestion Zone	Driving
Can be a dangerous street to cross in the morning even with a crossing guard.	Safety Issue	Driving
No surprise, often quite congested.	Congestion Zone	Driving
Malden is very busy during morning and evening commutes. Almost impossible to turn left onto Malden.	Congestion Zone	Driving
Long wait times here in the morning.	Congestion Zone	Driving
Malden Road is always congested	Congestion Zone	Driving
Too many lights. Too much commercial packed into a tight area without enough forethought on how to control it.	Congestion Zone	Driving
Traffic is very heavy on Malden up to roundabout. It is sometimes impossible to turn left onto Malden anywhere from Morton to Outram	Congestion Zone	Driving
With speed of vehicles and volume, difficult to make transition from Front Road to Old Front Road	Safety Issue	Driving
Excessive speeding	Safety Issue	Driving
Too many lights too close together and not in sync.	Congestion Zone	Driving
A solution for the congestion at this intersection is required	Congestion Zone	Driving
parking places for people to access the trailway	Opportunity	Driving
Too much traffic on Malden. Need a better solution	Congestion Zone	Driving
Too much traffic on Malden. Need a better solution	Safety Issue	Driving
Can't see around parked cars	Safety Issue	Driving
intersection improvements needed	Safety Issue	Driving
Need longer left turn lane heading west turning onto Tenth from Todd	Safety Issue	Driving
Need longer left turn lane heading west turning onto Tenth from Todd	Congestion Zone	Driving
Need traffic light	Congestion Zone	Driving
This area gets very congested at peak timed during the day especially at the end of the work day & people get aggressive. Not sure what to suggest	Congestion Zone	Driving
A Roundabout should be put here to alleviate the backlog of traffic in all directions at this 4 way stop.	Opportunity	Driving
People should be allowed to make a left from Front Rd. onto Sprucewood without having to just wait for the advanced green to allow them to turn. traffic flies by while people are sitting there waiting for the light to turn so they can turn onto Sprucewood.	Safety Issue	Driving
People should be allowed to make a left from Front Rd. onto Ojiibway Pkwy when it's clear without having to wait for the advanced green (and meanwhile have to just sit at the red turning light while traffic flies by them) before they can make the left turn onto Ojibway Pkwy.	Safety Issue	Driving
Installing a Roundabout would alleviate the traffic flow & congestion that happens often here.	Opportunity	Driving

4 way stop should be a round about or traffic light	Congestion Zone	Driving
Everyone speeds along this area	Safety Issue	Driving
Everyone speeds along this area. There's kids here. There's the park and pool here. The speed needs to be controlled. Not by a round about, but by more lights or constant police presence.	Safety Issue	Driving
Again, people going over the speed limit, upwards of 70-80 km/ hour.	Safety Issue	Driving
High traffic area	Congestion Zone	Driving
It's very difficult to get onto Malden from Bouffard during rush hours.	Congestion Zone	Driving
We need a roundabout or traffic lights at Matchette and Sprucewood	Congestion Zone	Driving
too many lights too close together	Congestion Zone	Driving
Backs up during rush hour	Congestion Zone	Driving
It seems to take quite some time to make turns from this steer into Malden.	Congestion Zone	Driving
Please make this a four-way stop. I can't begin to tell you how many people run this stop sign on Michigan, or assume it is a four-way and proceed into oncoming traffic coming down International.	Safety Issue	Driving
Takes 5-10 mins to turn left here. Feel like I'm taking my life when I do. So much traffic without a stoplight anywhere near this intersection	Safety Issue	Driving
Desperately need stoplight	Congestion Zone	Driving
Speeding residents, children in neighborhoods	Safety Issue	Driving
Speeding residents	Safety Issue	Driving
Speeding residents around children	Safety Issue	Driving
Speeding	Safety Issue	Driving
Speeding non stop	Safety Issue	Driving
Needs light	Congestion Zone	Driving
This round about is truly unsafe. People cut through going left to avoid the roundabout day an night. There should be better signage or speed bumps to force people to use the roundabout the correct way!	Safety Issue	Driving
The timing of this light still needs some adjustments.	Congestion Zone	Driving
Lots of speeders	Safety Issue	Driving
Speeders	Safety Issue	Driving
Speeders	Safety Issue	Driving
Too many traffic lights	Congestion Zone	Driving
Put in a light or roundabout. It would smooth traffic flow in and out of LaSalle during heavy traffic periods.	Congestion Zone	Driving
Put in a light or four way stop here to allow motorists attempting left hand turns to do so safely.	Congestion Zone	Driving
A hydro pole blocks visibility heading east causing a blind spot for vehicles turning left onto Matchette. You have to roll almost into the intersection to ensure you have a clear path to make your turn.	Safety Issue	Driving
Traffic light with a flashing warning sign ahead would allow traffic to move smoothly at that intersection which is heavily travelled both in and out of town. It would also reduce the number of guardrail collisions by reducing vehicle speed.	Congestion Zone	Driving
Front road speed limit 50 (people go70) but soon turns to 70 (people go 100). Its too fast. Subdivision and people crossing all the time. Hard to cross a 4 lane highway when trafic moves that fast. If 50 was inforced it woukd be easier	Safety Issue	Driving

Malden road is awful. We dont shop there and usually avoid this area	Congestion Zone	Driving
Front road has high traffic, cars speed down side streets to avoid traffic lights and are thereby creating a safety issue for residents.	Congestion Zone	Driving
It is very hard to make a left turn from Reaume into Malden. Especially difficult after school when buses are on the road and later in the afternoon/early evening when people are come home from work	Congestion Zone	Driving
North of Martin Ln = 50k	Other	Driving
South of Martin Ln = 70k	Other	Driving
Almost impossible to make left turn	Safety Issue	Driving
Interim solution better signage	Opportunity	Driving
Speeding concerns	Safety Issue	Driving
Blind corners (5 to 10) right	Safety Issue	Driving
Speeding safety concerns	Safety Issue	Driving
Congested/safety risk	Congestion Zone	Driving
-----	Gap	N/A
-----	Congestion Zone	N/A
-----	Congestion Zone	N/A
-----	Congestion Zone	N/A
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-----	Congestion Zone	N/A
-----	Safety Issue	N/A
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-----	Congestion Zone	N/A
-----	Safety Issue	N/A
-----	Safety Issue	N/A
-----	Gap	N/A
-----	Congestion Zone	N/A
-----	Congestion Zone	N/A
-----	Gap	N/A
-----	Gap	N/A
-----	Gap	N/A
-----	Safety Issue	N/A
-----	Safety Issue	N/A
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-----	Congestion Zone	N/A
-----	Gap	N/A

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-----	Gap	N/A
-----	Congestion Zone	N/A
-----	Safety Issue	N/A
-----	Congestion Zone	N/A
-----	Congestion Zone	N/A
-----	Safety Issue	N/A
-----	Congestion Zone	N/A
-----	Safety Issue	N/A
Reaume . Michigan	Gap	N/A
-----	Gap	N/A
-----	Congestion Zone	N/A
-----	Congestion Zone	N/A
-----	Congestion Zone	N/A
-----	Congestion Zone	N/A
Gap from Ec Row to here	Gap	N/A
-----	Opportunity	N/A
-----	Opportunity	N/A
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-----	Opportunity	N/A
-----	Opportunity	N/A
-----	Opportunity	N/A
-----	Barrier	N/A
-----	Congestion Zone	N/A
-----	Congestion Zone	N/A
-----	Congestion Zone	N/A
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-----	Safety Issue	N/A
-----	Congestion Zone	N/A
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-----	Safety Issue	N/A
-----	Gap	N/A
-----	Congestion Zone	N/A
-----	Safety Issue	N/A
-----	Opportunity	N/A
-----	Opportunity	N/A
-----	Opportunity	N/A
-----	Congestion Zone	N/A
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-----	Congestion Zone	N/A
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-----	Safety Issue	N/A
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-----	Gap	N/A
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-----	Opportunity	N/A
-----	Congestion Zone	N/A
-----	Safety Issue	N/A
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-----	Safety Issue	N/A
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-----	Gap	N/A
-----	Safety Issue	N/A

-----	Safety Issue	N/A
-----	Congestion Zone	N/A
-----	Barrier	N/A
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-----	Opportunity	N/A
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-----	Gap	N/A
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-----	Congestion Zone	N/A
-----	Opportunity	N/A
Matchette and Sprucewood	Congestion Zone	N/A
-----	Opportunity	N/A
-----	Congestion Zone	N/A
-----	Congestion Zone	N/A
-----	Congestion Zone	N/A
-----	Safety Issue	N/A
-----	Congestion Zone	N/A
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-----	Congestion Zone	N/A
-----	Safety Issue	N/A
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-----	Safety Issue	N/A
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-----	Gap	N/A
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-----	Safety Issue	N/A
-----	Congestion Zone	N/A
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-----	Gap	N/A
-----	Barrier	N/A
-----	Safety Issue	N/A
-----	Congestion Zone	N/A
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-----	Congestion Zone	N/A
-----	Safety Issue	N/A
-----	Barrier	N/A
-----	Congestion Zone	N/A
-----	Congestion Zone	N/A
-----	Safety Issue	N/A
Volume? (municipal building)	Congestion Zone	N/A

ensure connectivity through future developments and intersection alignment	Opportunity	Other
make our waterfront more of an attraction	Opportunity	Other
Develop your waterfront for the people. Too many buildings on the water side of Front Road.	Opportunity	Other
Waterfront opportunity make this pretty, have parks, outdoor concerts, shows, shores restaurants ...a boardwalk??? Amherstburg doesn't have that??!!	Opportunity	Other
Deer throughout the season, middle of the night, maybe we could keep them safe somehow?	Safety Issue	Other
Reclaim this land back to it's once by lawed protected park status to compliment Ojibway. LaSalle does not exist separate to Windsor - everything must be collaborated - Windsor suffered the commuter traffic problem	Opportunity	Other
If either golf course goes up for sale - this is a perfect place to create bmx - off road style cycle parks - as well as urban retreat centres	Opportunity	Other
no looping available	Gap	Other
Opportunity for public water front	Opportunity	Other
Many buildings are Front Road are empty. There must be some opportunity for commercial buildings here to lessen the congestion on Malden Road	Opportunity	Other
Transportation improvements should include small watercraft improvements such as the docks at Marcotte Park and J. Craig Park, plus Turtle Club, etc.	Opportunity	Other
Opportunity for economic development	Opportunity	Other
Stop building ridiculous plazas with no parking/odd parking lots. This area is a development nightmare and I actively avoid it as much as possible.	Congestion Zone	Other
Infrastructure and education need to go hand in hand	Opportunity	Other
TRUNK Extension (big opportunity)	Opportunity	Other
Future school, moving from Kelly Rd/Malden Rd	Opportunity	Other
Arrow to continue Laurier Pkwy to Windsor	Opportunity	Other
Barrie N to Herb and Windsor	Opportunity	Other
6th conc.	Other	Other
Large trucks using Laurier, truck routes?	Safety Issue	Other
Need AT (cycling) (paper) map	Gap	Other
need to ensure transportation link through green field area have connectivity	Opportunity	Transit
Hav bus route down Reaume road from Matchette to front	Opportunity	Transit
there needs to be earlier busses so people travelling form Windsor to Lasalle to Work can get to work before a 7am start shift and vice versa. Also maybe cater to the midnight crews to get to and from factories in Lasalle home to their families.	Gap	Transit
Increase transit from windsor to lasalle for people that work int he factories in lasalle that take public transportation. People on avg are paying 100-120/week for other means of transportation. why not convert that into profit and improve transit for transit before 7am shift starts.	Opportunity	Transit
Connections to main Transit Windsor system are not adequate or timely. Trip to the University of Windsor requires 3 buses and 2 transfers. University students are subsidizing a service that they can't use.	Gap	Transit
Bus only lanes into LaSalle, St. Clair College	Opportunity	Transit
Transportation up Front Road to Marine Lane to Malden Road. Then past the Prince Andrew and Sandwich high school.	Gap	Transit

should have buses at this end.	Gap	Transit
Would like to see LaSalle transit stops on this road.	Gap	Transit
Would like to see LaSalle transit go up/down Laurier, splitting the current continuous loop in order to shorten travel time for southern LaSalle residents (to not have to go all the way around loop to exit near International)	Gap	Transit
You have a rapidly growing subdivision here with a large number of young families who would gladly teach their children to use public transportation and yet, the town felt it necessary to further alienate this segment of LaSalle by not extending public transit this way.	Opportunity	Transit
Transportation down front and Malden rd	Opportunity	Transit
With the additional of the transit bus which I do enjoy having I feel that this plus not having turning lanes for left turns causes traffic congestion	Safety Issue	Transit
Decrease route times for transit	Opportunity	Transit
The entire area south of Victory -- no bus service...I am only aware of this area as this is where I reside. I'm sure there are other areas as well.	Gap	Transit
No bus?	Barrier	Transit
Busses later than 7pm Sunday service needed	Gap	Transit

B-5c. Cycling facility preferences

Comment	Facility Class
A buffered bike lane is the clear cut choice for cylists. All three options are acceptable as long as there is enough of a buffer. The new Windsor stretch of paved shoulder is a good example of not enough room, cars are constantly having to cross the middle lane to dodge me; and I have to do the same to dodge cyclists.	Designated Facilities
more respect from motorists	Designated Facilities
Buffered paved should brings us back to maintenance. These are not maintained and are cluttered with glass stone and everything else.	Designated Facilities
This option feels safer	Designated Facilities
Need curbed bike lanes	Designated Facilities
Bike lanes	Designated Facilities
Works best if it's on both sides opf the roade, so all bicycles are travelling in the same directions as motor vehicles, and all cyclists are forced to stop at stop signs, just like a motor vehicle. These are dangerous without those caveats.	Designated Facilities
When on moderate speed road buffer is needed for wind turbulence and side view mirtors	Designated Facilities
Either marked bike lane or buffered are great...curb or even flexible Bullard as on a section of Huron Church Road are very nice too).	Designated Facilities
Everyone feels more comfortable cycling on completely separate bike lanes or at the very minimum buffered lanes. Studies have shown that separate bike lanes are much safer for cyclists and encourage more cycling. European cities have tremendously high cycling rates and cycle commuting rates because of their dedicated bike lanes that make cyclists safer.	Designated Facilities
As a cycle commuter between Amherstburg and Windsor paved shoulders would be a welcome improvement on many rural roads	Designated Facilities
Buffered paved roads woykd work well for high volume roads.	Designated Facilities
I prefer the buffered lanes/shoulders. Further away from vehicular traffic the better.	Designated Facilities

Having cycling away from traffic eliminates breathing fumes - but there still is a need to separate "commuter" faster cycling from "wandering" dog walkers, strollers, children riding their bikes	Separated Facilities
Huge concern about cost of these paved trails. Our taxes are high, and this could have huge costs.	Separated Facilities
The new cycling lanes on Todd are excellent. The relatively new one on Malden at the traffic circle is a disaster. It is unsafe and should never be repeated (it need to be fixed). The state of Florida has a wonderful analysis of safety associated with many of the cycling options being considered. It is available as a PDF online. The farther you can separate cars and cyclists, the better. New roads should have safety margins for cyclists, though updating existing roads often offers fewer choices since space may be limited.	Separated Facilities
Cycle track is not preferred because if a kid accidentally rides off the edge they are now in traffic. I like the path one too but sometimes it is nice to have a more direct route.	Separated Facilities
Love all of the bike trails!	Separated Facilities
I prefer biking on trails for safety. However, when I bike, I ring a bell to warn walkers of my approach and I approach slowly. Too often, as a walker with my dog, other bikers do not afford me such courtesy and safety. My dog has nearly been struck several times. Clear signage dedicated to advising bikers of their responsibility is requested.	Separated Facilities
As an avid cyclist I find it very difficult to maneuver around individuals on trails having a multi-use facility with markings would be amazing. In addition in this day and age with people being distracted drivers getting off of the roadway is extremely important for safety	Separated Facilities
The gold standard - see Ottawa, Calgary, etc. - and the one LaSalle should be shooting for. As a potential retirees' community, this is the one they will feel the most secure using.	Separated Facilities
Off Road is a much more pleasant experience whenever possible, but I'll take any of these choices over shared roads. Would suggest though that you look at safe and speedy street crossing options for these types of off road lanes.	Separated Facilities
Most people feel safer on off road trails but where this is not possible, the addition of in boulevard trails would increase cycling activity, safety, and comfort.	Separated Facilities
Bikes & traffic should be separated and away from each other	Separated Facilities
Please create more safe multi use pathways. These are so desirable for families, children and those seeking safe exercise and recreation.	Separated Facilities
These are the best options of all....if cost is not prohibitive.	Separated Facilities
Direct route	Separated Facilities
These are all good depending on the situation	Separated Facilities
Preferable with markings and trees along the trail for shade	Separated Facilities
Trees!! Yes everywhere	Separated Facilities
This one gets the most attention from motorists	Shared Facilities
I've cycled all over North America and other parts of the world. These designated lanes out of all 3 on this page work the best	Shared Facilities
The bike routes need to be outlined as motorists do not know the law of 3 ft or 1 m. If you put the designated bike lane in, they will have no choice but to give you the space you need to travel on the roads. Period.	Shared Facilities
Best markers for cars	Shared Facilities
Bike clubs need to be made aware of the rules of the road. They are dangerous	Shared Facilities
I like this option. It is good for both cyclists and drivers. Although hopefully cars count park in the lines.	Shared Facilities
Hopefully no parking in the bike lanes.	Shared Facilities

I don't like any of these options. In your sample photo a car is parked blocking the bike lane!! I by far prefer a shared sidewalk/bike lane multi use path. It I have to choose from these options, it's the solid line, but again - look at your photo.	Shared Facilities
Not comfortable biking on any road even with painted bike lanes. Too many hurried and distracted drivers. Drivers are going through stop signs, yellow and even red lights and using cell phones.	Shared Facilities
Show on road bike access	Shared Facilities
As you can see in the picture painted edge lines allow cars to park in the path of for cyclists that's causing them to go into traffic to go around vehicles this is extremely dangerous	Shared Facilities
All are still dangerous when cyclists ignore stop signs, as they do routinely in LaSalle. Drivers have no idea what the cyclist is going to do, and when the cycle path is on the "wrong side of the road" (like Malden Road) for the direction being travelled, for drivers, that becomes a blind spot - a spot they do not normally check when turning, proceeding, etc. Suddenly the cyclist is right in front of you "out of nowhere". Ideal = paths on both sides of the road, with all bicycles travelling with the traffic flow, and all cyclists obeying stop signs - just like a vehicle. You may have to ticket them all into compliance, because they sure don't stop now.	Shared Facilities
Either painted option but third clearly defines the cyclists right to space	Shared Facilities
Key to make sure the cycling area marked by lines has no impediments like sewer grates or bumpy pavement as this will result in cyclists veering into car lane.	Shared Facilities
There should be the addition of physical road bollards to increase a safety barrier. A painted line is not enough.	Shared Facilities
Drivers are often very courteous and leave space in low volume roads. As traffic increases their courteously fails and they leave less space when passing bikers. I would put money into solutions for high volume roads (Laurier, Front Rd., Reaume, Sorucewood, International, Michigan, Etc.)	Shared Facilities
I'm not a cyclist, but properly lit bicycles / riders should be mandatory at night if they are utilizing the streets. Edge lines do seem to be the safer of these three choices.	Shared Facilities

B-5d. Additional comments from online survey

Comment
Please plant more trees along new and existing trails. Protect our natural areas. Every plan the town considers should have the impacts of climate change in mind.
I have a son who bikes to work everyday on midnights in LaSalle we also ride bikes with our youngest son. The bike/road safety is of high concern to me.
I do not feel safe sharing the road with cars while riding my bike.
Retired.... so work or school does not apply but my husband and I love to walk and walk to shopping also.
Speaking with consultants, it seems that there are no good answers to controlling speeding vehicles which is an undeniable issue in LaSalle.. Speed humps not always accepted, stop signs not preferred, etc.. There must be answer, we cannot continue coming up with excuses to do nothing. We need to find solutions to solve problems.
Streetlight at Reaume n Malden Pedestrian Light At Malden n Morton Better timed lights when going down Malden from Todd lane... timing sucks at 5pm
Slow down the vehicles, enforce the laws.
i Love trails through the bush and scenery but I worry as a woman if there is someone lurking in there for me, hoe bout safety call spots?
I would bike to work if there was a safe route on Front Road
please improve public transport for the commuters from windsor to lasalle along ojibway for early morning starts as well as maybe provide a sidewalk so that they can walk from the factories safely along ojibway
stop all transports from using Laurier Dr unless making a delivery on Laurier. To many trucks using it as a short cut.

when assessing infrastructure or development projects, please consider life cycle and maintenance costs, and minimize the quantity of roads and traffic signals constructed - roundabouts are great (for reducing points of conflict and minimizing air pollution from stop and go traffic) and cul-de-sacs are wonderful for minimizing cut-through traffic through neighbourhoods
Please consider working on developing a waterfront, even a pedestrian only area with shops.
I love living in Lasalle!
Busing into Windsor is still an issue, as a student it takes me well over 1.5hrs to get to the university. On the days I carpool it takes me 15min. I feel better connection points to Windsor hubs will decrease the time for LaSalle bus users and will increase use of our new bus system. Also drivers have little to no respect of cyclists which is why I have stopped riding to work, I have been forced off the road several times and it is common for other people I have spoken to. Having a seperated bike lane and enforcing fines for drivers could solve this issue. Thank you for your time.
I would love to be at the next meeting to help with the next step as I travel all around lasalle by bike and have many great compliments and many ways it can be improved.
I love LaSalle's trail system, and I think we are very lucky to have such a well thought out system. I think a lot more could be done for biking safety, especially along Malden Road. Not all cyclists are simply recreational cyclists. Many people bike to work and more would do so if the roads were more bike-friendly.
We want mountain bike trials!!! 😁😁😁
I bike with my children to school most days. I would love if the trail between Normandy and Wyoming was completed. This would provide a much safer route to school that wouldn't require a crossing guard.
Great work LaSalle
Appreciate that this survey offers up ideas as well as a comment section to further expand or add ideas. We are far behind our European cities, many examples if you take a look of better infrastructure and building with better design. Thank you for this opportunity.
No thanks
I'd commute by cycle if there was a safe Windsor-LaSalle connection.
I would commute to Windsor by bike if it was safer
I'm retired
Continue the great work for this community!
Love marked trails with lanes painted. Like the segregated bike trails on road w barrier
Public consultation on this Master Plan warrants more than just boards posted. There should be active engaging of the public by the Town of LaSalle.
We live on Front Road, and find over the years many things are taken away from this area. Area (now has a huge tower instead to replace it) (ugly). Liquor store moved to Malden (already heavy traffic area). Nothing new at this end of town.
We need a transit that reaches the university campus
Thank you for allowing public comments on your developing plan.
Overall the bike and walk trails in LaSalle are very good. Keep it up and keep adding especially on the fringes for those of us who would like to bike to town center,
Horrible crosswalks very dangerous luckily no one has been hit yet saw two close calls myself
Need more cycling facilities to keep me living here, step it up Lasalle!
Would bike more with these updates in place. LaSalle is beautiful.
Your survey does not address the needs of parents with young children, strollers and small children on bicycles or in bike trailers. If you want to make your community (and in particular its new developments) attractive to young families then you need to consider the needs of those families.
We need better ways to cross lasalle and we need to plan to create other commercial zones to take some pressure off Malden road.

trails are more than just biking...gaps for walking, jogging and hiking should be considered.
Good survey
I ride a motorcycle most days I can. The main thing is that i have to run the lights becuase they dont sense me. I wait for a couple cycles and doible check before going but still. I'd rather not do this. Please make the sensors more sensative if possible. Thanks
We enjoy trails for walking, need to extend them so more people can access them. Nice that they are away from road traffic
I want to ride my bike from Matchette /Laurier to downtown Windsor waterfront. There is no way for me to safely do that, without going in the opposite direction way out of the way. It is 14 kms for me to get to work - I would like to be able to cycle - safely. Please look at a waterfront path connecting Lasalle to Windsor.
Stay at home mom. Love the trails. Just wish my kids could ride their bikes from our house on Ramblewood to Front road so they could go swimming, fishing, play volleyball and go to subway with friends. The bend from highway 18 to Front road is to dangerous. Would love if the sidewalk continued from in front of River to Morton. Thank you for your time!
Driver safety issues is at the top which affects walkers, bikers, other drivers etc. Increased police enforcement of adhering to rules of the road is requested.
LaSalle is a great community! The improvements will help support those with a healthy active lifestyle and hopefully encourage others to take advantage of other modes of transportation.
Some paths and bike lanes on front Rd
We need a bus that you can take from the west end of Windsor to LaSalle. As of right now coming from the east end you have to take 3 busses to get to front road.
We would bike more if biking lanes had an edge or island between traffic. Too many distracted drivers.
I would certainly attempt to bike to work more often if I felt safer Crossing Malden Road in morning rush hour traffic. There is a serious safety concern for pedestrians cyclists and drivers trying to merge onto Malden Road at either bouffard resume or Morton a safety mechanism needs to be put in place immediately
Todd lane was a waste of space, it's a busy rd. People want their kids off those busy roads and ride on the sidewalk. There is more than enough space on Todd lane sidewalk for both bikes and pedestrians. Waste of tax payers money, and there is no parking on the street!
LaSalle a great place to bring up grandchildren
I don't like the bus route on Montgomery Drive. It's too narrow a road and a quiet subdivision
I would bicycle to work during appropriate weather if I had a quick, safe way of getting there, and if I had a foolproof way of securing my bike from thieves once there.
Streets with lots of kids, put in speed bumps
I would ride my bike more often if I felt safer on the roads
Run many errands using my bike. Have 2 teenagers using bikes for commuting to work school and social
I wish the bike paths would connect to each other in my area near International and Fields street. They just end. Need more trails.
Thank you for all of the great work so far with our recreational facilities and bike trails....keep up the good work! Your efforts are making LaSalle a great place to live!
I am happy to see this enhanced focus on active transportation. Lasalle has already done a great job of preserving fantastic green spaces and adding walking and cycling paths; hopefully this will continue to be a priority as it is a primary reason many people have moved to Lasalle from elswewhere. However, many of the core streets in Lasalle do not have sidewalks or cycle lanes, and the Malden road town centre is not very pedestrian friendly. It would be great to have this core area with the library, town hall, and local shopping be more pedestrian friendly with safer sidewalks (with boulevard space separating pedestrian from car traffic), reduced car traffic, shade trees, and accessible store fronts rather than strip malls. Also, any street that is on a bus stop route should have sidewalks. It is not safe for our children to have to walk to the bus stop with no sidewalks.
more bus routes to improve the accessibility and the timing. Longer hours and Sundays.
I've lived in Lasalle for 43yrs and love it. But I have found that only the core is being taken care of,the county has poor roads,no lights,no sewers and no bike routes.

Driver education in regards to cyclists on the road is needed tremendously in LaSalle. Many ignorant drivers.
Living in LaSalle for 20 years and love the improvements that are being made. Trails, roads, roundabouts... all great. Please continue to improve our town !!!
I'd love a wider walkway from Golfview to Martin Lane, for safety. A dog park would be wonderful. Thanks
LaSalle efforts to be a fitness oriented community are to be lauded. Please continue to build infrastructure.
I've been cycle commuting between Amherstburg and Windsor over 5 years now mostly spring summer & fall but some winter days as well. LaSalle has the best cycling facilities on my commute. Glad to see you're still interested in making improvements.
Biking/walking trails MAKE the community!
I would really like to see Malden rd from front to golfview get a paved shoulder to walk or ride bikes.
Decrease route times for transit on the 25
Thank you for taking the time to find out community wants and needs.
Desperately need stop light on Malden near Stuart Blvd. Far too much traffic and no stop lights near make a very dangerous situation. Takes at least 5 mins to turn left and then have to speed out.
Speeding in Heritage Estates is a major issue. Drivers are routinely going 60kmh on streets and it's only a matter of time before a child is hit.
Bike and walking lanes needed on County Rd 8, disputed and Broderick.
Please add bike lanes or trails along the south end of Malden road. It's dangerous. Stop the speeders along that stretch. Canard drive is really bad for that too
Front rd is too dangerous to ride bikes on.
Trafic on Front road between petro canada and martin lane is WAY TOO FAST. Scary to cross, walk, bike, watch front our portch.
Would like to have trails or sidewalks on my street Bouffard to link up with the trail system
Thank you for allowing this input
A traffic light is needed at Malden and Reaume, at times the congestion causes waits of 8 to 10 minutes.
Bike lanes are a waste of money. Put funds into roads to keep traffic moving
I would really like a stop sign at the corner of International Ave and Michigan Ave. There are obstructions that do not allow the driver stopped to see down the street to turn left or right. There has been many many near misses.
I have just purchased new bikes for the entire family so we can utilize the new parkway trails. After two weeks, we love it! We rule our bikes everyday, LaSalle has huge potential to become a cycling game destination. We could extend trails to amherstburg even to the wine trails. I absolutely love living inLaSalle, this is an incredible town.

B-6. Stakeholder comments received during engagement round 2

Comment	Facility Class
Bike Rodeo and AT education events	AT Supportive Programs
coordination with other agencies and county	AT Supportive Programs
build upon existing efforts	AT Supportive Programs
types of uses: tied to different types of events	AT Supportive Programs
education for drivers to learn how to drive with active transportation	AT Supportive Programs
group bike rides organized by the Vollmer	AT Supportive Programs
promote bike lane use for bikes and walkers, not parking!	AT Supportive Programs
town to participate in STR bike friendly community workshop in 2019	AT Supportive Programs
Initiatives counts: group rides = 2, active and safe routes to school = 4, bike to work day = 3, online hub = 2, open streets events = 5	AT Supportive Programs
designing street for people	Complete Streets

how to implement policy?	Complete Streets
recommend guidelines to implement policy	Complete Streets
Malden, Matchette, Front need to be complete streets	Complete Streets
mandate sidewalks and bike lanes in all new residential developments	Complete Streets
electric scooters	Emerging Mobility Technologies
ebikes for rideshare	Emerging Mobility Technologies
add bikeshare, scooter-share	Emerging Mobility Technologies
add need for covered, secure bike parking	Emerging Mobility Technologies
green + orange both to St. Clair -change to orange on south, green on north (not both to civic centre)	Future Transit Network
connect green route to St. Clair College	Future Transit Network
run both directions for special events (clockwise/ counterclockwise)	Future Transit Network
need connection to university	Future Transit Network
bike-capable buses	Future Transit Network
sidewalks along transit routes 1st and last mile connections	Future Transit Network
promote transit/ carpool for special events (Strawberry Fest)	Future Transit Network
crowding at St. Clair College more buses or more capacity	Future Transit Network
commuter vans microtransit	Future Transit Network
convenience	Future Transit Network
accessible	Future Transit Network
car culture, distance to destinations	Future Transit Network
how to connect to outlying or rural areas?	Future Transit Network
College Avenue Community Centre moving to a different location	Future Transit Network
important connection from Malden Road along Normandy Street to St. Clair College	Future Transit Network
need to service Heritage Park Alliance Church (Huron Church Line Rd & Concession Rd 6) especially for those with disabilities	Future Transit Network
serve the church	Future Transit Network
expand to Vollmex	Future Transit Network
LaSalle bus line up to university on Huron Church Line direct	Future Transit Network
go down 6th concession past Heritage Park Alliance Church	Future Transit Network
difficult to get schools to walk to school	Preferred Future Draft Active Transportation Network
Pilot: try different designs along the road, investigate how this could impact maintenance, appealing to different users, access to CWATS and other plans	Preferred Future Draft Active Transportation Network
priority -> completing small gaps	Preferred Future Draft Active Transportation Network
data collection	Preferred Future Draft Active Transportation Network
parking in pathways and bike lanes	Preferred Future Draft Active Transportation Network
bike lanes at bus stops: bike lanes to go on outside of bus stop	Preferred Future Draft Active Transportation Network
Dispute Road and Kelly Rd intersection -> priority	Preferred Future Draft Active Transportation Network

Malden Rd from Deerview Cr to Laurier Dr is part of EA	Preferred Future Draft Active Transportation Network
Malden Rd from Laurier Dr to Meagan Dr -> pedestrian friendly 3.2km high school district	Preferred Future Draft Active Transportation Network
Malden Rd from Meagan Dr to Golfview Dr -> gravel onto pathway	Preferred Future Draft Active Transportation Network
Maple Ave -> bad for cycling now	Preferred Future Draft Active Transportation Network
need for pedestrian bridge on Front Road south of Old Front Rd	Preferred Future Draft Active Transportation Network
promote Front Rd at Riverview Ave as destination	Preferred Future Draft Active Transportation Network
town owned parcel on riverfront, west of Front Rd and Maple Ave intersection	Preferred Future Draft Active Transportation Network
expand Front Rd south of Maple Ave (reason to come)	Preferred Future Draft Active Transportation Network
implement pilot to identify need for enhanced pedestrian crossings	Preferred Future Draft Active Transportation Network
incorporate history of Front Rd south of Marcel Ln	Preferred Future Draft Active Transportation Network
Front Rd north of Martin Ln speed limit should be 50km/h	Preferred Future Draft Active Transportation Network
Front Rd south of Martin Ln speed limit should be 70km/h	Preferred Future Draft Active Transportation Network
extend Matchette Rd south to North Townline Rd	Preferred Future Draft Active Transportation Network
ETR 1 train/ week along railway	Preferred Future Draft Active Transportation Network
in-boulevard pathway along Laurier Dr being used for parking, garbage, etc, making it hard to ride on	Preferred Future Draft Active Transportation Network
existing in-boulevard pathway along Laurier Dr not good for cycling	Preferred Future Draft Active Transportation Network
need physical separation to increase confidence in parents and youth to bike to school	Preferred Future Draft Active Transportation Network
bollards along Huron Church Line are in poor condition and need more separation	Preferred Future Draft Active Transportation Network
missing AT link from Deerview Cr to Bouffard Rd east of Matchette Rd	Preferred Future Draft Active Transportation Network
transport trucks should be rerouted from Laurier drive (residential street)	Proposed Future Road Network
truck route system for LaSalle?	Proposed Future Road Network
issues with speeding along Monty St -speed bump installed in 2018 but no longer there	Proposed Future Road Network
Malden needs centre left turn lane	Proposed Future Road Network
get traffic off Malden (in support of centre left turn lane)	Proposed Future Road Network
Engagement Counts: Vertical Deflections = 3, Horizontal Deflections = 6, Other Measures = 5	Traffic Calming Measures
Stuart Blvd needs sidewalks, speed bumps, or stop sign!	Traffic Calming Measures
speed and volume on Monty St	Traffic Calming Measures
speed and volume on Montgomery	Traffic Calming Measures

speeding on Laurier is a concern	Traffic Calming Measures
Disputed Rd -roundabout at Laurier pkwy	Traffic Calming Measures
speed radar signage does not work, perhaps if it took a pic of license plate	Traffic Calming Measures
recommend enforcement on Stuart Blvd, Laurier, Montgomery	Traffic Calming Measures
Traffic Calming Measures counts: vertical deflections = 5, horizontal deflections = 1, other measures = 3	Traffic Calming Measures
speed "humps"	Traffic Calming Process
enforcement = photoradar	Traffic Calming Process
traffic calming needed on Montgomery	Traffic Calming Process
please review the 1687 Winfield area, and a way to slow down traffic coming around the corner	Traffic Calming Process

B-7. Additional stakeholder comments received

Comment Received Date	Comment	WSP/Town Response Date	WSP/Town Response
Public Information Centre 1			

2018-06-27	I would like to offer the following comments for consideration, and for the record, with respect to the Town of LaSalle Transportation Master Plan:
	Public Transportation
	• LaSalle recently adopted a public transit service, contracted to Transit Windsor. It is a very limited service in terms of both market, frequency and usability. It serves only 1 of the top 3 destinations identified by potential transit users, St. Clair College, with the other destinations being the University of Windsor and Devonshire Mall.
	• For LaSalle to embrace public transit, service must:
	  • Be frequent
	  • Offer scheduled and dedicated connections to the main Transit Windsor network
	  • Offer “one ride” (no transfers) service to the top 3 destinations.
	• Consider, for example, the plight of University of Windsor students who want to use LaSalle transit. University students were among the target markets for LaSalle transit, however:
	  • A ride to the University requires 3 buses and 2 connections. The connections are not dedicated, scheduled, or guaranteed.
	  • The trip, assuming one can make the connections, is 90 minutes. (A car ride is 10 to 15 minutes from most part of LaSalle.)
	  • The service doesn’t fit even a basic class schedule. Most University classes operate in the 8:30am to 5:20pm timeframe. The first bus of the day will not arrive in time for the first class of the day at 8:30am. And a student with a class ending at 5:20pm would miss the last bus of the day. And night classes are completely out of the question.
	  • And for this lack of service, University of Windsor students living in LaSalle are now required to pay $134/year for a mandatory bus pass which they cannot effectively use. As a matter of policy and fairness, the Town of LaSalle must either provide useful service to the University of Windsor or inject		

	themself into the agreement between the University of Windsor Student's Alliance and Transit Windsor to ensure an opt-out for University students living in LaSalle. The Town entered into a service agreement with Transit Windsor with "eyes wide open" knowing that Transit Windsor would exercise their right to collect UPass fee for LaSalle students if they became the service provider. This agreement gives Transit Windsor a significant cost advantage over other providers at the expense of students who cannot use the service offered.
	• All outcomes of a Transportation Master Plan must be equitable and should not disenfranchise or unfairly burden any given user group. This is the situation that exists today, and simply put, it is very bad public policy. It must be remedied and the Transportation Master Plan should address this.
	CWATS
	• CWATS in LaSalle must be more than signage. There is a disconnect between CWATS signed routes and the LaSalle trail system. Most of the LaSalle trail system is not part of the CWATS system. Conversely, most CWATS signed corridors in LaSalle have no infrastructure for pedestrians or cyclists. This creates confusion for novices and visitors to LaSalle who are familiar with the CWATS program and discover, upon arriving in LaSalle, that most CWATS routes are not safe or suitable for cycling. For example, see Sprucewood Avenue. It is signed as a CWATS route. However, there is absolutely no cycling infrastructure in place. The only pedestrian infrastructure is a crumbling sidewalk along a small length of east end of the road on the south shoulder. So why is this signed as a CWATS route????? If there are no services, don't sign it! Similar situations occur throughout the Town.
	LaSalle Trail System
	• The recent informational signs are a welcome addition the trail system. They will make the trails easier to navigate for novices.
	• Larger directional signage (readable without stopping and dismounting) at junctions within the trail system that point towards the nearest major street or landmark would be helpful for novices to navigate the trail system.
	• The trail system remains largely recreational in nature. It needs to be expanded to reach employment areas like the industrial park on the west side of LaSalle and Windsor Crossing Outlet Mall and other future "highway commercial" employment lands on the east side of LaSalle.
	• The trail system is mainly oriented east/west. There are no safe ways to cycle the north/south length of LaSalle.
	  • Trail infrastructure along Malden Road needs to be completed as originally envisioned, before the Malden Road redevelopment cost overruns. This should include the addition of dedicated, signaled pedestrian crosswalks at, and south of, Morton Drive.
	  • Trail infrastructure needs to be added to Front Road and Matchette Road.
	I would be pleased to discuss these suggestions further with the consultant team, either 1:1 or in the context of a special Planning Advisory Committee meeting similar to that which was held to introduce the recently updated official plan.		

2019-02-28	Can you please eMail me a copy of the Recommendations and proposed networks so that I may review and comment? Could you also include a copy of public comments received during PIC #1, or that may have been submitted	Thank you for your continued interest in the Town's Transportation Master Plan. We will be posting the materials from PIC#2 online after the public	2019-03-01

	independently by those unable to attend PIC #1 in person? I would like to continue participating in the comment process, but not sure if I will be able to attend PIC #2 during the posted hours, which are somewhat limited.	meeting on March 7th. We can send you a link to the Town's website when they are posted. The PIC#2 materials include a summary of the comments received in the first round of consultation, including PIC#1.	
2019-03-13	I have reviewed the 20 slides from PIC#2 that were posted to the Town's website. You indicated in your eMail below that the PIC#2 materials would include a "summary of comments received in the first round of consultation". Can you please point me to that information, as it's not obvious in the slides? I am interested in understanding how the comments provided in PIC#1 shaped the recommendations being made in PIC#2, but I cannot make those connections with the limited information that was provided. Can you please provide ALL of the comments provided in PIC#1 with PII redacted? I'm sure that you consolidated all of those comments into a single reference document during your analysis. Also, what is your deadline for receiving public comments related to PIC#2?	Slides 5 and 6, titled "Community and Stakeholder Feedback" summarize input received in the first round of consultation. To give some examples of how we have incorporated feedback into our proposed recommendations, looking at slide 5, we are addressing public feedback by placing a heavy emphasis on active transportation. Also, the Town has added to the scope of work a specific task on traffic calming to address this ongoing concern. Looking at slide 6, much of our road network strategy is directly designed to address concerns on Malden, Matchette and Front Roads. We have received over 600 comments and typically provide the comments as an appendix in the final Transportation Master Plan report. We have not made all of the comments available to the public at this time. We would appreciate receiving comments on the PIC#2 boards by April 7th but will be accepting comments until the project is completed. Thank you for your ongoing interest in the Town's Transportation Master Plan.	2019-03-21
2019-03-22	I would still be interested in reviewing the PIC#1 comments at this time. Is there any way that can be facilitated? Should I make a request under the Municipal Freedom of Information and Privacy Protection Act?	At this point in time the Town does not have the comments that were submitted to the Consultant team. As part of the EA process, all of these comments are with WSP and will be included in their draft report. As soon as that report is delivered to the Town it will become publicly available for review purposes, so that everyone can see what comments were submitted throughout the EA process. In the meantime, we encourage you to submit comments on the PIC 2 information.	2019-03-22
Public Information Centre 2			
The week of March 3, 2019	Before the LaSalle PIC on March 7th I had a local resident call (no name provided) to express concern with walking along Huron Church Line. The resident said that there was no safe place to walk, especially in the winter, when the snow plows filled the shoulder with snow and she has to walk in the street. She also felt that there was not enough streetlighting. The resident was speaking specifically about the section of Huron Church Line between Broderick Road and Laurier Parkway. She did state that the trails in LaSalle are great.		
2019-03-18	I was not able to attend the public information night about the Transportation and Active Transportation Master Plan, however I did take a look at the slides posted here:		

	http://www.lasalle.ca/en/town-hall/transportation-and-active-transportation-master-plan.asp?fbclid=IwAR2Xyv4ULJn_Ub875ZGnb-AJMujCkzuPImfLotjLt3vxWU6eH0yW-euoCvg I see that the plan includes paved shoulders on Matchette road. I am writing to see if there is a possibility to improve that to something that is usable by walkers/runners/slow bicycles (ie: children). Currently, there is not a way to access Ojibway and the trails in the complex without traveling on Matchette road. This means that LaSalle residents have no choice but to drive there. If we could connect Ojibway to our existing trail system, even by a sidewalk, I believe this would be a great asset to the community. Is this a possibility?		
2019-03-24	I have reviewed the slides for the Town of LaSalle Transportation Master Plan Public Information Centre #2 and offer the following comments for the record: Public Transportation The 2 options for a Future Transit Network are both short-sighted and inconsistent with the findings of the study that recommended public transportation for LaSalle in the first place. That study identified 3 primary transit destinations for LaSalle residents: St.Clair College, University of Windsor and Devonshire Mall. The 2 options being proposed serve only St. Clair College in a timely and convenient fashion. No options are provided to serve the other 2 destinations on a timely or convenient basis. Service to Devonshire Mall will continue to require 1 transfer and at best, offer a 1 hour transit time. Devonshire Mall can be reached in 15 to 20 minutes by car from most points in LaSalle. Service to the University of Windsor will continue to require 2 transfers and at best, offer a 90 minute transit time. The University can be reached in 10 to 15 minutes by car from most points in LaSalle. Moreover, the student body of the University has recently voted to continue their UPass program indefinitely. LaSalle students are not allowed to opt out because of the #25 bus, despite the fact that it provides no practical service for them. Public transit must be viewed more than an afterthought, especially in a master plan that is being designed to serve the Town for the long run. The existing transit service, whether on 30 or 45 minute headways, unidirectional or bidirectional, is nothing more than a local shuttle. It will continue to lack ridership in either of the proposed formats. The Transportation Master Plan must embrace destinations that people actually want to visit, as articulated in your original survey. LaSalle is a de-facto bedroom community to Windsor and convenient, timely, one-ride transit service must be provided to residents of LaSalle to reach popular destinations in the City of Windsor. This vision must be included in the Transportation Master Plan. Active Transportation The Preferred Future Draft Active Transportation Network as presented is confusing and lacks context. It appears as a dump of every possible active transportation route, but there is no purpose, priority or timing assigned to each route. Are the proposed routes intended for commuters or recreation? Which are viewed as most important? When might each route be built? Are there challenges associated with any of the proposed routes? An active transportation network should be designed similarly to a vehicular road network. What are the feeder (local) routes vs. the trunk (collector and arterial) routes? How will the network effectively connect major destinations? For example, how could one bike from employment lands in the Morton Drive corridor to residential areas in Heritage Estates ? How could one bike from the Vollmer Complex to residential areas in northwest LaSalle? The proposed network must demonstrate how it can actually be used to connect destinations, not just where routes could possibly	Thank you, for your comments on the LaSalle Transportation Master Plan. These will be included in the official record.	2019-03-25

	be located. Also, key routes - the arteries of the network - should strive to use similar infrastructure. A commuter who wants to bike from an employment area to a residential area will be discouraged from doing so if the route changes back and forth from off road trail to paved shoulder to signed roadway too many times. There must be consistency among and within key routes. There must also be a commitment to maintenance in the active transportation plan. If the routes cannot or won't be maintained in all seasons, they will exist only as recreational trails and not true commuter routes. How is this being addressed? Front Road Vision - Pilot Project Great idea, but please recall there was also a vision for Malden Road that was never completed. Before embarking on a vision for Front Road, consider finishing the vision for Malden Road that was left half-baked. This is not addressed in the slides. Please confirm that these comments will be included in the official record.		
2019-03-25	Voicemail summarized: My neighbours and I were reading something from the Town of LaSalle Facebook page about Front Road Vision Pilot Project. Is the decision already made to reduce Front Road to 2 lanes with bike lanes from 4 lanes? We like the 4-lane Front Road as is. Please let me know what I can do to protest against this decision and to discuss about the plans.		
2019-03-25	If we are reading the pilot project for Front Road correctly, are you making Front Road into a two lane road with those stupid bike lanes? I think most residents like the four lane road as it is, we don't want it to end up like Malden Road with the delay in traffic and being stuck behind your buses (that no one are taking), another unnecessary expense that we didn't need. I'm not sure where you come up with this research and statistics. Why would you just not let the residents of Lasalle take a vote on these issues? Thank you for your time.	The Consultants working on a new Transportation Plan for the Town have identified a number of options to improve mobility for motorists, cyclists, walkers and transit riders -- including a pilot project for a portion of Front Road. At this point in time, the Consultants are seeking public input as part of the second round of public consultation. No final recommendations have been made, and all residents are welcome to send comments, suggestions and questions to the Transportation Consultants. By copy of this reply, I am forwarding your written comments below to our Consultants. I am also forwarding them the voice mail message you left with Ryan Tufts. Should you wish to send additional comments, please forward them to the attention of Brett Sears at WSP	2019-03-26
2019-03-26	Thanks for getting back to me...One problem I think is no one knows what issues are going on or how to contact anyone in Lasalle...Unless you go on to Town of Lasalle which I think most people after working all day have better things to do , no offense. Just like the bus issue, had they asked the residents (instead of a handful) you would have seen that there was little need for them and you wouldn't have wasted money for buses going around and around the town empty...this is the topic of several conversations and most of us have followed the bus route on several occasions to witness it. It's kind of a joke amongst residents with people saying, OMG I actually saw one person at a stop? I'd like to ask them, " Where are all the people they said would be taking it to the medical center on Front Road at International". I live on International and have yet to see one person at that stop and the one on Michigan at International, I have seen one person. Yet they will never admit that it's a flop. When I spoke with several councilors before the election they too were misinformed and now they are going to try to do reduced fares and promotions to try to get people to ride		

	their buses as they didn't listen to us? We are the ones living in the community off Front Road and see the traffic now. Who came up with reducing the lane? Have they drove this lane on a daily basis? Not to mention when the Strawberry Fest is in town and traffic will be lined up or if there is an accident? Look at Malden Road, I had to take it one morning as I had to go to WFCU and was half an hour late for work with all the school buses and transit buses and traffic, I will never take Malden Road in the morning again. If anything Malden should be a four lane road as well. Sorry if I sound like I am ranting but it's so frustrating when they get these independent survey companies who don't know what they are talking about! Just ask the residents who will be affected by all these changes. Once again, I appreciate your time.		
2019-04-08	I don't know if you are still accepting feedback from the PIC #2 presentation. I just want to say that the pilot project on Front Road looks like a great idea. I live on International and it would be great to bike with my family toward the park/pool at Laurier and allow data collection.	Thank you for sending us this feedback. By copy of this email reply, I am forwarding your comment to our Transportation Consultant.	2019-04-08
2019-05-14	Front Road vision: Front road definitely needs a cycling lane identified, whether its separated or just identified for safety reasons as drivers tend to treat cyclists as an inconvenience. Cycling Facilities: Cycling paths/lanes need to be maintained after installed. Most are full of construction debris (chunks of mud, aggregate) which makes it unsafe to use and the default is to go back on the road. Ticket vehicles that park in cycling lanes/paths. Traffic Calming measures: Currently there is no enforcement of traffic laws and speed limits, which is why traffic calming was identified as the highest priority for residents responding to the survey. When drivers have realized that the chance of getting a 'ticket' is at or near zero, why obey the laws. We either need a change in attitude at LAPD or we need to abandon this as a viable alternative. In my opinion, vertical deflections would be the best available options as some roads do not offer the space for horizontal deflections. Speed Radar does seem to work at its outset but the novelty soon wears off when drivers realize that it is 'for your information' and nothing more I vote for 6th Concession as the Pilot for traffic calming. I support the Complete Streets policy as it will make LaSalle a more livable community.	Thanks for your input. By copy of this email your comments are being sent to WSP. Thank you for your input to the LaSalle TMP. Your comments have been received and will be considered as we develop the draft report. My apologies to not responding sooner to your May 7th e-mail.	2019-05-14
2019-05-15	Thanks. I thought of some more ideas on the traffic calming 1. Using a combination of Stop signs and vertical deflection on a stretch of road 2. 3d Painted crosswalks (picture below) 		
Front Road Reduction Pilot Project			
2019-07-23	I am just inquiring about the Front Road Project. I am not sure who decides this stuff. I am just a resident living off Front Road on International and am always amazed at how they determine things. We have heard, unless mistaken, that they want to make Front Road a two lane road with bike lanes and turn lanes? I'm sure if you took a poll most would	Thank you for your comments and your continued interest in transportation-related matters affecting your community. The Transportation Master Plan includes a number of	2019-07-25

	agree we like the four lane road as is with no bike lanes....it is frustrating enough when one lane is closed down now due to bridge work and water main breaks. They should first do a study and go sit on Normandy and see that no one (if any) actually use the bike lanes, then they add cross walk signs that are very distracting. You will notice they are riding their bikes on the sidewalks as they have done for years. I personally won't ride on the bike lanes nor would I let my grandson. Malden road has to be the worst, maybe they should spend the money making it a four lane road as well! I hope this isn't going to be another flop like bringing buses to Lasalle....they do a phone survey of 400 people (which by the way aren't taking the bus) to decide a major issue like this? Now we are stuck with this for four more years watching buses go by with no one on them because they didn't listen to the majority of residents. We certainly don't want to be stuck behind them on your two lane road proposal. My opinion probably doesn't mean much but thought I would give it anyway. Thanks for your time.	recommendations that are designed to address both short and long term needs for a growing municipality. As part of our assignment, we have a responsibility to consider how best to accommodate all existing and future residents and visitors, with particular attention to public safety for pedestrians, cyclists, transit riders and for motorists. The pilot project that is being recommended for a portion of Front Road is intended to improve public safety for pedestrians and cyclists travelling to/from and along this corridor, and to assist with revitalization objectives that residents living and working in this part of LaSalle want to see come to fruition. With respect to public transit, it should be noted that ridership numbers to date have exceeded initial projections, and the number of people taking transit in LaSalle continues to grow. Further information regarding both of these items will be included as part of our final report to Council. We encourage you to read that report once it becomes available. We will notify you when the report is posted online.	
2019-07-25	When you say ridership has grown, can you let us know which stops people are actually taking the bus? A lot of residents including myself have actually followed different busses with no one getting on or off and have done this at several different times of the day. I live on International and have yet to see anyone at the stop at the medical center and have only see one person at the stop on International...It is a topic of conversation in our neighborhood and everyone says it's a joke....we see slabs of cement with benches and the enclosure on Front Road and we don't ever see anyone on them? Please email me a list of stops with riders so we can actually see for ourselves.		
Final TMP Report			
2019-10-11	Long time, no chat. Hope all is well! What is the status of the Transportation Master Plan? There have been no updates to the web page since the PIC #2 last winter. I remain interested in seeing copies of the public input when available.	Our consultants are currently finalizing the draft Transportation Master Plan. As soon as it is available, we will be posting same on the Town's website. I am copying Brett Sears (the lead consultant) so that he is aware of your continued interest in this master plan document. We will let you know when it has been posted on the website.	2019-10-15

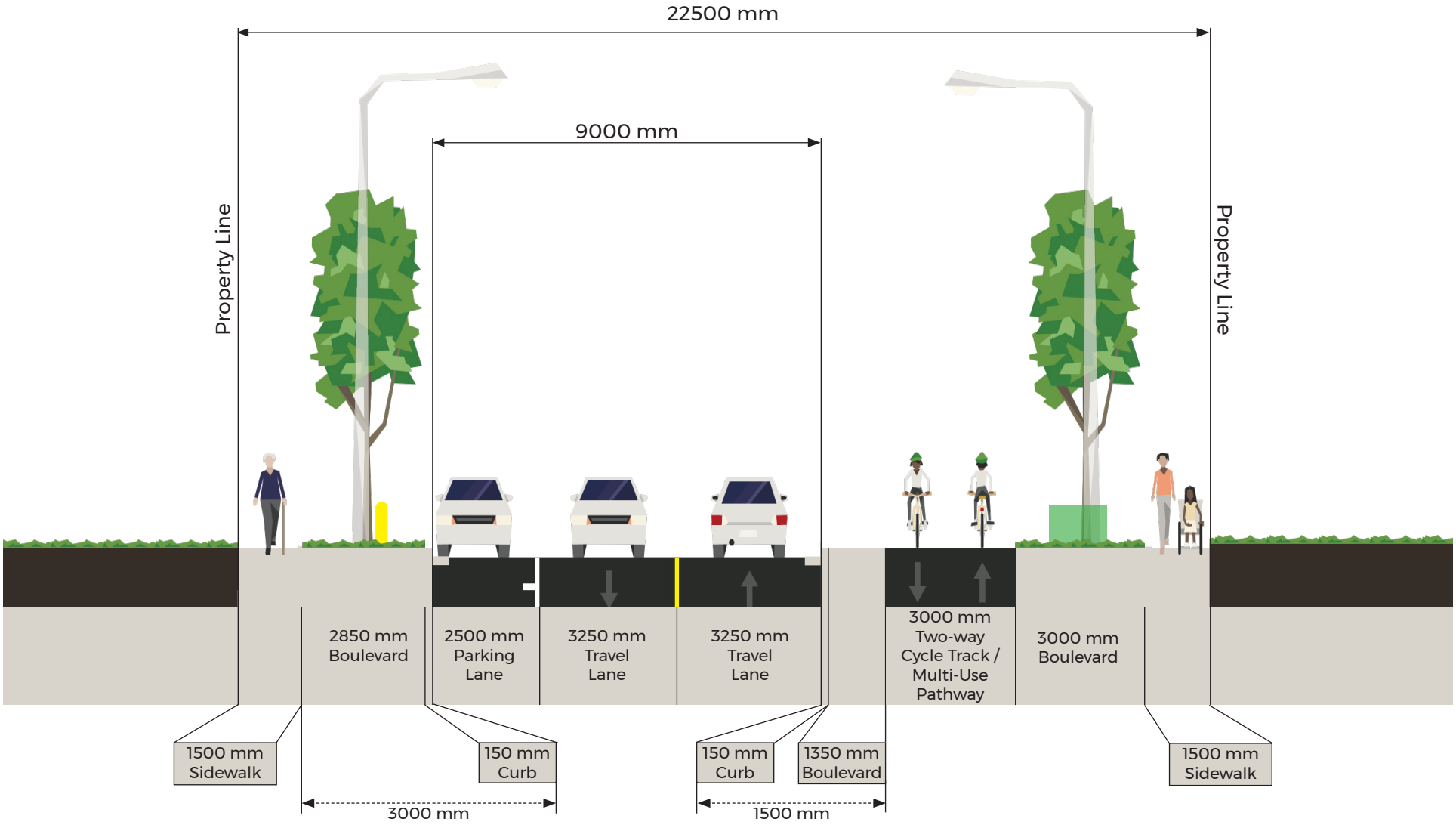
Our Next Move

Appendix C

Road Design Cross-Sections

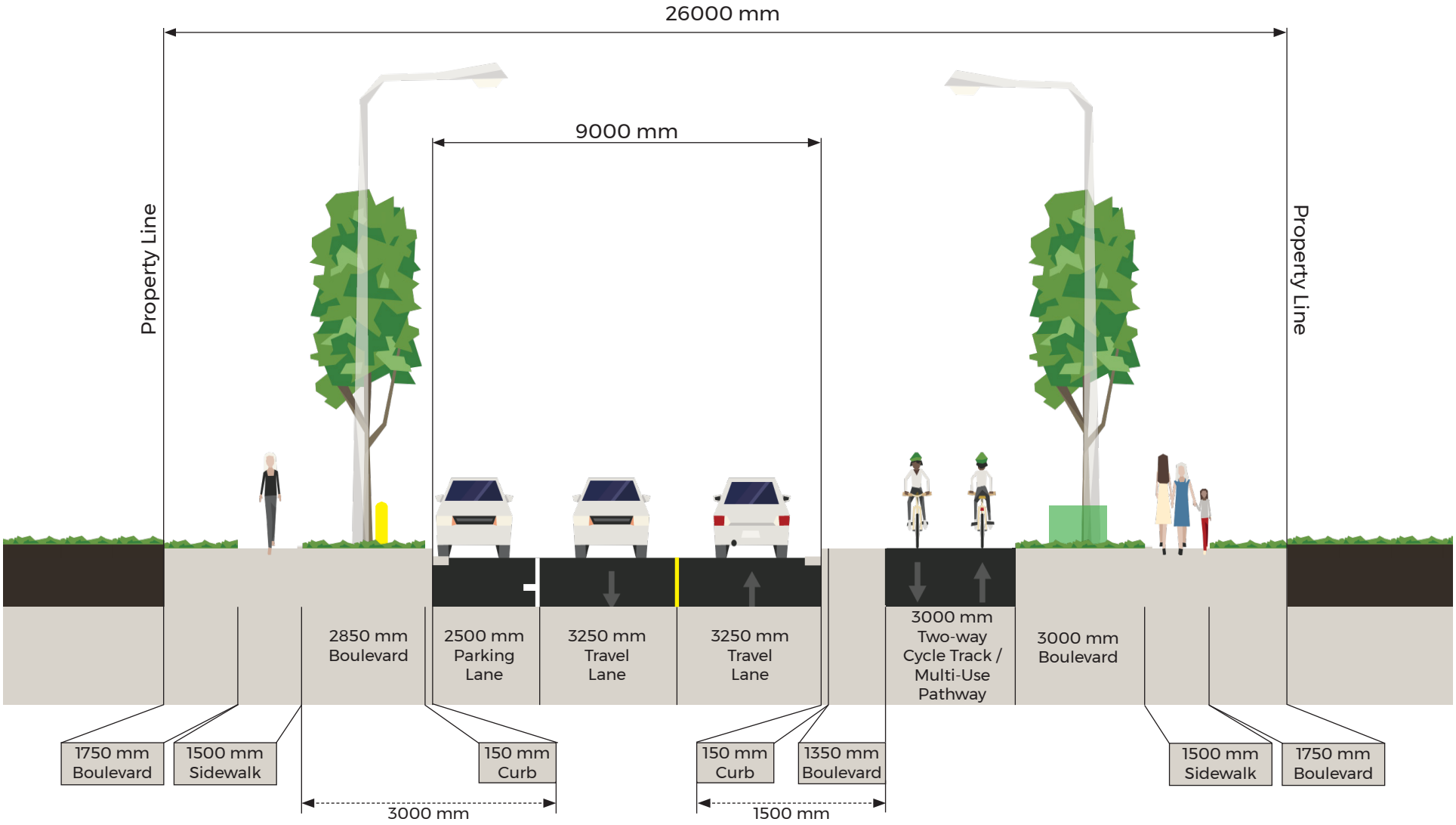
22.5m ROW - Collector Road

Two-Way Cycle Track, 1 Parking Lane



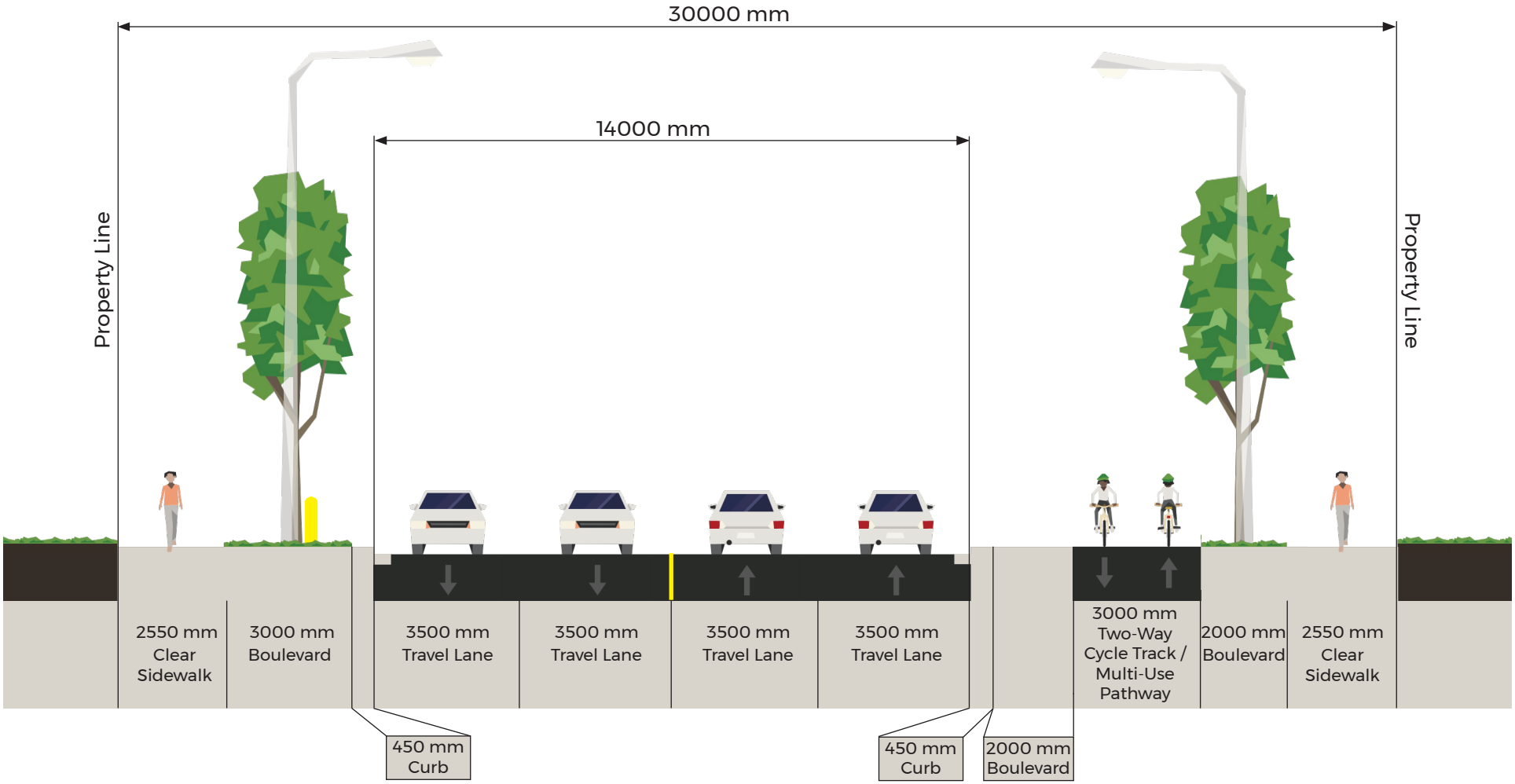
26m ROW - Collector Road

Two-Way Cycle Track, 1 Parking Lane



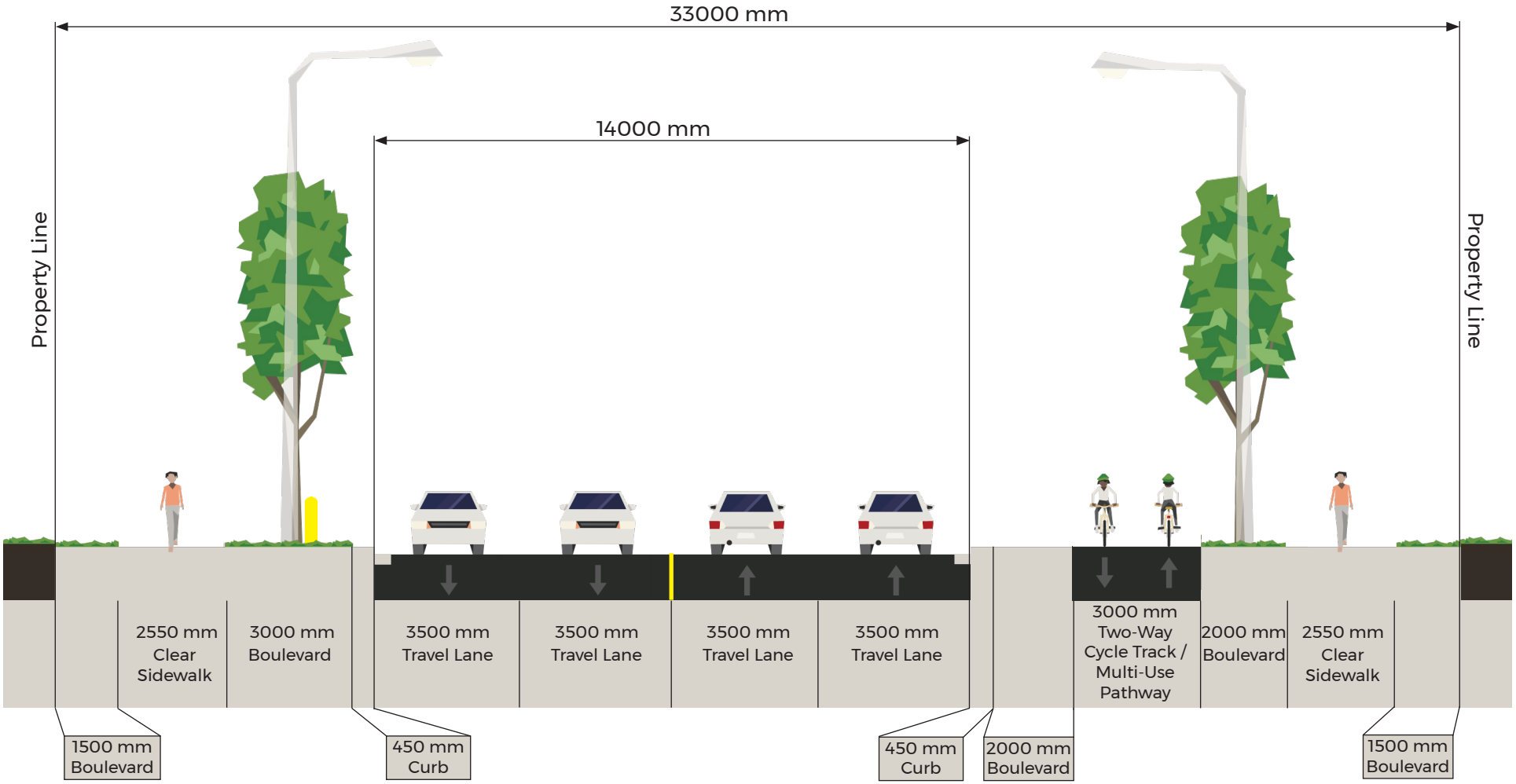
30m ROW - Arterial Road

Two-Way Cycle Track, No Parking, 4 Lanes



33m ROW - Arterial Road

Two-Way Cycle Track, No Parking, 4 Lanes



Our Next Move

Appendix D

Traffic Calming Policy

LaSalle
Ontario, Canada

TRAFFIC CALMING POLICY

Prepared for: Town of LaSalle | January 2020

FINAL

Prepared by:

wsp

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1 Introduction

1.1 What is Traffic Calming?

Traffic calming is a collection of measures intended to improve conditions for users, including non-motorized street users of all ages and abilities, while travelling within LaSalle. Traffic calming measures include engineering, design, educational, and enforcement measures that can be used individually or together as a toolkit to help address traffic challenges such as high speeding and shortcutting traffic. Depending on the traffic concerns, the calming measures can be either passive behaviour changes or permanent physical infrastructure modifications.

1.2 Purpose

The purpose of this policy is to provide a framework for initiating, developing, assessing, implementing, and monitoring traffic calming measures for local and collector roads in the Town of LaSalle. The purpose of traffic calming is to address concerns about the behaviour of motor vehicle drivers and develop measures to mitigate the concerns resulting in safer roads for all modes of transportation. Creating a policy allows the Town Staff, members of Council and the public to agree on an approach and criteria that can be used objectively to respond to and prioritize requests.

1.3 Objective

The ultimate goal of traffic calming is to address the negative effects of motor vehicle use and driver behaviour. Most traffic calming measures address speeding, reckless driving, and conflicts between street users. The objective of implementing a traffic calming policy is to determine the best combination of measures that result in the greatest improvement in the quality of life and community safety at a reasonable cost.

2 Background

2.1 Street Classification

The Town of LaSalle's Official Plan includes three road classifications: local, collector, and arterial roads. A road's classification is an indication of its purpose and also the range of traffic volumes it can be expected to carry. The primary function and the purpose of the road should be maintained when considering the implementation of various traffic calming measures. Many traffic calming policies in the past have excluded arterial roads and restricted collector roads to only certain types of measures. However, with the 2018 update to the Transportation Association of Canada (TAC)/Institute of Transportation Engineers (ITE) manual, there are now traffic calming measures that are considered suitable for arterial roads.

Local and collector roads are intended to provide access to properties or to connect local roads to arterial roads. These roads typically have lower volume and speed. Arterial roads are designed to efficiently move and distribute traffic across the network, including goods movement and emergency vehicles, and any traffic calming measures that interfere with this function would not be recommended. For these reasons, it is important to carefully apply the right traffic calming measures to address the specific problem, based on the road classification.

2.2 Best Practices and Comparable Policies

Relevant best practices and comparable policies to the existing warrant from several other comparable municipalities in Ontario were considered. The review of four municipalities, the Town of Milton, the City of Windsor, City of London, and the Municipality of Leamington, is summarized in **Table 1** as they were the most relevant to the Town of LaSalle. In developing the policy for LaSalle, specific components of other municipal traffic calming policies were referenced.

Table 1: Comparable traffic calming policies of neighbouring municipalities

Criteria	Milton	Windsor	London	Leamington
Policy Document	"Traffic Calming Policy"	"Traffic Calming Policy"	"Traffic Calming Practices and Procedures for Existing Neighbourhoods"	"Short and Long Term Transportation Action Plans Update"
Year of Release	2011	2015	2019	2013
Eligible Streets	Local and collector roads within primarily residential neighbourhoods	Residential local or collector roads	Local, Primary and Secondary collector roads within residential areas	Local and collector roads
Traffic Calming Measures scope	- Vertical deflections - Horizontal deflections - Obstructions - Traffic regulations	- Vertical deflections - Horizontal deflections - Volume control measures - Traffic regulations - Signage	- Vertical deflections - Horizontal deflections - Obstructions - Passive and mitigating measures	- Vertical deflections - Horizontal deflections - Obstructions - Signage
Process Initiation	Residents with traffic related concerns submit their written request to investigate traffic calming within their neighbourhood to the Town	Residents, businesses or groups submit their concerns to the City's Public Works-Transportation Planning Division	Residents with traffic related concerns are instructed to submit their written request to investigate traffic calming within their neighbourhood to the City. Staff will then conduct a brief preliminary assessment to determine if the requested roadway meets the Initial Screening Criteria. A signed	A signed petition with a minimum of 25% support from the affected households OR A local Councillor to initiate following a public meeting OR A survey conducted by the Councillor must be submitted

			petition with a minimum of 25% support for traffic calming measures must be submitted to the City before an area is considered for traffic calming	
Initial Screening Criteria	- Street length must be at least 150m - Posted speed limit must be 50km/h or lower - Must have a minimum of 500 Annual Average Daily Traffic (AADT) - All reasonable efforts have been made (including engineering, education, and enforcement tools)	- Street length must be at least 150m - Posted speed limit must be 50km/h or lower - Street has not been evaluated for traffic calming in the last 5 years	- Street length must be at least 300m - Posted speed limit must be 50km/h or lower - Must have a minimum of 500 Annual Average Daily Traffic (AADT) - No Previous efforts must have been made within the last 36 months - Road is primarily residential land use - Road provides obvious by-pass to a major intersection	- Street length must be at least 120m - The 85th percentile speed must be a minimum of 10km/h over the posted speed limit - If the 85th percentile speed is more than 15km/h over the posted speed limit, there is no minimum volume requirement - Must have 1,000-8,000 vehicles per day for local roads and 2,500-8,000 per day for collector roads - Must have continuous sidewalks on at least one side for local roads and both sides for collector roads
Initial Public Support	After initial screening criteria is met, a minimum of 51% of support is required From: the property owners with households with direct frontage or flankage onto the section of the affected roadway	After initial screening is met, a minimum of 60% of support is required From: properties in the petition area Timeline: within eight months	Signatures and addresses of at least ten (10) separate households on the street of concern.	After initial screening criteria is met, a minimum of 25% of support is required From: affected households

Warrant	Scoring or Ranking Description	Point based system Minimum points to qualify: - Local roads –35 points - Collector roads – 52 points	Point based system - Threshold of 30 points if passed the initial criteria. *Exceptions may be made by the City based on other project schedules, available funding sources, and other considerations*	Point based system Minimum points to qualify: - Neighbourhood Streets (Local roads) – 35 points - Neighbourhood Connectors (Collector roads) – 52 points	Point based system - No threshold is set, only used to prioritize projects - 4 subgroups worth 25 points each including: Speed, Volume, Collisions, Pedestrian and Bicycling Factors
	Speed	- Five points for every 2km/h that the 85th percentile speed is greater than 15km/h over the speed limit (max. points = 35)	- One point for every km/h that the 85th percentile speed is between 5-15 km/h over the posted speed limit, plus 2 points for every km/h from 15-25 km/h over posted speed limit using the average along the street (max. points = 30)	- Five points for every 2km/h that 85th percentile speed is greater than 10km/h over the speed limit (max points = 35) - Five points if a minimum of 5% of daily traffic exceeds posted speed by 15-20km/h (max. points = 5)	- Local Roads: Two points for each km/h that the 85th percentile spe9ied is above the minimum speed threshold (max points = 25) - Collector Roads: One point for each km/h that the 85th percentile speed is above the minimum speed threshold (max. points = 25)
	Volume	- Local Roads: Five points for every 1,500 AADT; - Collector Roads: 5 points for every 2,000 AADT (max. points = 20) - Five points if 25% or more short-cutting traffic; and additional 5 points for every 10% increment above 25% (max. points = 15)	- One point for every 150 AADT starting from zero (max. points = 25)	- Local Roads: Five points for every 1,500 AADT; - Collector Roads: 5 points for every 2,000 AADT (max. points = 20) - Five points if 25% or more short-cutting traffic; and additional 5 points for every 10% increment above 25% (max. points = 15)	- Local Roads: One point for every 100 vehicles of AADT (max: 25 points) - Collector Roads: One point for every 200 vehicles of AADT (max. points = 25)
	Collisions History	- One point for every two collisions/year in the last three years	- One point for each reducible	- One point for every two collisions/year in the last three years	- Five points for every preventable collision

		(max. points = 10)	collision/km in the last five years - Five points for each collision/km involving a vulnerable road user within the last five years (max points = 10)	(max. points = 10)	recorded in the last three years - Ten points for two or more preventable collisions recorded in the last three years OR - Ten points for every preventable collision recorded resulting in personal injury in the last three years (max. points = 25)
	Pedestrian/ Cyclists Generators	- Five points for each nearby pedestrian generator (school, playgrounds) - (max. points = 15)	- Five points for each other generator (park, senior's center, community centre) with a direct connection to the street - 7.5 points for each school along street; and - Five points for school walk routes in the area for schools near but not on street itself. (max points = 15) (max points = 10)	- Five points for each nearby pedestrian generator (school, playgrounds, community centres, libraries, retail centres, etc.) (max. points = 15)	- Five points for each pedestrian generator (e.g. park, school, senior centre, recreation centre, church, or other public institution) - Ten points for a signed bicycle route (max points = 25)
	Sidewalks	- Five points if the road does not have any sidewalk with evidence of pedestrian activity (max. points = 5)	- Five points if the road does not have a continuous sidewalk on at least one side (max. points = 5)	- Ten points if the road does not have any sidewalk with evidence of pedestrian activity - Five points for sidewalks on only one side (max. points = 10)	- Not Applicable (included in the initial criteria)

Opportunities for Community Participation	Yes (survey and public meeting)	Yes (surveys and public meeting)	Yes (surveys and public meeting)	Yes (survey only)
Additional Community Support Approval Process	Yes - An additional survey round would be sent to community with proposed measures - A minimum of 25% of sent surveys must respond, and from this at least 60% must be in favour of plan	Yes - Once the traffic calming plan is developed, a public approval poll is sent to the properties in the poll area - A minimum of 50% of sent surveys must respond, and from this at least 60% must be in favour of plan	Yes - PIC & Public Input Notices will be circulated to all residents who have direct frontage or flankage of the street in question. PIC is to present the proposed Traffic Calming Measures and gain inputs. - A minimum of 51% of total surveys delivered must be returned to the City indicating they approve the future installation of the recommended traffic calming plan.	Not Specified
Emergency / Transit / Maintenance Approval or Involvement	Yes	Yes	Yes	Yes
Alternative / Flexible Measures, if Initial Screening Criteria is not Met	Yes - Staff will consider “front-line” mitigating measures such as driver feedback boards, Neighbourhood Speed	Yes - If the absence of sidewalks is an issue this can be sought through the Local Improvement Policy. Dangerous	Yes - Staff will consider “front-line” mitigating measures such as driver feedback boards, police enforcement, sign	Not Specified

	Watch programs, police enforcement, sign installation, pavement marking modifications	driving should be reported to Police or the Windsor Police Service Road Watch Program. Road safety concerns can be reported through the City of Windsor's 311 system.	installation and pavement marking modifications.	
Degree of Process Complexity	High	High	High	Low
Monitoring and Evaluation Methods	- Outcome study: 4-6 months following implementation - Town will take corrective actions if: through traffic on parallel streets has increased by 15% or more (with a minimum of 150 vehicles)	- Outcome study: 6-12 months following implementation - City may run the site through the warrant process again to see if it still has a need for calming - City may undertake further public meetings to discuss amendments to the project	- Traffic engineering staff will monitor the roadway to determine the effectiveness of the utilized measures and their impact on the surrounding road network - City will also assess if the plan has resulted in significant amounts of traffic diverting to adjacent, parallel streets	- Not Specified

2.3 TAC's Canadian Guide to Traffic Calming 2018

TAC and ITE jointly updated the 1998 Canadian Guide to Neighbourhood Traffic Calming and have published the Canadian Guide to Traffic Calming 2018 (CGTC). A group of professionals and associations contributed to the update to the 1998 Guide based on their experience from many more municipalities and current best practices. The CGTC is intended to be used as a national guideline, and the review of the CGTC is to assist LaSalle in developing its own policy and use it as a reference to educate elected officials and the general public. LaSalle's policy conforms to the guiding principles and follows the process recommended in the CGTC and much of its content is good background to the subject.

The following sections summarize relevant contents from TAC's 2018 Canadian Guide to Traffic Calming that are considered when developing a traffic calming plan.

2.3.1 Overview

Traffic calming is used to maintain the road's intended function while keeping the safety of all road users at the forefront. Two main causes that may elicit the need for traffic calming to be considered are excessive speeding and traffic short-cutting / infiltration. Depending on the cause of the issue, the location, and the desired results, the proposed measures should reflect the objective. Some traffic calming measures are more effective at controlling speed, for example, and others might be intended to deter traffic from using a particular street. There are various types of traffic calming measures but largely divided into physical measures that require alteration of physical attributes of the roadway and passive measures such as enforcement and educational/awareness programs.

Some traffic calming measures are more suitable in certain locations than others. In the past, traffic calming was designed and implemented primarily in residential neighbourhood areas as noted by the first edition of TAC/ITE's guide title of Canadian Guide to Neighbourhood Traffic Calming. The updated edition now takes into consideration not only local and collector roads but also arterials roads. This addition however includes provisions that the objective and the approach be different than local and collector roads to make sure that the function of arterial roads is not hindered. Restriction and diversion of traffic flow are not recommended on arterial roads. In addition, the area type (rural or urban) is an important factor to consider when choosing traffic calming measures.

One of the main objectives of traffic calming is to increase the safety of the road users. Decreasing the operating speed of vehicles and volume of traffic and heightening the awareness of other street users can reduce conflicts between road users. However, traffic calming measures require appropriate signage and pavement marking to ensure all users know how to use the road safely.

2.3.2 Factors Affecting Traffic Calming Planning

There are many factors for municipalities to consider when planning and implementing traffic calming policies to ensure they are effective. The factors outlined in the CGTC are: legislation and regulations, liability, accessibility, enforcement, emergency services, maintenance and operations, modes of transportation, and compatibility with municipal land use and transportation plans as shown in Table 2.

Table 2: Factors to consider when planning traffic calming policies

Factors	Considerations
Legislation and Regulations	Any planned traffic calming should not conflict with the current legislation and relevant by-laws in place, at all levels of government.
Liability	Developing a traffic calming policy is helpful to minimize potential liability for the installation and impact of traffic calming that may arise from perceived conflict with other reference documents. For the safety of all road users, a number of steps can be taken to minimize potential liability issues in the future: developing the policy and documenting the process which includes the design, implementation and maintenance of traffic calming measures. Support from the decision-makers would be easily made with a well-thought out process that considers all road users and affected town staff.
Accessibility	Traffic calming measures should consider road users of all ages and abilities that will allow them to be independent and safe.
Enforcement	Understanding that enforcement resources are limited and that not all locations can be monitored at all times, consideration of various measures that are self-enforcing may have greater chance of success. However, these measures tend to include physical changes to the road characteristics, therefore a good balance between different types of traffic calming measures is important.
Emergency services	While slowing down daily vehicular traffic is the objective, this may have negative impacts on emergency services' response times. Over time, enhanced designs have been developed to minimize the impact on emergency service vehicles while still providing functionality to the general traffic. These design considerations are crucial when selecting traffic calming measures.
Maintenance and Operations	Consultation with the maintenance and operations staff of the municipality throughout the process is important to ensure the implementation of traffic calming measures do not conflict with their operations. Snow removal, pavement markings, damages due to roadway geometry changes are common concerns however, there may be other locally-specific issues that may arise.
Modes of transportation	Active transportation and transit operations are important aspects to consider since the objective of traffic calming to enhance safety of all road users. Careful consideration of the measures and thorough consultation process can improve the road user's experience.
Compatibility with municipal land use and transportation plans	Incorporating traffic calming implementation throughout other long-range plans and policies confirms uniformity across the municipality and potentially within the region as well.

2.3.3 Guiding Principles

The guidelines indicated in **Table 3** should be taken into consideration before and during the implementation of a traffic calming intervention. These are general recommendations that recognize important aspects of the investigation and implementation process:

Table 3: Key guidelines to consider before, during, and after implementing traffic calming

#	Guidelines
1	Identify the source of the problem and quantify the extent of the problem through data collection or analysis
2	Consider first cost-effective options such as increased enforcement, education or community-led community road watch programs, installation of driver speed feedback boards, and/or better street signage
3	Consider widening the scope by studying an area-wide plan instead of a localized, street-specific plan that would likely result in displacement of traffic onto adjacent streets
4	Generally, traffic calming measures that are effective at all hours of the day and do not require the enforcement of officers are both preferred and supported
5	Verify that the intervention does not impede upon the accessibility of non-motorized modes of transportation such as pedestrians, cyclists, and wheelchairs
6	Ensure that all service providing vehicles including transit, police, fire, ambulance, garbage collection, snow plowing, and other emergency or service vehicles are able to handle the proposed infrastructure and calming measures
7	Continue to monitor any traffic calming measures for six months or a year following implementation to analyze the effectiveness and success or to prepare a contingency plan in case the measure does not produce ideal results
8	Engage with all relevant stakeholders (community, emergency service staff, transit staff, traffic engineering, public works staff, Council, other organizations) in the investigation and implementation process to reflect the needs of multiple users and analyze the traffic calming measure through different lenses. This would maximize opportunities of consensus/participation and reduce the risk of other factors not being considered in time

2.3.4 Traffic Calming Process and Procedure

CGTC includes a comprehensive process of potential steps to consider when developing a traffic calming plan. Understanding that each municipality has their own culture and concerns that they need to address, this process can be a model that municipalities can adapt to their needs. There are five main stages in the process: initiation, development, approval, implementation and evaluation.

1. Initiation

   A consistent and documented process is important to keep track of all requests. The initial process includes receiving and screening the traffic calming requests. This section has been expanded to include various types of initiation types such as external public requests but also internal checklist that may prompt a survey within an area. Initial criteria are recommended to use for the screening process. At the end of this stage, a problem definition, scope and the decision to proceed or not should be made.

2. **Development**
   More detailed project definition including data collection, stakeholders, list of alternative solutions are determined at this stage. Review and analysis of the problem statement to develop the plan for each of the project and finally determining the solution.
3. **Approval**
   For any traffic calming plans to go forward, approval from stakeholders, residents and the decision-makers is essential. At this stage, an overview of the problem statement and proposed solutions are reviewed to ensure that the objective is met. The community support is important as the initial request might not reflect the opinion of the majority affected. There is a potential for two stages of approval; one approval to agree on the need of traffic calming measure and second approval for the type of traffic calming measure to be implemented.
4. **Implementation**
   This stage is to complete detailed design according to the specific study area and to ensure the funding is available and finally, to construct the designed traffic calming measure.
5. **Evaluation**
   Monitoring and evaluation is required to ensure the initial objective is met and if it is not, reconsideration of how the implementation can be refined. Some traffic calming projects are intentionally temporary to evaluate their effectiveness before permanent investments are made. Traffic calming policies should outline the evaluation process that includes the evaluation criteria, the monitoring timeline, and outcomes.

2.3.5 Traffic Calming Measures

The CGTC updated the list of traffic calming measures that are deemed to be suitable for use within North America based on their effectiveness on traffic volume, speed, conflicts and neighbourhood environment. The list of measures recommended in **Section 4** for LaSalle are taken from this recognized list. Some measures that were included in the first edition have been removed based on the outdated practices and outcomes of their uses. In addition, new common operational and educational practices that can also be used as a traffic calming measure are added and a number of emerging technologies are introduced to broaden the options for available measures.

The measures are divided into the following categories: vertical deflection, horizontal deflection, roadway narrowing, surface treatment, pavement marking, access restriction, gateways, enforcement, education, shared space, emerging technologies and measures.

In selecting the most appropriate traffic calming for the problem statement and the study location, the Guide included two tables showing the applicability and the potential benefits and disbenefits of each traffic calming measures. Table 3.2 of the Guide outlines which of the measures are suitable for each location type: local/collector, urban arterial or rural arterial. Table 3.3 of the Guide shows what types of problems that the traffic calming measure can address and what types of implication it can potentially cause.

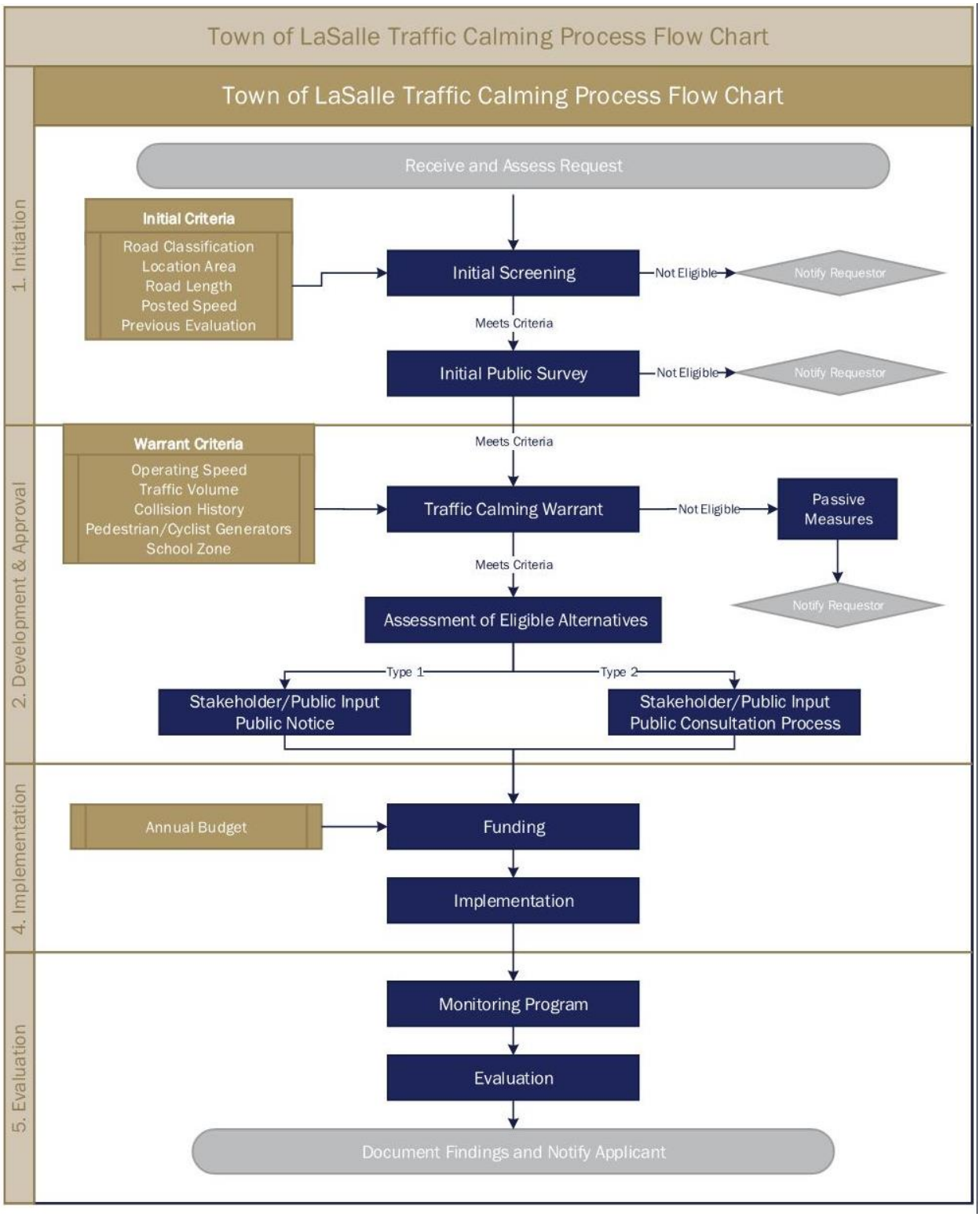
3 Town of LaSalle's Process

The review of other municipalities policies and the CGTC was used as the basis of developing the Town of LaSalle's process. The traffic calming process for the Town of LaSalle is intended to provide step by step guidance from the time of receiving a request to providing solutions to the concerns, whether the result is the implementation of a traffic calming measure or to provide an alterative response. This process provides transparency and consistency for the Town staff and the public.

3.1 Traffic Calming Process Flow Chart

The flow chart in **Figure 1** shows the steps and sequence required to effectively manage any request. It shows the various decision points and possible outcomes and makes sure all necessary considerations have been taken into account. Each step is described in the remainder of this chapter.

Figure 1: LaSalle's traffic calming process flow chart



3.2 Initiation

The initiation stage starts when an official request has been submitted in writing to the Town Staff. The requestor can be any member of the public, Town staff, or an elected official. Once the request has been made, the initial screening and public survey will be conducted to confirm the need for a traffic calming measure. This initial process is to evaluate and screen requests to minimize the required staff effort.

3.2.1 Receive and Assess Request

All requests will be received in writing and managed by staff in one section of the Public Works Department for data management purposes. Having a formal request process provides an opportunity for the Town staff to gather the necessary information to decrease unnecessary administrative efforts. Once the request has been received, the Town staff will review the request and provide an update to the requestor within a 30-day review period.

3.2.2 Initial Screening Criteria

The initial screening criteria outlines the minimum requirements for a location to be eligible for traffic calming measures. These criteria are developed based on the review of nearby municipalities of similar size and TAC's Traffic Calming Manual.

Table 4: LaSalle's initial screen criteria

Criterion	Requirement
Road Classification	Only **local** and **collector** roads are eligible
Location Area	Primarily residential area
Road Length	Street segment length **must exceed 200 metres** [1]
Posted Speed	Posted speed limit must be less than or equal to **50km/h**
Previous Evaluation	Specific roadway has not been considered within the last **12 months**.

[1] *Where the segment of the roadway is not interrupted by a stop sign, traffic signal or curve sharper than 30 degrees.*

3.2.3 Initial Public Survey

Before data collection occurs, a survey is circulated to the residents within the study corridor to confirm that there is a neighbourhood concern regarding traffic conditions. The Town will advise the residents in the subject area of the request and the process the Town will follow. A minimum response of 25% is required for the request to continue. The purpose of this step is to confirm that there are others concerned about the operating conditions, in addition to the requestor, to ensure staff time and Town funds get spent where the residents are most concerned.

3.3 Development & Approval

Once the community support has been confirmed, the required data is collected to assess the location against the warrant criteria and the process for selecting the appropriate traffic calming measure is followed. The proposed traffic calming strategy needs to be accepted by the community and funding availability confirmed before implementation can take place.

3.3.1 Traffic Calming Warrant

Subsequent to the initial screening criteria, the operating conditions in the subject area are compared to a set of warrants, approved by the Town. The warrants are intended to help staff determine whether the conditions, as defined by the collected traffic data, indicate a problem that the Town should address. Also, the warrants allow various locations that have been requested to be prioritized when there is finite funding for improvements.

Data Collection

The data required for the warrant process are operating speed, annual average daily traffic (AADT), collision data, and a database of pedestrian/cyclist generators. A collaborative effort with other departments within the Town, and the police service is beneficial for organizing data storage and allocating proper budget. The sources of data required are shown in **Table 5**.

Table 5: Warrant criteria data source

Criterion	Data Source
Operating Speed	At the time of the request
Traffic Volume	Annual traffic count program or request-specific counts if no suitable data is available (less than 5 years old)
Collision History	LaSalle Police Service
Pedestrian/Cyclists Generators	Town's GIS database
School Zone	Town's GIS database

Town staff should review the surrounding road characteristics to determine the study area. The limits of the study area should include the section of road that is considered to have similar operating characteristics to the location of the request.

The warrant screening for the Town of LaSalle is based on a point system in which each category includes points to show severity. A point system is a commonly used practice in other jurisdictions to determine the severity of the identified issues based on various attributes. The weight assigned to each of the criteria is based on the concerns and issues that has been occurring within the Town. The minimum point total required to satisfy the warrants for traffic calming measures is 35 points. The point system for each criterion is shown in **Table 6**.

Table 6: Warrant screening requirements for LaSalle's traffic calming policy

Criterion	Requirement	Max Points
Operating Speed	One point for every km/h that the 85th percentile speed is between 1-15 km/h over the posted speed limit Two points for every km/h that the 85th percentile speed is between 15-25 km/h over posted speed limit (except for school zone specific speed limits)	30
Traffic Volume	Local Roads: Five points for every 1,000 AADT Collector Roads: Five points for every 2,000 AADT	30
Collision History	Two points for every collision, not involving vulnerable road uses, within the last 3 years Five points for every collision, involving vulnerable road uses, within the last 3 years	20
Pedestrian/Cyclists Generators	Places of pedestrian/cyclist generators: Playgrounds/park, senior's center, recreational/community centre, retail centres, libraries, Five points for every pedestrian/cyclist generator within the study area Five points for a walking trails and cycling routes	10
School Zone	Five points for every school within the study area	15

For locations that satisfy the initial criteria and received sufficient community support, but did not meet the warrant, will be considered for passive traffic calming measures discussed in **Section 4.1**. These measures are relatively low in cost, and often temporary, but can impact driver behaviour through education and awareness.

3.3.2 Assessment of Eligible Alternatives

All requests that reach this stage of the process have passed the initial screening process and the residents have indicated their support towards addressing the problem.

Municipalities have found that physical measures, primarily vertical deflections measure have been the most effective at modifying driver behaviours. However, these treatments are usually the most expensive and often municipalities do not have sufficient capital budgets to fund all the projects that meet their warrants. In cases where locations that met the warrants have to wait several years for their improvements to be funded, these residents are unsatisfied and feel like their problem is not being addressed.

To avoid this problem, the Town of LaSalle will utilize two types of traffic calming treatments. Type 1 traffic calming measures are low cost but effective ways of changing driver behaviour. They generally consist of signs, pavement markings and temporary installations such as bollards that can change the feel of a road and reduce speeds. Type 2 traffic calming measures involve construction of curbs or humps which are higher in cost but may prove more effective.

Based on the annual budget and ranking of the locations based on their point totals, staff will recommend Type 1 and Type 2 treatments to make the most effective use of the available budget. Should there be enough capital funding to construct Type 2 traffic calming treatments at all the warranted locations, all locations will receive Type 2 treatments. In the event that there is not sufficient funding, 40% of the Capital funds will be allocated to Type 2 treatments based on the priority ranking. The remaining 60% will be allocated to Type 1 treatments by the remaining locations.

In subsequent years, locations with Type 1 treatments will remain eligible for Type 2 treatments while in the monitoring program as discussed in Section 3.5.1. The monitoring program will further evaluate the effectiveness of the Type 1 treatments and provide updated data for the warrant score.

The point system outlined in Table 6 not only determines whether a location is warranted for traffic calming, but also used to rank its priority against other projects. The points allocated to the severity of the problem or the characteristics of the environment will assist staff in determining a priority ranking of locations.

3.3.3 Stakeholder/Public Input

Once staff have developed a proposed traffic calming strategy, it is important to determine whether the affected community will support the plan. Similar to the neighbourhood feedback from the initial survey, resident reaction is necessary at this stage to measure their agreement with traffic calming and particularly the approach that will be taken.

Regardless of the types of measures determined for the location, the affected residents will be sent information about the proposed treatment, provided contact information for questions and surveyed to indicate whether they are in favour. This survey will also outline the required level of support for approval. For Type 1 measures, the public will be consulted via notices and for Type 2 measures a public meeting will be held. A review period of 30-days is to be given for the residents to indicate their support. A minimum of 25% of sent surveys must respond, and from this at least 60% must be in favour of the plan.

The residents of the subject area should be advised of the results of the community survey. If the threshold for support is met, the residents will be advised that their project will proceed for prioritization with other warranted projects.

3.4 Implementation

3.4.1 Traffic Calming Funding

Traffic Calming should have an annual envelope in the Town's Capital Budget with consistent and predictable funding. This allows staff and the public to have realistic expectations about the number of traffic calming projects that can be funded each year and how long it might take for new projects to receive funding. Each year, the traffic calming plan will be based on the available funds for the list of warranted locations.

3.4.2 Implementation

Once the budget envelope has been approved, the installation schedule can be developed for the construction season. This will include public notification, installation by staff, as well as contracted services as required.

3.5 Evaluation

3.5.1 Monitoring Program

It is important to monitor locations after traffic calming has been installed to confirm whether operating conditions have improved. This monitoring will provide data to confirm the effectiveness of each installation and these results may influence the proposed traffic calming plans for future years. The Town of Lasalle should collect follow up data at traffic calming installations for at least two years. The first year will determine the initial impact of the treatment but the second year is required to determine whether the impact is permanent.

3.5.2 Evaluation

It is also important for the residents to receive feedback on the performance of the traffic calming treatments. Often residents can form their own opinion about the effectiveness of the traffic calming but it important for them to see the statistical results from the data collected by staff.

4 Traffic Calming Measures

Traffic calming measures included in this policy are selected to suit the geometrics and practices within LaSalle and includes measures that have been implemented in nearby municipalities. The measures are categorized into Type 1 and Type 2 as discussed in Section 3.3.2. Type 1 measures include passive measures that can be achieved in shorter time period for a lower cost such as road narrowing, signage and education. Type 2 measures may require construction for physical geometric changes such as vertical and horizontal deflections.

4.1 Type 1 Measures

Type 1 traffic calming measures are effective methods to address concerns through less-intrusive road changes when permanent physical road geometry changes are not possible or recommended. These passive measures are typically lower in implementation cost and have a shorter turnaround time for the evaluation period, allowing the Town to address more requests with the given funding and resources. Type 1 traffic calming measures used in LaSalle are shown in **Table 7**.

Table 7: Type 1 traffic calming measures

Traffic Calming Measure Description	Example	Considerations
Road Diet Reconfiguration of a road by reducing the number of vehicle lanes to allocate the reclaimed space for other uses (sidewalks, bus lanes, bike lanes, parking)		- Reduces vehicle speeds and conflicts - May affect emergency vehicle response times due to added congestion
Speed Display Devices Interactive sign that displays vehicle speeds as oncoming motorists' approach		- Reduces speed and conflicts - If not enforced, drivers may become immune - An estimate of volume data can be collected
Lane Narrowing Using pavement marking to mark the designated roadway lane width to alert drivers of the appropriate road position. Bollards are often used as a physical eliminator to reinforce the lane width.		- Reduce speeds and heightened awareness - Opportunity to redistribute roadway right-of-way for other road users - No construction required

4.2 Type 2 Measures

Type 2 traffic calming measures typically result in more effective solutions as the physical changes to the road require the drivers to reduce their speed. The three categories of Type 2 measures are vertical deflection, horizontal deflection and access/volume control.

4.2.1 Vertical Deflection

Vertical deflections are physical obstructions for vehicles to traverse. The vertical height difference is designed to cause drivers that are driving above the speed limit discomfort to slow down. Certain drivers may reroute their travels to avoid these neighbourhood calming areas, achieving traffic diversion. Vertical deflections used in LaSalle are shown in **Table 8**.

Table 8: Vertical deflection traffic calming measures

Traffic Calming Measure Description	Example	Considerations
Speed Hump / Speed Table (intersection) Vertical deflection designed to accommodate the desired operating speed.		- Reduces speed and volumes - Affects emergency vehicle response times and transit routes
Speed Cushion A raised area on a road similar to a speed hump but does not cover the entire width allowing for large vehicles (bus, fire truck) to straddle the cushion without difficulty.		- Reduces vehicle speeds and volumes - May slightly affect emergency vehicle response times and transit routes but not as much as speed humps - Requires removal in the winter

4.2.2 Horizontal Deflection

Horizontal deflection traffic calming measures narrow the road to encourage vehicles to slow down and accommodate other roadway users. These types of measures are effective on roadways with straight geometry for extended length and at areas with high volume of pedestrians and cyclists. Horizontal deflections used in LaSalle are shown in **Table 9**.

Table 9: Horizontal deflection traffic calming measures

Traffic Calming Measure Description	Example	Considerations
Curb Extensions A horizontal intrusion of a curb into the roadway resulting in a narrow section of roadway.		- Reduces vehicle speeds and conflicts through shortening the crossing distance for pedestrians - Not compatible with bike lanes - Potential loss of on-street parking
Traffic Circle Form of intersection control requiring through traffic to manoeuvre around the centre island.		- Reduces speeds, volumes, and conflicts - Delays emergency vehicle response times - Not suitable for high pedestrian locations
Raised Median Island An elevated medium constructed on the centerline of a two-way roadway to reduce the overall width of the adjacent travel lanes		- Reduces speeds marginally - Reduces conflicts as pedestrians can take refuge on mediums - May restrict access to driveways - May reduce room for cyclists

4.2.3 Access/Volume Control

Access and volume control measures are intended to deter vehicles to make certain movements to prevent vehicles entering a roadway while allowing pedestrians and cyclists. These measures are typically used for locations with high volumes of short cutting traffic. Short cutting traffic is defined as vehicles using a road that was not intended to carry these vehicles based on its classification. Since these traffic measures may disrupt the connectivity of the overall transportation network, it is recommended when other traffic measures are deemed not effective, and with definitive neighbourhood support. Access and volume control measures used in LaSalle are shown in **Table 10**.

Table 10: Access/volume control traffic calming measures

Traffic Calming Measure Description	Example	Considerations
Diverter A raised barrier that lies diagonally across an intersection that forces traffic to turn and prevents it from proceeding through.		- Reduces volume significantly - Does not do much regarding speed - Not ideal for emergency vehicles
Raised Median Through Intersection Asphalt island located on the centerline of a two-way roadway through an intersection that prevents left turns and through traffic.		- Reduces volume by eliminating cut-through traffic - Restricts resident access - May restrict emergency vehicle access
Directional Closure Curb extension or vertical barrier extending to about the centerline of a roadway prohibiting one direction of traffic.		- Reduces speed, volumes, and conflicts through shortening the pedestrian crossing - Restricts resident access - May complicate street sweeping and snow removal

Right-In/ Right-Out Raised triangular island at an intersection which prevents left turns and through movements to and from the intersecting street or driveway		- Reduces conflict points and volumes - Restricts resident access - May complicate street sweeping and snow removal

4.3 Passive Measures

Locations that satisfied the initial criteria and gained sufficient however, did not meet the warrant, passive traffic calming measures are considered. These measures are relatively low in cost, and may be temporary, but the concerns may be resolved through modified driver behaviour from education and awareness. Many of the passive measures are the community-led initiatives; these initiatives are proposed and developed by local residents which typically result in higher engagement level. These initiatives do not require any changes to the road geometry or interfere with any operational work by the Town. The Town will work with the residents to review, approve, and monitor any passive measures to ensure safety for all users, and that potential impacts on municipal and traffic operations are identified and mitigated. Passive traffic calming measures that can be considered in LaSalle are shown in **Table 7**.

Table 11: Passive traffic calming measures

Traffic Calming Measure Description	Example	Considerations
Location-specific Enforcement Police enforcement in a specific area known for traffic and driving infringements		- Meant to warn drivers, increase education - Enforcement for speed reduction and awareness
Resident Lawn Signs Signs such as 'Please Slow Down' and 'Thank You for Slowing Down' signs to remind drivers to slow down		- Meant to communicate with the drivers that children and other vulnerable road users are in the area - Based on resident voluntary commitment

Traffic Calming Measure Description	Example	Considerations
Education Campaign To raise awareness of road safety issues to all road users. Presented information can include traffic calming procedure, proper use of the measures, traffic calmed locations, and preventative safety measures.		- Through workshops, pamphlets, and social media to raise awareness - Combine campaigns with information of law enforcements for greater impact - Can focus on different audience groups with various messages
Traffic-Calmed Neighbourhood Sign to notify motorists of traffic calming measures such as speed humps		- Meant to make motorists aware that they are entering a traffic-calmed zone - Usually combined with other measures

4.4 All-Way Stop Control

Municipalities are often faced with requests for all-way stop control as a means to address speeding concerns. However, traffic engineering standards including the Ontario Traffic Manual (OTM) clearly indicate that stop signs are means of controlling the right-of-way at intersections, and not a tool to address speeding. These standards include warrants for all-way stop control based on intersection volume and safety. Compliance at unwarranted stop signs has been found to be lower than warranted locations because drivers perceive that there was no reason to stop and often tried recover lost time.

Our Next Move

Appendix E

Active Transportation Network Database and Costing

This table provides an overview of the estimated unit costs for active transportation facilities, structures and crossings and other elements of an active transportation and trails network. All unit prices exclude tax, contingency, design and approvals costs. Yellow highlighted rows indicate unit prices that have been used to develop the costing for LaSalle's Active Transportation Network.

Table 1: Unit Prices

ITEM	DESCRIPTION	UNIT	UNIT PRICE RANGE	UNIT PRICE FOR ROUTE CALCULATION	COMMENTS/ASSUMPTIONS
1.0 GENERAL ACTIVE TRANSPORTATION FACILITIES					
Shared Lanes / Paved Shoulders					
1.1	Signed Bike Route in Urban Area	linear KM	$1,200	$1,200	Price for both sides of the road, assumes one sign a minimum of every 500 metres in the direction of travel. Price assumes that signs will be mounted on an existing post. Price includes: - $300 per sign x 4 signs (2 signs on each side of the road)
1.2	Signed Bike Route in Rural Area	linear KM	$1,000	$1,000	Price for both sides of the road, assumes one sign a minimum of every 2 kilometres in the direction of travel. Price assumes that signs will be mounted on a new post. Price includes: - $500 per sign x 2 signs (1 sign on either side of the road)
1.3	Signed Bike Route with Sharrow Lane Markings *Intended to supplement a signed bike route in specific locations. Not intended to be a stand-alone facility type.*	linear KM	$11,600	$11,600	Price for both sides of the road, includes route signs every 500 metres and sharrow stencils every 75 metres as per OTM Book 18 guidelines. Price includes: - $300 per sign x 4 signs (2 signs on each side of the road) - $400 per stencil marking x 26 (13 stencils on each side of the road)
1.4	Signed Route with Edgeline	linear KM	$12,200	$12,200	Price for both sides of the road, includes signs and painted edgeline (100mm solid white line). Price includes: - $300 per sign x 4 signs (2 signs on each side of the road) - $5.5 per metre for painted solid white line
1.5	Signed Bike Route with Paved Shoulder in conjunction with existing road reconstruction / resurfacing	linear KM	$100,000 to $200,000	$150,000	1.5 metre paved shoulder on both sides of the road. Assumes cycling project pays for additional granular base, asphalt and painted line. Price may vary from $100,000 to $200,000 depending on work needed to improve platform. Price includes: - $300 per sign x 4 signs (2 signs on each side of the road) - $5.5 per metre for painted solid white line (both sides of the road) Price may be higher if road platform needs to be widened.
1.6	Signed Bike Route with Buffered Paved Shoulder in conjunction with existing road reconstruction / resurfacing project	linear KM	$200,000 to $250,000	$225,000	1.5 metre paved shoulder + 0.5-1.0 metre paved buffer on both sides of the road. Assumes cycling project pays for additional granular base, asphalt, painted edge lines and signs (buffer zone framed by white edgelines). Price may vary from $200,000 to $250,000. Price includes: - $300 per sign x 4 signs (2 signs on each side of the road) - $5.5 per metre for painted solid white line (both sides of the road)
1.7	Addition of Rumble Strip to Existing Buffered Paved Shoulder (rural)	linear KM	$12,000	$12,000	Price for both sides. Buffer $6 / m.
1.8	Granular Shoulder Sealing	linear KM	$18,000	$18,000	Both sides spray emulsion applied to harden the granular shoulder. This will reduce gravel on the paved portion of the shoulder and significantly reduce shoulder maintenance. Use $9 / m.
1.9	Upgrade Granular Surface Back Road to Chip Seal Surface	linear KM	$56,000	$56,000	Price includes pulverizing existing surface with double treatment ($6 / m^2) or tar and chip ($2 /$m^2$) at 7m wide.

ITEM	DESCRIPTION	UNIT	UNIT PRICE RANGE	UNIT PRICE FOR ROUTE CALCULATION	COMMENTS/ASSUMPTIONS
Conventional and Separated Bike Lanes					
1.10	Conventional 1.5m-1.8m Bicycle Lanes by Adding Bike Lane Markings and Signs	linear KM	$29,000	$29,000	Price for both sides of the road, includes signs, stencils and edge line. The price assumes: - $11,000 for painted lane line ($5.5 per metre multiply 2 for both sides of the road) - $10,400 for painted bike symbols (assumes $250 per symbol, 13 symbols per linear km multiply by 2 for both side of the road) - $2,500 for bike lane signs (assumes $350 per sign and tab, 5 signs per linear km - spaced every 200 metres - multiply by 2 for both sides of the road) - $3,900 for 'No Parking' signs (assumes $150 per sign, 13 signs per linear km multiply by 2). Signs to be mounted on existing and new posts. Price depends on number of stencils and signs used.
1.11	Conventional 1.5m-1.8m Bicycle Lanes through Lane Conversion from 4 lanes to 3 lanes	linear KM	$53,000	$53,000	Price for both sides. Includes grinding of existing pavement, markings, signs, painted markings. Assumes road is not be surfacing. The price assumes: - $11,000 for painted lane line ($5.5 per metre multiply 2 for both sides of the road) - $10,400 for painted bike symbols (assumes $400 per symbol, 13 symbols per linear km multiply by 2 for both side of the road) - $2,500 for bike lane signs (assumes $350 per sign and tab, 5 signs per linear km - spaced every 200 metres - multiply by 2 for both sides of the road) - $3,900 for 'No Parking' signs (assumes $150 per sign, 13 signs per linear km multiply by 2). Signs to be mounted on existing and new posts. Price depends on number of stencils and signs used. - $6 to $8 per linear metre for lane line removal (soda blasting). Price varies on markings to be removed on a multi-lane roadway. Remove soda-blasting cost component if the road is being resurfaced. The cost for resurfacing to be part of resurfacing project.
1.12	Conventional 1.5m-1.8m Bicycle Lanes in Conjunction with a New Road, or Road Reconstruction / Widening Project	linear KM	$378,000	$378,000	Price for 1.5m bike lanes on both sides of the roadway (1.5m x 2 sides = 3.0m). The price assumes: - $1,980 for catch basin leads ($55/m - assumes 50m catch basin spacing and 1.8m lead) - $360,000 for asphalt and sub-base ($55/m2 = 120 x 1.5m BL x 1000 x 2) - $16,000 for signs, stencils and edge line The roadway project funds all other improvements.
1.13	Conventional 1.5m-1.8m Bicycle Lanes that require a road widening /reconstruction	linear KM	$700,000	$700,000	Price for both sides of the road, includes the cost for excavation, adjust catch basins, lead extensions, new curbs/driveway ramps, asphalt and sub-base, painted markings and signs. All costs associated with widening or reconstructing the road for the purposes of adding bike facilities is born by the bike project i.e. no economies of scale of adding a bike facility in conjunction with a planned roadway project.

ITEM	DESCRIPTION	UNIT	UNIT PRICE RANGE	UNIT PRICE FOR ROUTE CALCULATION	COMMENTS/ASSUMPTIONS
1.14	Buffered Bicycle Lane with Hatched Pavement Markings - No Road Construction / Widening or Road Diet required	linear KM	$41,000	$41,000	Price for 1.5m bike lanes with 1m hatched buffer. The price assumes: - $22,000 for painted lines ($5.5 x 4000 metres of line paint) - $1,000 for hatching paint (1000 metres) - $10,400 for painted bike symbols (assumes $400 per symbol, 13 symbols per linear km multiply by 2 for both side of the road) - $2,500 for bike lane signs (assumes $350 per sign and tab, 5 signs per linear km - spaced every 200 metres - multiply by 2 for both sides of the road) - $3,900 for 'No Parking' signs (assumes $150 per sign, 13 signs per linear km multiply by 2). Signs to be mounted on existing and new posts. Price depends on number of stencils and signs used
Conventional and Separated Bike Lanes - CONT'D					
1.15	Buffered Bicycle Lane with Hatched Pavement Markings with Road Diet	linear KM	$65,000	$65,000	Price for 1.5m bike lanes with 1m hatched buffer. The price assumes: - $22,000 for painted lines ($5.5 x 4000 metres of line paint) - $1,000 for hatching paint ($1000 metres) - $10,400 for painted bike symbols (assumes $400 per symbol, 13 symbols per linear km multiply by 2 for both side of the road) - $2,500 for bike lane signs (assumes $350 per sign and tab, 5 signs per linear km - spaced every 200 metres - multiply by 2 for both sides of the road) - $3,900 for 'No Parking' signs (assumes $150 per sign, 13 signs per linear km multiply by 2). Signs to be mounted on existing and new posts. Price depends on number of stencils and signs used. - $6 to $8 per linear metre for lane line removal (soda blasting). Price varies on markings to be removed on a multi-lane roadway.
1.16	Buffered Bicycle Lane with Hatched Pavement Markings - Assumes New Road or Road Reconstruction/Widening already Planned	linear KM	$381,000	$381,000	Price for 1.5m bike lanes + 0.5m hatched buffers on both sides of the roadway (1.5m x 2 sides = 3.0m). The price assumes: - $1,980 for catch basin leads ($55/m - assumes 50m catch basin spacing and 1.8m lead) - $360,000 for asphalt and sub-base ($55/m2 = 120 x 1.5m BL x 1000 x 2) - $19,000 for signs, stencils and edge line The roadway project funds all other improvements.
1.17	Buffered Bicycle Lane with Flex Bollards - Assumes Road Reconstruction/Widening Already Planned	linear KM	$411,000	$411,000	Price for 1.5m bike lanes + 0.5m hatched buffers + flexible bollards on both sides of the roadway (1.5m x 2 sides = 3.0m). The price assumes: - $1,980 for catch basin leads ($55/m - assumes 50m catch basin spacing and 1.8m lead) - $360,000 for asphalt and sub-base ($55/m2 = 120 x 1.5m BL x 1000 x 2) - $19,000 for signs, stencils and edge line - $30,000 for flexible bollards ($150 per bollard, spaced every 10m) The roadway project funds all other improvements.

ITEM	DESCRIPTION	UNIT	UNIT PRICE RANGE	UNIT PRICE FOR ROUTE CALCULATION	COMMENTS/ASSUMPTIONS
1.18	Buffered Bicycle Lane with Pre-Cast Barrier - Assumes New road or Road Reconstruction/Widening Already Planned	linear KM	$471,000	$471,000	Price for 1.5m bike lanes + 0.5m hatched buffers + flexible bollards+ pre-cast and anchored curb delineators. The price assumes: - $1,980 for catch basin leads ($55/m - assumes 50m catch basin spacing and 1.8m lead) - $360,000 for asphalt and sub-base ($55/m2 = 120 x 1.5m BL x 1000 x 2) - $19,000 for signs, stencils and edge line - $30,000 for flexible bollards ($150 per bollard, spaced every 10m) - $50,000 - $60,000 pre-case curb delineators ($250 / pre-case unit 2m length + $7.5 / pins and anchoring. Assumes 2m long x 2 = 200-250 per km depending on intersections and driveways) The roadway project funds all other improvements.
1.19	Supply and install surface mounted flexible post delineators	each	$100 to $150	$125	Price depends on product, volume and supplier.
1.20	Standard precast concrete curb 178 mm high, 216 mm wide and 1.83 metre long	each	$250	$250	Approximately $95,000 - $100,000 per 1 linear kilometre. Assumes 70% of roadway to include physical delineation (700 metres per 1 linear kilometre): - 700 metres / 1.83 metres = 382.5 pre-cast concrete curbs - 382.5 x $250 = $95,000
1.21	Standard precast concrete curb 457 mm high, 457 mm wide and 3.05 metre long	each	$1,380	$1,380	Approximately $315,000 - $320,000 per 1 linear kilometre. Assumes 70% of roadway to include physical delineation (700 metres per 1 linear kilometre): - 700 metres / 3.05 metres = 229.5 pre-cast concrete curbs - 229.5 x $1,380 = $317,000
1.22	Standard precast concrete bullnose 457 mm high, 457 mm wide and 1.22 metre long	each	$970	$970	Approximately $550,000 - $560,000 per 1 linear kilometre. Assumes 70% of roadway to include physical delineation (700 metres per 1 linear kilometre): - 700 metres / 1.22 metres = 573.8 pre-cast concrete curbs - 573.8 x $970 = $556,557
			Cycle Tracks		
1.23	Uni-directional Cycle Tracks: Raised and Curb Separated - In conjunction with existing road reconstruction / resurfacing project	linear KM	$250,000 - $500,000	$375,000	Both sides. Assumes cycle track will be implemented as part of road construction. Could include minor utility / lighting pole relocations. Other components such as bike signals, bike boxes etc. are project specific and will impact unit price.
1.24	Uni-directional Cycle Tracks: Raised and Curb Separated - Retrofit Existing Roadway	linear KM	$500,000 - $1,200,000	$850,000.00	Both sides. Includes construction but excludes design and signal modifications. Form of cycle track and materials as well as related components such as bike signals, upgrade/modification of signal controllers, utility/lighting pole relocations, bike boxes etc. are project specific and will impact unit price
1.25	Two Way Cycle Track - Retrofit Existing Roadway	linear KM	$500,000 - $800,000	$650,000.00	One side. Includes construction but excludes design and signal modifications. Form of cycle track and materials as well as related components such as bike signals, upgrade/modification of signal controllers, utility/lighting pole relocations, bike boxes etc. are project specific and will impact unit price

ITEM	DESCRIPTION	UNIT	UNIT PRICE RANGE	UNIT PRICE FOR ROUTE CALCULATION	COMMENTS/ASSUMPTIONS
Active Transportation Paths and Multi-Use Trails					
1.26	Two Way Active Transportation Multi-use path within road right-of-way	linear KM	$275,000 - $375,000	$325,000	3.0m wide hard surface pathway (asphalt) within road right of way (no utility relocations). Price depends of scale / complexity of project and if existing sidewalk is being removed (i.e. crushing of existing sidewalk and compacting for trail base).
1.27	Concrete Splash Strip placed within road right-of-way between Active Transportation Multi-Use Path and Roadway	m²	$150	$150	Colour Stamped Concrete
1.28	Hard Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Urban Setting (New)	linear KM	$300,000 - $400,000	$350,000	3.0m wide hard surface pathway (asphalt) within park setting (normal conditions) 90mm asphalt depth. Price depends of scale / complexity of project.
1.29	Hard Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in Urban Setting (Upgrade existing granular surface)	linear KM	$150,000 - $225,000	$187,500	Includes some new base work (25% approx.), half of the material excavated is removed from site. Price depends of scale / complexity of project.
1.30	Granular Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in Urban Setting	linear KM	$150,000 - $165,000	$157,500	3.0m wide, compacted stone dust surface normal site conditions. Price depends of scale / complexity of project.
1.31	Granular Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in Rural Setting (New)	linear KM	$200,000	$200,000	3.0m wide, compacted stone dust surface in complex site conditions (includes cost of clearing and grubbing). Price depends of scale / complexity of project.
1.32	Upgrade existing granular surface trail to meet 3.0m wide compacted granular trail standard	linear KM	$75,000 - $125,000	$100,000	Includes some new base work (25% approx.) and an average of 20 regulatory signs per kilometre. Price depends of scale and existing trail conditions e.g. width, slope, location of trail, etc.
1.33	Off-Road Multi-Use Trail Outside of Road Right-of-Way on Abandoned Rail Bed	linear KM	$80,000 - $125,000	$102,500	3.0m wide, compacted stone dust surface, includes signage along trail and gates at road crossings. Assumes ballast is still in place. Price depends of scale / complexity of project.
1.34	Granular Surfaced Multi-use Trail in a Woodland Setting	linear KM	$175,000	$175,000	2.4m wide, compacted stone dust surface. Price depends of scale / complexity of project.
1.35	Major rough grading (for multi-use pathway)	m²	$8.00	$8	Varies depending on a number of factors including site access, disposal location etc.
2.0 PEDESTRIAN FACILITIES					
2.1	Sidewalk	linear KM	$300,000	$300,000	Price for 1.5m concrete sidewalk. Include site prep., select utility relocation, minor drainage modifications / traffic control.
3.0 STRUCTURES AND CROSSINGS					
3.1	Pedestrian Boardwalk (Light-Duty)	linear m	$1500 - $2500	$2,000	Structure on footings, 3.0m wide with railings. Price depends of scale / complexity of project.
3.2	Self weathering steel truss pedestrian / cyclist bridge	linear m	$10,000	$10,000	Price for 4.0m width bridge includes abutments
3.3	Feature Trail Bridge crossing over a valley land / highway	each	$2,500,000 - $4,500,000	$3,500,000	Depends on location, length and complexity of crossing as well as architectural detail.
3.4	Metal stairs with hand railing and gutter to roll bicycle	each	$6,500	$6,500	1.8m wide, galvanized steel (assumes 8ft between each landing).
3.5	Pathway Crossing of Private Entrance	each	$1500 - $2000	$1,750	Adjustment of existing curb cuts to accommodate 3.0m multi-use pathway
3.6	Median Refuge	each	$20,000	$20,000	Average price for basic refuge with curbs, no pedestrian signals
3.7	Pedestrian and Cyclist Crossride	each	$80,000	$80,000	Average price for pedestrian and cyclist crossride
3.8	Mid-block Crossing	each	$150,000 - $180,000	$165,000	Average price for new mid-block crossing
3.9	Intersection Pedestrian / Bike Signal	each	$80,000	$80,000	Average price for intersection pedestrian signal. Assumes partial rebuild of intersection for bike signals i.e. realignment of ducts and poles.
3.10	At grade railway crossing	each	$120,000	$120,000	Flashing lights, motion sensing switch (C.N. estimate)

ITEM	DESCRIPTION	UNIT	UNIT PRICE RANGE	UNIT PRICE FOR ROUTE CALCULATION	COMMENTS/ASSUMPTIONS
3.11	At grade railway crossing with gate	each	$300,000	$300,000	Flashing lights, motion sensing switch and automatic gate (C.N. estimate)
3.12	Below grade railway crossing	each	$500,000 - $750,000	$625,000	3.0m wide, unlit culvert style approx. 10 m long for single elevated railway track
3.13	Multi use subway under 4 lane road	each	$1,000,000 - $1,200,000	$1,100,000	Guideline price only for basic 3.3 m wide, lit.
3.14	Retaining Wall	m^2	$1,200	$1,200	Face metre squared
4.0 BARRIERS AND ACCESS CONTROL FOR MULTI-USE TRAILS OUTSIDE OF THE ROAD RIGHT-OF-WAY					
4.1	Lockable gate (2 per road crossing)	each	$4,000	$4,000	Heavy duty gates (e.g. equestrian supported step over gate). Price for one side of road - 2 required per road crossing. Typically only required in rural settings or city boundary areas
4.2	Metal offset gates	each	$2,000	$2,000	"P"-style park gate
4.3	Removable Bollard	each	$500 - $750	$750	Basic style (e.g. 75mm diameter galvanized), with footing. Increase budget for decorative style bollards
4.4	Berming/boulders at road crossing	each	$1,200	$1,200	Price for one side of road (2 required per road crossing)
4.5	Granular parking lot at staging area (15 car capacity-gravel)	each	$45,000	$45,000	Basic granular surfaced parking area (i.e. 300mm granular B sub-base with 150mm granular A surface), with precast bumper curbs. Includes minor landscaping and site furnishings, such as garbage receptacles and bike racks.
4.6	Paige wire fencing	linear M	$60	$60	1.5m height with peeled wood posts
4.7	Chain link fencing	linear M	$90 - $110	$110	Galvanized, 1.5m height
5.0 SIGNAGE					
5.1	Regulatory and caution Signage (off-road pathway) on new metal post	each	$150 - $250	$250	300mm x 300mm metal signboard c/w metal "u" channel post
5.2	Signboards for interpretive sign	each	$2,400	$2,400	Does not include graphic design. Based on a 600mm x 900mm typical size and embedded polymer material, up to 40% less for aluminum or aluminum composite panel
5.3	Staging area kiosk	each	$2,000 - $10,000	$10,000	Wide range provided. Price depends on design and materials selected. Does not include design and supply of signboards
5.4	Signboards for staging area kiosk sign	each	$1,500 - $2,000	$2,000	Typical production cost, does not include graphic design (based on a 900mm x 1500mm typical size and embedded polymer material). Up to 40% less for aluminum or aluminum composite panel
5.5	Pathway directional sign	each	$350 - $500	$500	Bollard / post (100mm x100mm marker), with graphics on all 4 sides
5.6	Pathway marker sign	each	$250	$250	Bollard / post (100mm x100mm marker), graphics on one side only
5.7	Pathway marker sign	linear KM	$1,000	$1,000	Price for both sides of the path, assumes one sign on average, per direction of travel every 0.5 km
5.8	Bike sign	each	$200	$200	Price for one side of road.
6.0 BICYCLE PARKING INFRASTRUCTURE					
6.1	Bicycle rack (Post and Ring style)	each	$150 - $250	$250	Holds 2 bicycles , price varies depending on manufacturer (includes installation).
6.2	Bicycle rack (U style)	each	$600	$600	Holds 2 bicycles , price varies depending on manufacturer (includes installation).
6.3	Bicycle rack	each	$1,800	$1,800	Holds 6 bicycles, price varies depending on manufacturer (includes installation).
6.4	Bicycle Locker	each	$3,000	$3,000	Price varies depending on style and size. Does not include concrete mounting pad.
6.5	Bike Loop	each	$2,500	$2,500	Price for installation including labour and equipment. Price also includes materials e.g. two channel detector for traffic cabinet, bike loop (wire and sealant), cable to traffic cabinet, handhole and conduit.

ITEM	DESCRIPTION	UNIT	UNIT PRICE RANGE	UNIT PRICE FOR ROUTE CALCULATION	COMMENTS/ASSUMPTIONS
6.6	Bicycle Corral (one parking space with bollards)	each	$1,500 - $2,900	$2,900	Price may vary from $1,500 (galvanized finish with the mad shield corrosion warranty) to $2,900 (stainless finish with the mad shield corrosion warranty) for one parking space.
7.0 LIGHTING AND UTILITIES					
7.1	Pathway Lighting	per 25 m	$5,000	$5,000	Includes cabling, connection to power supply, transformers and fixtures.
7.2	Relocation of Light / Support Pole	each	$4,000	$4,000	Adjustment of pole offset (distance between pole and roadway).
7.3	Relocation of Signal Pole / Utility Box	each	$8,000	$8,000	Adjustment of pole offset (distance between pole and roadway).
8.0 PAVEMENT MARKINGS					
8.1	Sharrow Symbol	each	$400	$400	Price for durable paint. Sharrow symbol with green pavement marking
8.2	Bike Symbol	each	$400	$400	Price depends on volume
8.2	Line Painting	linear M	$6	$6	Price for durable paint.
8.2	Removal of Line Painting	linear M	$3	$3	N/A
9.0 OTHER					
9.1	Bike Box	each	$1,500	$1,500	Price may vary depending on road cross-section (e.g. two lane roadway, four lane roadway, etc.). Price includes installing a bike box on the approach of an intersection using a bike stencil and durable e.g. green surface treatment ($250 / each). Price also include estimate to move stop-bar back to provide space for bike box.
9.2	Clearing and Grubbing	m^2	$15	$15	
9.3	Bench	each	$1,000 - $2,000	$2,000.00	Price varies depending on style and size. Does not include footing/concrete mounting pad
9.4	Safety Railings / Rubrail	linear M	$300	$300	1.4m height basic post and rail style
9.5	Small diameter culvert	each (6 m)	$1,200	$1,200	Price range applies to 400mm to 600mm diameter PVC or CSP culverts for drainage below trail
9.6	Flexible Bollards	each	$110	$110	Should be placed at 10m intervals where required. Cost depends on product type used.

Notes:

1. Unit Prices are for functional design purposes only, include installation but exclude contingency, design and approvals costs (unless noted) and reflect 2019 dollars, based on projects in southern Ontario.
2. Estimates do not include the cost of property acquisitions, signal modifications, utility relocations, major roadside drainage works or costs associated with site-specific projects such as bridges, railway crossings, retaining walls, and stairways, unless otherwise noted.
3. Assumes typical environmental conditions and topography.
4. Applicable taxes and permit fees are additional.

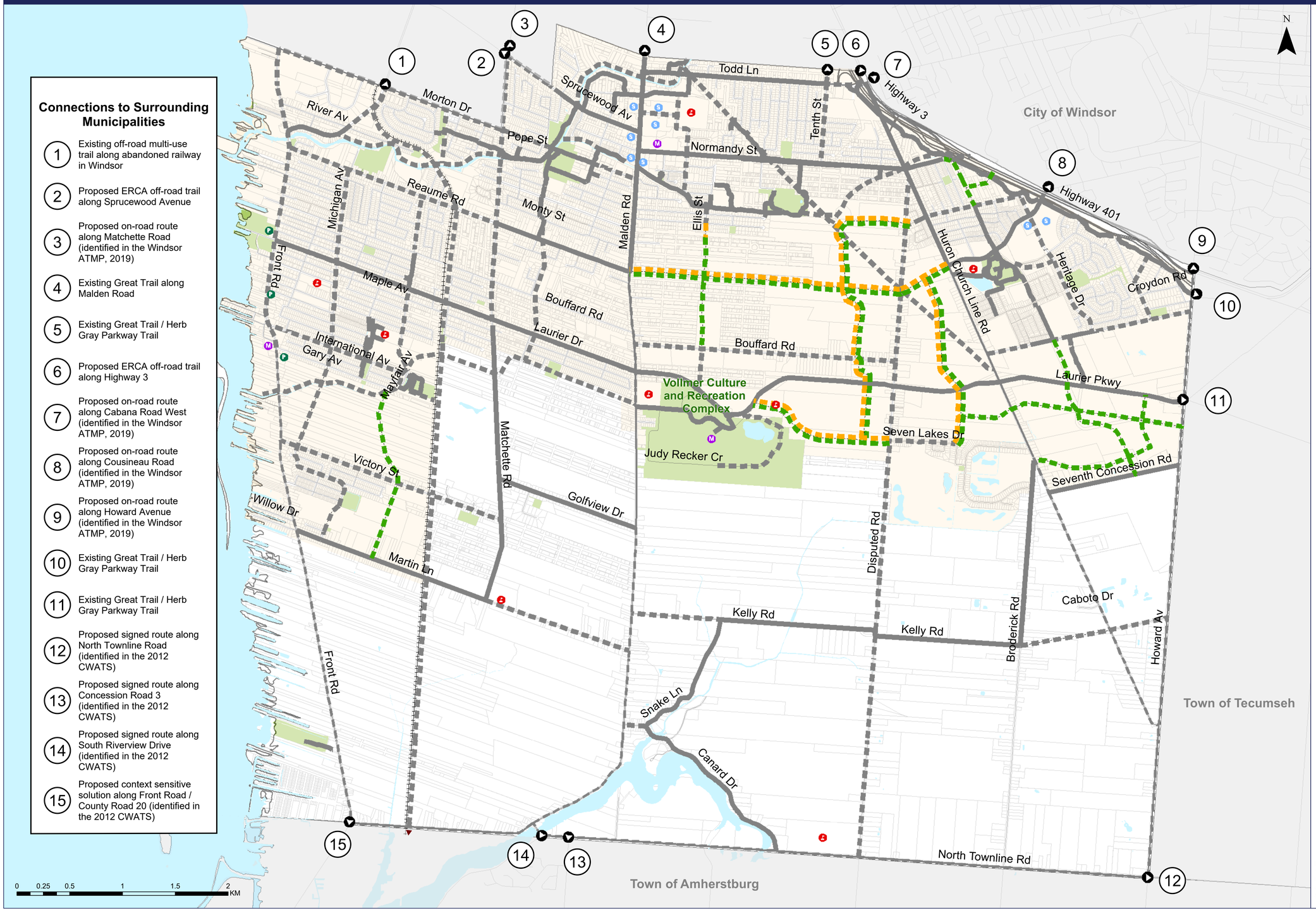
Our Next Move

Appendix F

Active Transportation Routes on Developer Land

Appendix E: AT Routes located on Developer-owned roads

TOWN OF LASALLE TRANSPORTATION MASTER PLAN | FINAL JANUARY 2020



Legend

Developer-built Routes[1]

- Proposed In-Boulevard Pathway
- Proposed Bike Lane

Other Jurisdiction Routes

Local	County	
		Existing Route
		Proposed Route

Other AT Features

- Connection to Surrounding Municipality

Road Network

- Provincial Highway
- County Road
- Town Road
- New Collector (2 lanes)

Points of Interest

- School
- Municipal Building
- Shopping Centre
- Municipal Parking

Land Use Features

- Water
- Park
- Urban Growth Area
- Parcel Property

Notes:
1. Includes routes that are located on future proposed roads that are anticipated to be built and paid for by developers. These routes are expected to proceed when development occurs in the future, such as when new subdivisions are constructed and / or when construction approvals are granted.

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